JEPPIAAR ENGINEERING COLLEGE

Electronics & Communication Engg.

Part A : Institutional Information

1 Name and Address of the Institution

JEPPIAAR ENGINEERING COLLEGE,
JEPPIAAR NAGAR,RAJIV GANDHI SALAI,CHEMANCHERRY

2 Name and Address of Affiliating University

Anna University, Sardar Patel Road, Guindy, Chenn

3 Year of establishment of the Institution:

2001

4 Type of the Institution:

☐ University	☐ Autonomous
☐ Deemed University	☑ Affiliated
☐ Government Aided	

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
Jeppiaar University	2021	Engineering, Sciences	Rajiv Gandhi Salai, Semmancherry - 600119
Jeppiaar Matriculation Higher Secondary School	2003	H.Sc	Rajiv Gandhi Salai, Semmancherry - 600119
Jeppiaar CBSE School	2017	H.Sc	Rajiv Gandhi Salai, Semmancherry - 600119

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	2001	2001	60	Yes	120	Not accredited (specify visit dates, year)	06/07/2018	08/07/2018	Yes	4
Computer Science and Engineering	UG	2001	2001	60	Yes	150	Not accredited (specify visit dates, year)	06/07/2018	08/07/2018	No	4

Sanctioned Intake for Last Five Years for the Computer Science and Engineering	
Academic Year	**Sanctioned Intake**
2022-23	150
2021-22	120
2020-21	120
2019-20	120
2018-19	120
2017-18	120

Information Technology	UG	2001	2001	60	Yes	120	Eligible but not applied	--	--	0	4
BioTechnology	UG	2001	2001	60	Yes	30	Granted accreditation for 3 years for the period (specify period)	2018	2021	0	4

Sanctioned Intake for Last Five Years for the BioTechnology	
Academic Year	**Sanctioned Intake**
2022-23	30
2021-22	30
2020-21	60
2019-20	60
2018-19	60
2017-18	60

Artificial Intelligence and Data Science	UG	2021	2021	60	Yes	90	Not eligible for accreditation	--	--	0	4

Sanctioned Intake for Last Five Years for the Artificial Intelligence and Data Science	
Academic Year	**Sanctioned Intake**
2022-23	90
2021-22	60
2020-21	0
2019-20	0
2018-19	0
2017-18	0

Mechanical Engineering	UG	2001	2001	60	Yes	60	Not accredited (specify visit dates, year)	06/07/2018	08/07/2018	0	4

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

Sanctioned Intake for Last Five Years for the Mechanical Engineering	
Academic Year	**Sanctioned Intake**
2022-23	60
2021-22	60
2020-21	90

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
Sanctioned Intake for Last Five Years for the Mechanical Engineering											
Academic Year						**Sanctioned Intake**					
2019-20						120					
2018-19						180					
2017-18						180					
MBA	PG	2001	2001	60	Yes	60	Applying first time	--	--	0	2
Sanctioned Intake for Last Five Years for the MBA											
Academic Year						**Sanctioned Intake**					
2022-23						60					
2021-22						60					
2020-21						60					
2019-20						90					
2018-19						120					
2017-18						120					
Computer Science and Engineering	PG	2012	2012	18	No	18	Eligible but not applied	--	--	0	2
BioTechnology	PG	2012	2012	18	No	18	Eligible but not applied	--	--	0	2

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Science & Engg.
2	Under Graduate	Engineering & Technology	Electronics & Communication Engg.
3	Post Graduate	Management	Master of Business Administration

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2022-23		2021-22		2020-21	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	74	74	71	72	117	120
Faculty in Engineering (Female)	72	72	69	70	90	93
Faculty in Maths, Science & Humanities (Male)	14	14	10	12	10	10
Faculty in Maths, Science & Humanities (FeMale)	18	18	17	18	15	16
Non-teaching staff (Male)	11	11	11	11	12	13
Non-teaching staff (FeMale)	5	5	5	5	5	6

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 (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (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

Items	2022-23	2021-22	2020-21
Total no. of Boys	1187	1376	1563
Total no. of Girls	583	604	702
Total	**1770**	**1980**	**2265**

Engineering and Technology- PG Shift-1

Items	2022-23	2021-22	2020-21
Total no. of Boys	11	18	11
Total no. of Girls	15	29	24
Total	**26**	**47**	**35**

Engineering and Technology- MBA Shift-1

Items	2022-23	2021-22	2020-21
Total no. of Boys	72	64	66
Total no. of Girls	45	51	55
Total	**117**	**115**	**121**

11 Vision of the Institution:

To build Jeppiaar Engineering College as an institution of academic excellence in technological and management education to become a world class University

12 Mission of the Institution:

M1	To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking
M2	To participate in the production, development and dissemination of knowledge and interact with national and international communities.
M3	To equip students with values, ethics and life skills needed to enrich their lives and enable them to meaningfully contribute to the progress of society
M4	To prepare students for higher studies and lifelong learning, enrich them with the practical and entrepreneurial skills necessary to excel as future professionals and contribute to Nation's economy

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

Head of the Institution	
Name	Dr. J Francis Xavier
Designation	Principal
Mobile No.	9443277305
Email ID	principal@jeppiaarcollege.org

NBA Coordinator, If Designated

Name	Dr. J Jebastine
Designation	Professor
Mobile No.	9566143828
Email ID	ece@jeppiaarcollege.org

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	60.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	120.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	120.00
4	STUDENTS' PERFORMANCE	150	131.46
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	185.06
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	50	50.00
8	FIRST YEAR ACADEMICS	50	46.19
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	**1000**	**962**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 60.00

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

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	To build Jeppiaar Engineering College as an institution of academic excellence in technological and management education to become a world class University
Mission of the institute	**M1** To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking **M2** To participate in the production, development and dissemination of knowledge and interact with national and international communities. **M3** To equip students with values, ethics and life skills needed to enrich their lives and enable them to meaningfully contribute to the progress of society **M4** To prepare students for higher studies and lifelong learning, enrich them with the practical and entrepreneurial skills necessary to excel as future professionals and contribute to Nation's economy
Vision of the Department	To become a center of excellence to provide quality education and produce creative engineers in the field of Electronics and Communication Engineering to excel at international level.
Mission of the Department	**Mission No.** / **Mission Statements** M1 Inculcate creative thinking and zeal for research to excel in teaching-learning process M2 Create and disseminate technical knowledge in collaboration with industries M3 Provide ethical and value based education by promoting activities for the betterment of the society M4 Encourage higher studies, employability skills, entrepreneurship and research to produce efficient professionals thereby adding value to the nation's economy

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

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Produce technically competent graduates with a solid foundation in the field of Electronics and Communication Engineering with the ability to analyze, design, develop, and implement electronic systems.
PEO2	Motivate the students for choosing the successful career choices in both public and private sectors by imparting professional development activities.
PEO3	Inculcate the ethical values, effective communication skills and develop the ability to integrate engineering skills to broader social needs to the students
PEO4	Impart professional competence, desire for lifelong learning and leadership skills in the field of Electronics and Communication Engineering

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

Total Marks 10.00

Institute Marks : 10.00

The departments Vision, Mission, and PEOs are all stated on the institutional website, (https://www. jeppiaarcollege.org). The public, as well as all stakeholders, can access the same information.

All stakeholders can view the departments Vision, Mission, and PEOs as they are prominently displayed in various places on campus.

During the induction programme, newly admitted students, parents, faculty members, alumni, industry experts, and other academicians are informed of the departments Vision, Mission, and PEOs.

A. The Vision, Mission and PEOs are published in the following modes:

The publication modes for the departments Vision, Mission, and PEOs to internal and external stakeholders are listed in table 1.3.1 below.

Table 1.3.1 Publishing Modes of Vision, Mission and PEOs

	Modes of Publishing		Internal Stake holders	External Stake holders
Vision, Mission and PEOs	1	College Website	✓	✓
	2	HoD Cabin	✓	✓
	3	Class Rooms	✓	
	4	Faculty Cabin	✓	
	5	Laboratories	✓	✓
	6	Lab Manuals and	✓	✓
	7	ECE Seminar Hall	✓	✓
	8	Department Notice	✓	✓
	9	Student Notice Board	✓	
	10	Department Magazine	✓	✓

The published samples of Vision, Mission and PEOs are shown in the following Figure 1.3.1.

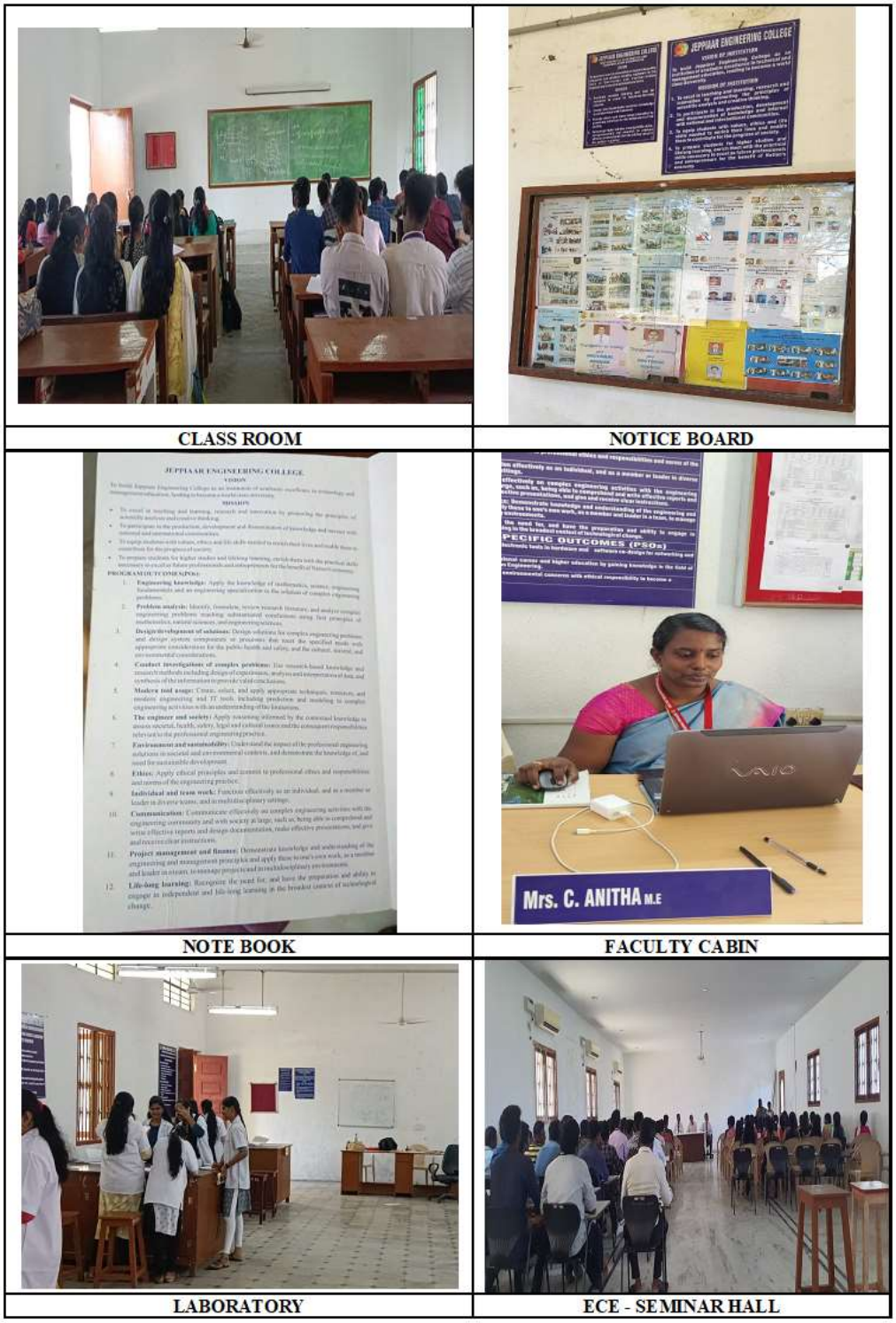


Figure 1.3.1 Publishing Modes of Vision, Mission and PEOs

B. The Vision, Mission and PEOs are disseminated in the following ways:

Internal stakeholders:

Management & Governing Council members

- The Vision, Mission, and PEOs were presented at the Governing Council meeting.

Faculty

- The Principal informs faculty members about the Vision, Mission, and PEOs during the faculty orientation session at the start of each academic year.
- During Department review sessions, the Head of the Department raises faculty understanding of the Vision, Mission, and PEOs.

Support staff

- The Principal informs every member of the institutions support staff on the institutions Vision, Mission, and PEOs.
- The Department Head informs the Department Support Staff on the Departments Vision, Mission, and PEOs.

Students

- Students receive information on the Vision, Mission, and PEOs at the beginning of each semesters classes.
- Through their different chairs, the students learn about the Vision, Mission, and PEOs at class committee meetings.

External stakeholders:

Affiliating University & Professional Bodies

- The college website disseminates the Vision, Mission, and PEOs.

Alumni

- The Principal and the Head of the Department presents the Vision, Mission, and PEOs to alumni at JEC Alumni Meet.

Industries and Employers

- Through interactions with industry institutes and placement meets, employers and recruiters are informed about PEOs, Vision, and Mission.

Parents

- The department head conveys the Vision, Mission, and PEOs to the parents during the Parents Teachers Meeting.
- During First-year Induction Programs, the principal presents the Vision, Mission, and PEOs to the parents.

The following table 1.3.2 provides the summary on the disseminating modes of Department's Vision, Mission and PEOs to internal and external stakeholders

Table 1.3.2 Disseminating modes of Vision, Mission and PEOs

	Modes of Dissemination		Internal Stake holder	External Stake holders	Frequency of Meeting
Vision, Mission and PEOs	1	Induction Program for Fresher	✓	✓	1 per year
	2	Students Orientation Program	✓		1 per year
	3	Parents – Teachers Meeting		✓	1 per Semester
	4	Alumni Meeting		✓	1 per year
	5	Department Review Meeting	✓		2 per month
	6	Class Committee Meeting	✓		3 per semester
	7	Faculty Orientation Program	✓		1 per year
	8	Internal Quality Assurance Cell (IQAC)Meeting	✓	✓	4 per year
	9	Management Review Meeting	✓	✓	2 per year
	10	Program Assessment and Evaluation Committee (PAEC)	✓		2 per semester
	11	Department Advisory Committee Meeting	✓	✓	1 per year
	12	Governing Council Meeting	✓		1 per year

The disseminated samples of Vision, Mission and PEOs among stakeholders are shown in the following Figure 1.3.2.

Figure 1.3.2 Disseminating modes of Vision, Mission and PEOs

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25) Total Marks 25.00

Institute Marks : 25.00

Process involved in defining the Vision, Mission of the Department:

The Departments Vision and Mission are designed in accordance with the Institutes Vision and Mission. The Governing Council, Faculty, Students, Parents, Alumni, and Industry members of the Department of Electronics and Communication Engineering took part in a collaborative process to define the departments Vision and Mission.

As indicated in figure 1.4.1, the following stages are done to define the departments Vision and Mission.

- An assortment of input from internal (management, governing council members, faculty members, and students) and external (industry, parents, alumni, and professional society) stakeholders is acquired.
- Based on the Institutes Vision and Mission, the affiliated universitys Vision and Mission, the professional societies IEEE , IET , ICT and IETEs Vision and Mission, stakeholder input, and the direction for future development as indicated in statutory, regulatory, and affiliated organizations, the department drafts its own Vision and Mission.
- The department faculty members participated in brainstorming sessions to help improve the departments Vision and Mission statements.
- The drafted Vision and Mission statements are examined to ensure alignment with the Institutes Vision and Mission.
- The institutions head formally recommends the developed Vision and Mission statements.
- The suggested Vision and Mission statements are presented at meetings of the Department Advisory Committee (DAC) and the Programme Assessment and Evaluation Committee (PAEC).
- The Governing Council has given its approval to the statements of the Finalized Vision and Mission.
- The Vision and Mission statements of the department are prominently exhibited and made available to all stakeholders.

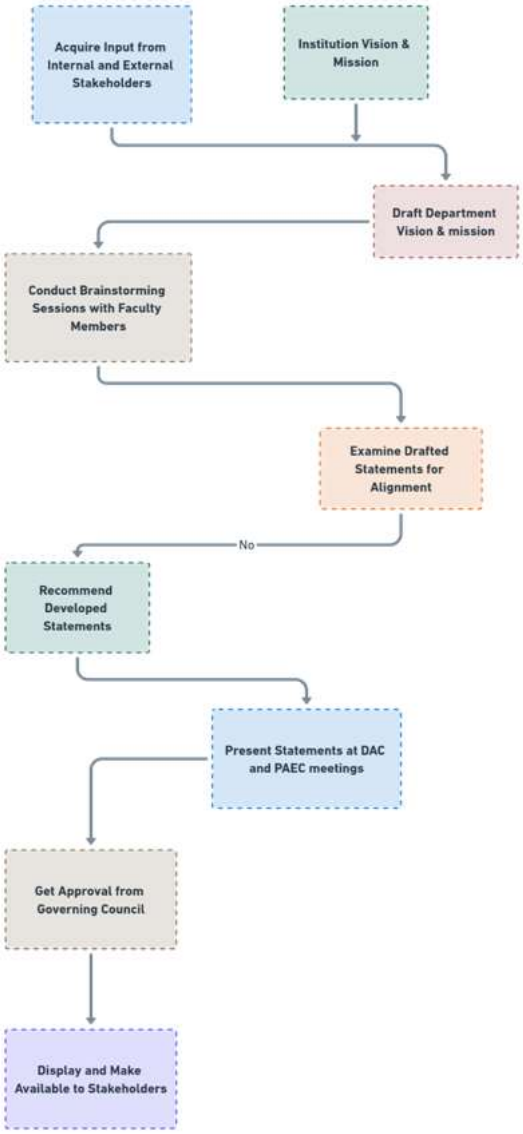


Figure 1.4.1 Process of defining the Vision and Mission of the Department

Process involved in defining the PEOs of the program

The primary stakeholders, including faculty, students, parents, entrepreneurs, and members of professional societies, consult on the programs educational objectives. In order to guarantee that the graduates receive outcome-based education, PEOs were made mandatory in addition to the departments Vision and Mission.

The PEO's are established through the following steps as shown in the figure 1.4.2.

- Both internal (management, governing council members, faculty, and students) and external (industry, employer, alumni and parents) stakeholder input is gathered.
- PEO statements are made using the Vision and Mission of the Institute & Department, the Affiliated University, Professional Societies like IEEE, IET, ICT and IETE, feedback from stakeholders, and the direction for future development as expressed in statutory/regulatory/affiliating bodies.
- Faculties from the department participate in brainstorming sessions, and the recommendations and opinions are included to improve the PEO statements.
- The Head of the Institution duly recommends the PEO statements that have been developed.
- The Department Advisory Committee (DAC) meeting and the Programme Assessment and Evaluation Committee (PAEC) meeting both feature presentations of the suggested PEO statements.
- The Governing Council gives its approval to the finalized PEO statements.
- The PEO statements are distributed to all stakeholders and exhibited in conspicuous places within the Institution.

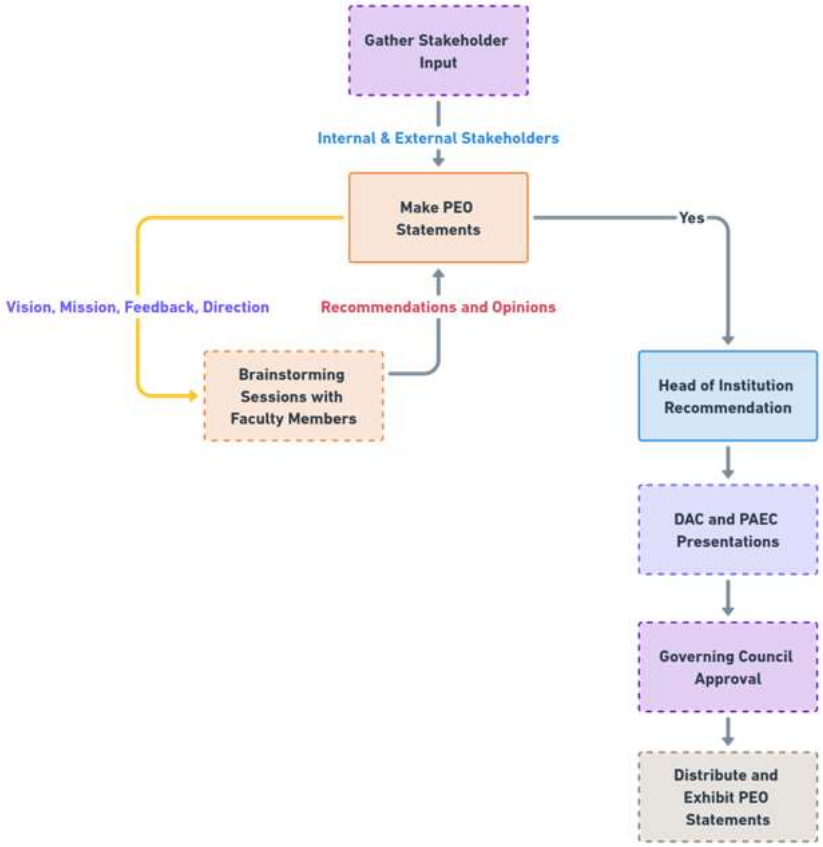


Figure 1.4.2 Process of establishing the PEOs

1.5 Establish consistency of PEOs with Mission of the Department (15) Total Marks 15.00

Institute Marks : 15.00

Table 1.5.1 shows the justification of PEOs mapping with Mission of the department.

Table 1.5.1 shows the justification of PEOs mapping with Mission of the department.

Mapping	Justification
PEO I maps substantially with M1, M2 and M4	• By employing technologies like MATLAB, Cadence, Pspice, and others during the teaching and learning process, the students are given a foundational understanding of technical concepts. • Through integrative projects and participation in national level contests, designing and creating skills are enhanced. • Students are encouraged to submit financed research, patent applications, and conference and journal papers in order to help graduates create electronic products.
PEO I maps moderately with M3	• The career counseling cell encourages students to take the GATE, CAT, MAT, TOEFL, GRE, IELTS, and BEC in order to become knowledgeable engineers. • The internship, in-plant training, GATE coaching, and workshops that assist graduates in career-related matters are encouraged among the students.
PEO II maps substantially with M1, M2,M3 and M4	• Membership in professional organizations like IEEE, ICT, IET and IETE offers a forum to address societal problems. • Students have participated in National Science Day, Engineers Day, and Projects Expo while working on projects with IBM, NSIC, NIELIT and other organizations. Additionally, some industrial issues have been located and resolved.
PEO III maps substantially with M1, M2,M3 and M4	• Students actively engage in departmental association activities as well as extracurricular pursuits like sports, Tamil Mandram, NSS, NCC, YRC, photography club, Rotract Club, and Yi Yuva Club. Pupils receive training in soft skills, communication skills, practice interviews, and group discussions to help them succeed in the workplace after College working hours. • Students take part in inter-college activities such as conferences, technical symposiums, and paper presentations. In order to develop into professionals with ethics and moral values, students also participate in events sponsored by the Entrepreneurship Development Cell, Industry Institute, and online courses.
PEO IV maps substantially with M1, M3 and M4	• Technical symposium, department association events, and professional society activities are organized by students, giving graduates the opportunity to engage responsibly and collaborate. • Students with an enriching introduction to modern technology that helps graduates tackle engineering difficulties by Providing Value added courses.
PEO IV maps moderately with M2	• By engaging in discussions with professors and peers, participating in technical clubs, research lab activities, developing novel products through the creation of patents, the Smart India Hackathon, Toy Hackathon, and Ideaothon, students are given the chance to freely express their ideas.

PEO Statements	M1	M2	M3	M4
Produce technically competent graduates with a solid foundation in the field of Electronics and Communication Engineering with the ability to analyze, design, develop, and implement electronic systems.	3	3	2	3
Motivate the students for choosing the successful career choices in both public and private sectors by imparting professional development activities.	3	3	3	3
Inculcate the ethical values, effective communication skills and develop the ability to integrate engineering skills to broader social needs to the students	3	3	3	3
Impart professional competence, desire for lifelong learning and leadership skills in the field of Electronics and Communication Engineering	3	2	3	3

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120) Total Marks 120.00

2.1 Program Curriculum (20) Total Marks 20.00

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexurel. Also mention the identified curricular gaps, if any (10)

Institute Marks : 10.00

Jeppiaar Engineering College – Department of Electronics and Communication Engineering is affiliated to Anna University, Chennai. The department follows the syllabus prescribed by Anna University. As per Anna university regulation, the B.E Program is four years full time and it follows semester pattern. The B.E Program is comprised of eight semesters.

In R2017, the curriculum comprises of Humanities and Social Sciences (HS), Basic Sciences (BS), Engineering Sciences (ES), Professional Core (PC), Professional Elective (PE), Open Elective (OE) and Employability Enhancement Courses (EEC).

In R2021, the curriculum comprises of Humanities, Social Sciences and Management Courses (HSMC), Basic Sciences Courses (BSC), Engineering Sciences Courses (ESC), Professional Core Courses (PCC), Professional Elective Courses (PEC), Open Elective Courses (OEC), Employability Enhancement Courses (EEC) and Audit courses (AC).

Regulation 2017: Batch 2019-2023 (IV-year ECE) and Batch 2020-2024 (III-year ECE)

Regulation 2021: Batch 2021-2025 (II-year ECE) and Batch 2022-2026 (I-year ECE)

The following procedures are modified to identify curriculum gaps in order to determine the extent to which the university curriculum complies with the POs and PSOs.

A. Process used to identify extent of compliance of the University Curriculum for attaining POs & PSOs

PROGRAM SPECIFIC OUTCOMES (PSOs)

Program Specific Outcomes are statements that indicate what engineering program graduates should be able to perform.

Figure 2.1.1.1 depicts the process of establishing PSOs. The Program Specific Outcomes are in line with the needs of stakeholders.

Figure 2.1.1.1 Process of establishing Program Specific Objectives (PSOs)

The Program Specific Outcomes (PSOs) defined for the Electronics and Communication Engineering Program:

Program Specific Outcomes	After the successful completion of B.E Programme in Electronics and Communication Engineering,the graduates will be able to
PSOI	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.
PSOII	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.
PSOIII	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems

Structure of Anna University Curriculum: Regulation – 2021

Table 2.1.1.1 shows the curricular framework for the program, including course specifics, hours per week, and credits.

Table 2.1.1.1 Structure of the Program curriculum for the Regulation 2021

S.No	Course Code	Course Title	Category	Periods per Week			Total Contact Periods	Credits
				L	T	P		
1.	IP3151	Induction Programme	-	-	-	-	-	0
Semester - I								
Theory								
2.	HS3152	Professional English - I	HSMC	3	0	0	3	3
3.	MA3151	Matrices and Calculus	BSC	3	1	0	4	4
4.	PH3151	Engineering Physics	BSC	3	0	0	3	3
5.	CY3151	Engineering Chemistry	BSC	3	0	0	3	3
6.	GE3151	Problem Solving and Python Programming	ESC	3	0	0	3	3
7.	GE3152	Heritage of Tamils	HSMC	1	0	0	1	1
Practical								
8.	GE3171	Problem Solving and Python Programming Laboratory	ESC	0	0	4	4	2
9.	BS3171	Physics and Chemistry Laboratory	BSC	0	0	4	4	2
10.	GE3172	English Laboratory $	EEC	0	0	2	2	1
			TOTAL	**16**	**1**	**10**	**27**	**22**
Semester - II								
Theory								
1.	HS3252	Professional English - II	HSMC	2	0	0	2	2
2.	MA3251	Statistics and Numerical Methods	BSC	3	1	0	4	4
3.	PH3254	Physics for Electronics Engineering	BSC	3	0	0	3	3
4.	BE3254	Electrical and Instrumentation Engineering	ESC	3	0	0	3	3
5.	GE3251	Engineering Graphics	ESC	2	0	4	6	4
6.	EC3251	Circuit Analysis	PCC	3	1	0	4	4
7.	GE3252	Tamils and Technology	HSMC	1	0	0	1	1
8.		NCC Credit Course Level 1#	-	2	0	0	2	2*
Practical								
9.	GE3271	Engineering Practices Laboratory	ESC	0	0	4	4	2
10.	EC3271	Circuits Analysis Laboratory	PCC	0	0	2	2	1
11.	GE3272	Communication Laboratory/ Foreign Language	EEC	0	0	4	4	2
			TOTAL	**17**	**1**	**14**	**33**	**26**
Semester – III								
Theory								
1.	MA3355	Random Processes and Linear Algebra	BSC	3	1	0	4	4
2.	CS3353	C Programming and Data Structures	ESC	3	0	0	3	3
3.	EC3354	Signals and Systems	PCC	3	1	0	4	4
4.	EC3353	Electronic Devices and Circuits	PCC	3	0	0	3	3
5.	EC3351	Control Systems	PCC	3	0	0	3	3
6.	EC3352	Digital Systems Design	PCC	3	0	2	5	4
Practical								
7.	EC3361	Electronic Devices and Circuits Laboratory	PCC	0	0	3	3	1.5
8.	CS3362	C Programming and Data Structures Laboratory	PCC	0	0	3	3	1.5
9.	GE3361	Professional Development	EEC	0	0	2	2	1
			TOTAL	18	2	10	30	25
Semester – IV								
Theory								
1.	EC3452	Electromagnetic Fields	PCC	3	0	0	3	3
2.	EC3401	Networks and Security	PCC	3	0	2	5	4
3.	EC3451	Linear Integrated Circuits	PCC	3	0	0	3	3
4.	EC3492	Digital Signal Processing	PCC	3	0	2	5	4
5.	EC3491	Communication Systems	PCC	3	0	0	3	3
6.	GE3451	Environmental Sciences and Sustainability	BSC	2	0	0	2	2
7.		NCC Credit CourseLevel2		3	0	0	3	3*

Practical								
8.	EC3461	Communication Systems Laboratory	PCC	0	0	3	3	1.5
9.	EC3462	Linear Integrated Circuits Laboratory	PCC	0	0	3	3	1.5
			TOTAL	17	0	10	27	22
Semester – V								
Theory								
1.	EC3501	Wireless Communication	PCC	3	0	2	5	4
2.	EC3552	VLSI and Chip Design	PCC	3	0	0	3	3
3.	EC3551	Transmission lines and RF Systems	PCC	3	0	0	3	3
4.		Professional Elective I	PEC	-	-	-	-	3
5.		Professional Elective II	PEC	-	-	-	-	3
6.		Professional Elective III	PEC	-	-	-	-	3
7.		Mandatory Course-I	MC	3	0	0	3	0
Practical								
8.	EC3561	VLSI Laboratory	PCC	0	0	4	4	2
			TOTAL	-	-	-	-	21
Semester – VI								
Theory								
1.	ET3491	Embedded Systems and IOT Design	PCC	3	0	2	5	4
2.	CS3491	Artificial Intelligence and Machine Learning	ESC	3	0	2	5	4
3.		Open Elective–I*	OEC	3	0	0	3	3
4.		Professional Elective V	PEC	-	-	-	-	3
5.		Professional Elective VI	PEC	-	-	-	-	3
6.		Professional Elective VII	PEC	-	-	-	-	3
7.		Mandatory Course-II	MC	3	0	0	3	0
8.		NCCCreditCourseLevel3		3	0	0	3	3#
			TOTAL	-	-	-	-	20
Semester – VII								
Theory								
1.	GE3791	Human Values and Ethics	HSMC	2	0	0	2	2
2.		Elective-Management	HSMC	3	0	0	3	3
3.		Open Elective–II**	OEC	3	0	0	3	3
4.		Open Elective –III**	OEC	3	0	0	3	3
5.		Open Elective–IV**	OEC	3	0	0	3	3
Practical								
6.	EC3711	Summer internship	EEC	0	0	0	0	2
			TOTAL	**14**	**0**	**0**	**14**	**16**
Semester – VIII								
Practical								
1.	EC3811	Project Work/Internship	EEC	0	0	20	20	10
			TOTAL	**0**	**0**	**20**	**20**	**10**

Figure 2.1.1.2 depicts the distribution of the course hours in the curriculum and shows that 38.43% of the hours are used for laboratory sessions, 1.97% of the hours are used for tutorial lectures, and 59.2% of the hours are devoted to theoretical sessions.

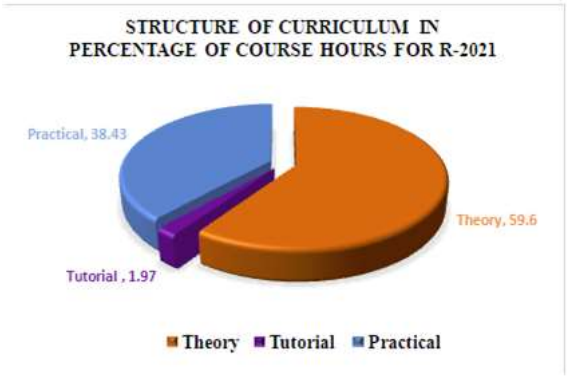


Figure 2.1.1.2 Distribution of course hours in the Curriculum

Course wise credits for Anna University (AU) curriculum: Regulation 2021

1. The Curriculum is divided broadly in to seven categories as listed below.

   Humanities, Social Sciences and Management Courses (HSMC)

   Basic Sciences Courses (BSC)

   Engineering Sciences Courses (ESC)

   Professional Core Courses (PCC)

   Professional Elective Courses (PEC)

   Open Elective Courses (OEC)

   Employability Enhancement Courses (EEC)

2. The curriculum prescribed by the university has 62 courses

3. Table 2.1.1.2 Shows the curriculum categorization and mapping with POs and PSOs :

Table 2.1.1.2:Credits of AU curriculum R2021

S. No.	Course Code	Course Title	Mapping with PO	Mapping with PSO	Credits
Humanities, Social Sciences and Management Courses (HSMC)					
1.	HS3152	Professional English - I	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12	PSO1	4
2.	HS3252	Professional English - II	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12		3
3.	GE3791	Human Values and Ethics			2
4.		Elective-Management			3
				Total Credits	**12**
Basic Sciences Courses (BSC)					
5.	MA3151	Matrices and Calculus	PO1, PO2, PO3, PO4, PO9,PO11,PO12		4
6.	PH3151	Engineering Physics	PO1, PO2, PO3, PO4, PO5, PO6,PO12		3
7.	CY3151	Engineering Chemistry	PO1, PO2, PO3, PO4, PO6, PO7,PO12		3
8.	BS3171	Physics and Chemistry Laboratory	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO12		2
9.	MA3251	Statistics and Numerical Methods	PO1, PO2, PO3, PO4, PO5, PO9,PO11,PO12		4
10	PH3254	Physics for Electronics Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO12		3
11	MA3355	Random Processes and Linear Algebra	PO1, PO2, PO9,PO12		4
12	GE3451	Environmental Sciences and Sustainability	PO1, PO2, PO3, PO4, PO6, PO7, PO12		2
				Total Credits	**25**
Engineering Sciences Courses (ESC)					
13.	GE3151	Problem Solving and Python Programming	PO1, PO2, PO3, PO4, PO5, PO11,PO12	PSO1, PSO2	3
14.	GE3171	Problem Solving and Python Programming Laboratory	PO1, PO2, PO3, PO4, PO5, PO11,PO12	PSO1, PSO2	2
15.	BE3254	Electrical and Instrumentation Engineering	PO1, PO2, PO3, PO5		3
16.	GE3251	Engineering Graphics	PO1, PO2, PO3, PO4, PO10,PO12	PSO1, PSO2	4
17.	GE3271	Engineering Practices Laboratory	PO1, PO2, PO5, PO6, PO7,PO12	PSO1, PSO2, PSO3	2
18.	CS3353	C Programming and Data Structures	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9,PO10,PO11,PO12	PSO1, PSO2, PSO3	3
19.	CS3491	Artificial Intelligence and Machine Learning	PO1, PO2, PO3, PO4, PO5, PO9,PO10,PO11,PO12	PSO1, PSO2, PSO3	4
				Total Credits	**21**

Professional Core Courses (PCC)					
20.	EC3251	Circuit Analysis	PO1, PO2, PO3, PO4 PO5,PO10		4
21.	EC3271	Circuits Analysis Laboratory	PO1, PO2, PO3, PO4,PO5,PO10,		1
22.	EC3354	Signals and Systems	PO1, PO2, PO3, PO4, PO5, PO6,PO12	PSO1, PSO2, PSO3	4
23.	EC3353	Electronic Devices and Circuits	PO1, PO2, PO3, PO4, PO5, PO6,PO12	PSO1, PSO2, PSO3	3
24.	EC3351	Control Systems	PO1, PO2, PO3, PO4, PO5, PO6, PO11,PO12	PSO1, PSO2, PSO3	3
25.	EC3352	Digital Systems Design	PO1, PO2, PO3, PO4, PO6, PO11,PO12	PSO1, PSO2, PSO3	4
26.	EC3361	Electronic Devices and Circuits Laboratory	PO1, PO2, PO3, PO4	PSO1, PSO2, PSO3	1.5
27.	CS3362	C Programming and Data Structures Laboratory	PO1, PO2, PO3, PO4, PO5, PO6, PO7,PO9,PO10,PO11,PO12	PSO1, PSO2, PSO3	1.5
28.	EC3452	Electromagnetic Fields	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO10,PO11,PO12		3
29.	EC3401	Networks and Security	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO10,PO11,PO12		4
30.	EC3451	Linear Integrated Circuits	PO1, PO2, PO3, PO4, PO11,PO12	PSO1, PSO2, PSO3	3
31.	EC3492	Digital Signal Processing	PO1, PO2, PO3, PO4, PO5, PO6, PO11,PO12	PSO1, PSO2, PSO3	4
32.	EC3491	Communication Systems	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO11,PO12	PSO1, PSO2, PSO3	3
33.	EC3461	Communication Systems Laboratory	PO1, PO2, PO3, PO4, PO5, PO6, PO10,PO11,PO12	PSO1, PSO2, PSO3	1.5
34.	EC3462	Linear Integrated Circuits Laboratory	PO1, PO2, PO3, PO4, PO5, PO11,PO12	PSO1, PSO2, PSO3	1.5
35.	EC3501	Wireless Communication	PO1, PO2, PO3, PO4, PO5, PO6, PO12	PSO1, PSO2, PSO3	4
36.	EC3552	VLSI and Chip Design	PO1, PO2, PO3, PO4, PO5, PO6, PO11,PO12	PSO1, PSO2, PSO3	3
37.	EC3551	Transmission lines and RF Systems	PO1, PO2, PO3, PO4, PO5, PO6, PO10,PO12	PSO1, PSO2, PSO3	3
38.	EC3561	VLSI Laboratory	PO1, PO2, PO3, PO4, PO5, PO11,PO12	PSO1, PSO2, PSO3	2
39.	ET3491	Embedded Systems and IOT Design	PO1, PO2, PO3, PO4, PO5	PSO1, PSO2, PSO3	4
				Total Credits	58
Professional Elective Courses (PEC)					
40.		Professional Elective I	PO1, PO2, PO3, PO4, PO5, PO6, PO12	PSO1, PSO2, PSO3	3
41.		Professional Elective II	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
42.		Professional Elective III	PO1, PO2, PO3, PO4, PO5, PO6, PO12	PSO1, PSO2, PSO3	3
43.		Professional Elective V	PO1, PO2, PO3, PO4, PO5, PO6, PO12	PSO1, PSO2, PSO3	3
44.		Professional Elective VI	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
45.		Professional Elective VII	PO1, PO2, PO3, PO4, PO5, PO6, PO12	PSO1, PSO2, PSO3	
				Total Credits	**18**

Open Elective Courses (PEC)					
46.		Open Elective–I	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
47.		Open Elective–II	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
48.		Open Elective –III	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
49.		Open Elective–IV	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO10,PO12	PSO1, PSO2, PSO3	3
				Total Credits	**12**
Employability Enhancement Courses (EEC)					
60.	GE3172	English Laboratory \$	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12		1
61.	GE3272	Communication Laboratory/Foreign Language	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12		2
62.	GE3361	Professional Development	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12		1
63	EC3711	Summer internship	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12		2
64	EC3811	Project Work/Internship	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12		10
				Total Credits	**16**

The Anna University Curriculums summary of credits is shown in the following Table 2.1.1.3 and Figure 2.1.1.3 for Regulation 2021.

Table2.1.1.3: Summary of credits of AU CurriculumR-2021

Sl. No.	Subject Area	Credits Per Semester								Credit Total	Percentage %
		I	II	III	IV	V	VI	VII	VIII		
1.	HSMC	4	3	-	-	-	-	5	-	12	7.4%
2.	BSC	12	7	4	2	-	-	-	-	25	15.4%
3.	ESC	5	9	3	-	-	4	-	-	21	13.0%
4.	PCC	-	5	17	20	12	4	-	-	58	35.8%
5.	PEC	-	-	-	-	9	9	-	-	18	11.1%
6.	OEC	-	-	-	-	-	3	9	-	12	7.4%
7.	EEC	1	2	1	-	-	-	2	10	16	9.9%
Total		**25**	**25**	**25**	**24**	**25**	**23**	**22**	**16**	**162**	**100**

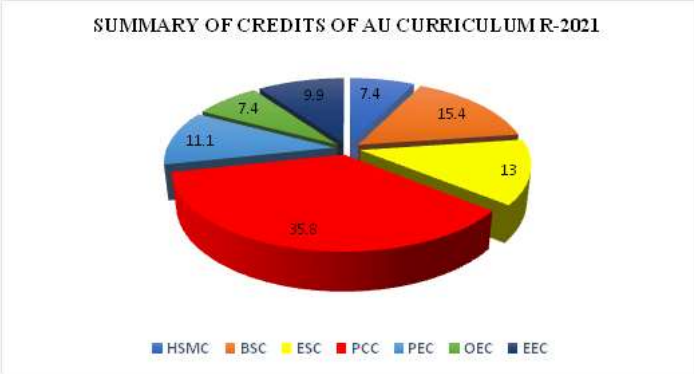


Figure2.1.1.3 Summary of credits of AU CurriculumR-2021

Structure of Anna University Curriculum: Regulation– 2017

The curriculums organizational structure, including information on the courses, credits, hours perweek, and other specifics, is provided in Table 2.1.1.4.

Table 2.1.1.4 Structure of the Program curriculum for the Regulation 2017

Sl. No	Course Code	Course Title	Category	Contact Periods	L	T	P	C
Semester - I								
Theory								
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	MA8151	Engineering Mathematics - I	BS	4	4	0	0	4
3.	PH8151	Engineering Physics	BS	3	3	0	0	3
4.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
5.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
6.	GE8152	Engineering Graphics	ES	6	2	0	4	4
Practical								
7.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
8.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
			TOTAL	31	19	0	12	25
Semester - II								
Theory								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8254	Basic Electrical and Instrumentation Engineering	ES	3	3	0	0	3
5.	EC8251	Circuit Analysis	PC	4	4	0	0	4
6.	EC8252	Electronic Devices	PC	3	3	0	0	3
Practical								
7.	EC8261	Circuits and Devices Laboratory	PC	4	0	0	4	2
8.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
			TOTAL	**29**	**21**	**0**	**8**	**25**

Semester - III								
Theory								
1.	MA8352	Linear Algebra and Partial Differentia lEquations	BS	4	4	0	0	4
2.	EC8393	Fundamentals of Data Structures in C	ES	3	3	0	0	3
3.	EC8351	Electronic Circuits- I	PC	3	3	0	0	3
4.	EC8352	Signals and Systems	PC	4	4	0	0	4
5.	EC8392	Digital Electronics	PC	3	3	0	0	3
6.	EC8391	Control Systems Engineering	PC	3	3	0	0	3
Practical								
7.	EC8381	Fundamentals of Data Structures in C Laboratory	ES	4	0	0	4	2
8.	EC8361	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
9.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
			TOTAL	**30**	**20**	**0**	**10**	**25**
Semester - IV								
Theory								
1.	MA8451	Probability and Random Processes	BS	4	4	0	0	4
2.	EC8452	Electronic Circuits II	PC	3	3	0	0	3
3.	EC8491	Communication Theory	PC	3	3	0	0	3
4.	EC8451	Electromagnetic Fields	PC	4	4	0	0	4
5.	EC8453	Linear Integrated Circuits	PC	3	3	0	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
Practical								
7.	EC8461	Circuits Design and Simulation Laboratory	PC	4	0	0	4	2
8.	EC8462	Linear Integrated Circuits Laboratory	PC	4	0	0	4	2
			TOTAL	**28**	**20**	**0**	**8**	**24**

Semester - V								
Theory								
1.	EC8501	Digital Communication	PC	3	3	0	0	3
2.	EC8553	Discrete- Time Signal Processing	PC	4	4	0	0	4
3.	EC8552	Computer Architecture and Organization	PC	3	3	0	0	3
4.	EC8551	Communication Networks	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Open Elective I	OE	3	3	0	0	3
Practical								
7.	EC8562	Digital Signal Processing Laboratory	PC	4	0	0	4	2
8.	EC8561	Communication Systems Laboratory	PC	4	0	0	4	2
9.	EC8563	Communication Networks Laboratory	PC	4	0	0	4	2
			TOTAL	**31**	**19**	**0**	**12**	**25**
Semester - VI								
Theory								
1.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
2.	EC8095	VLSI Design	PC	3	3	0	0	3
3.	EC8652	Wireless Communication	PC	3	3	0	0	3
4.	MG8591	Principles of Management	HS	3	3	0	0	3
5.	EC8651	Transmission Lines and RF Systems	PC	3	3	0	0	3
6.		Professional Elective -II	PE	3	3	0	0	3
Practical								
7.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
8.	EC8661	VLSI Design Laboratory	PC	4	0	0	4	2
9.	EC8611	Technical Seminar	EEC	2	0	0	2	1
10.	HS8581	Professional Communication	EEC	2	0	0	2	1
			TOTAL	**30**	**18**	**0**	**12**	**24**

Semester - VII								
Theory								
1.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
2.	EC8751	Optical Communication	PC	3	3	0	0	3
3.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
4.	EC8702	Adhoc and Wireless Sensor Networks	PC	3	3	0	0	3
5.		Professional Elective -III	PE	3	3	0	0	3
6.		Open Elective - II	OE	3	3	0	0	3
Practical								
7.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
8.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2
			TOTAL	**26**	**18**	**0**	**8**	**22**
Semester - VIII								
Theory								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
Practical								
3.	EC8811	Project Work	EEC	20	0	0	20	10
			TOTAL	**26**	**6**	**0**	**20**	**16**

Figure 2.1.1.4 depicts how the curriculums course hours are distributed; showing that 61.57% of the time is set aside for theoretical sessions and 38.43% is used for laboratory sessions.

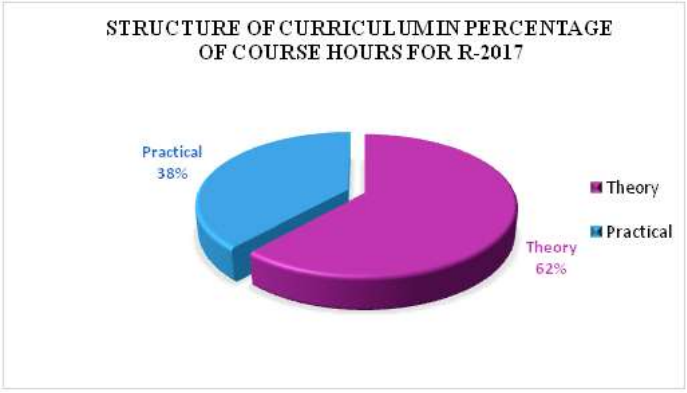


Figure 2.1.1.4 Distribution of course hours in the Curriculum

Course wise credits for Anna University (AU) Curriculum: Regulation 2017

1. Mapping of Course outcome with POs and PSOs is done
2. The Curriculum is divided broadly in to seven categories as listed below.

   Humanities and Social Sciences (HS)

   Basic Sciences (BS)

   Engineering Sciences (ES)

   Professional Core (PC)

   Professional Elective (PE)

   Open Elective (OE)

   Employability Enhancement Courses (EEC)
3. The curriculum prescribed by the university has 62 courses.
4. Table 2.1.1.5 shows the categorization of curriculum and mapping each category with POs and PSOs :

Table 2.1.1.5: Credits of AU curriculum R2017

S. No	Course Code	Course Title	Mapping with PO	Mapping with PSO	Credits
Humanities and Social sciences (HS)					
1.	HS8151	Communicative English	PO4, PO9, PO10, PO12	PSO1	4
2.	HS8251	Technical English	PO4, PO9, PO10, PO12	PSO1	4
3.	GE8291	Environmental Science and Engineering	PO1, PO2, PO3, PO7,PO8,PO9, PO10, PO12	PSO1	3
4.	MG8591	Principles of Management	PO4, PO5, PO6, PO7, PO8,PO9,PO10,PO11,PO12	PSO1,PSO2,PSO3	3
				Total Credits	**14**
Basic sciences (BS)					
5.	MA8151	Engineering Mathematics–I	PO1, PO2, PO3, PO4, PO5,PO12	PSO2, PSO3	4
6.	PH8151	Engineering Physics	PO1, PO2, PO3, PO4, PO5,PO6,PO11,PO12	PSO1,PSO3	3
7.	CY8151	Engineering Chemistry	PO1, PO2, PO3, PO4, PO11,PO12	PSO1	3
8.	BS8161	Physics and Chemistry Laboratory	PO1, PO2, PO3, PO4, PO8, PO9,PO10, PO12	PSO1,PSO3	2
9.	MA8251	Engineering Mathematics II	PO1, PO2, PO3, PO5, PO12	PSO3	4
10.	PH8253	Physics for Electronics Engineering	PO4,PO9,PO10,PO11,PO12	PSO1, PSO3	3
11.	MA8451	Probability and Random Processes	PO1, PO2, PO3, PO4, PO5,PO11,PO12	PSO1, PSO2,PSO3	4
12.	MA8352	Linear Algebra and Partial Differential Equations	PO1, PO2, PO3, PO4, PO5,PO11,PO12	PSO1	4
				Total Credits	**27**
Engineering Sciences (ES)					
13.	GE8151	Problem Solving and Python Programming	PO1, PO2, PO3, PO4, PO5, PO12	PSO2	3
14.	GE8152	Engineering Graphics	PO1, PO3, PO11, PO12	PSO1	4
15.	GE8161	Problem Solving and Python Programming Laboratory	PO1, PO2, PO3, PO4, PO5, PO12	PSO2, PSO3	2
16.	BE8254	Basic Electrical and Instrumentation Engineering	PO1, PO2, PO3, PO4, PO6, PO8, PO10, PO11, PO12	PSO1,PSO3, PSO4	3
17.	GE8261	Engineering Practices Laboratory	PO1, PO2, PO3, PO4, PO6, PO9, PO12	PSO1,PSO2, PSO3,	2
18.	EC8393	Fundamentals of Data Structures in C	PO1, PO2, PO3, PO4	PSO1	3
19.	EC8381	Fundamentals of Data Structures in C Laboratory	PO1, PO2, PO3, PO10, PO12	PSO1, PSO3	2
				Total Credits	19
Professional Core(PC)					
20.	EC8251	Circuit Analysis	PO1, PO2, PO3, PO4, PO12	PSO1, PSO3	4
21.	EC8252	Electronic Devices	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3	3

22.	EC8261	Circuits and Devices Laboratory	PO1, PO2, PO3, PO4, PO8, PO9, PO10, PO11, PO12	PSO1,PSO3	2
23.	EC8351	Electronic Circuits- I	PO1, PO2, PO3, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3	3
24.	EC8352	Signals and Systems	PO1,PO2,PO3,PO4,PO5, PO8,PO10,PO12	PSO1,PSO2, PSO3	4
25.	EC8392	Digital Electronics	PO1, PO2, PO3, PO4, PO8, PO10, PO12	PSO1,PSO2, PSO3	3
26.	EC8391	Control Systems Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO10, PO11, PO12	PSO1,PSO2, PSO3,	3
27.	EC8361	Analog and Digital Circuits Laborstory	PO1,PO2,PO3,PO4,PO5, PO8, PO9, PO10, PO12	PSO1,PSO3	2
28.	EC8452	Electronic Circuits II	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO11, PO12	PSO1,PSO2, PSO3,	3
29.	EC8491	Communication Theory	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3,	3
30.	EC8451	Electromagnetic Fields	PO1, PO2, PO3, PO4, PO8, PO10, PO12	PSO1,PSO2, PSO3	4
31.	EC8453	Linear Integrated Circuits	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO10, PO11, PO12	PSO1,PSO2, PSO3	3
32.	EC8461	Circuits Design and Simulation Laboratory	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO12	PSO1,PSO2, PSO3	2
33.	EC8462	Linear Integrated Circuits Laborstory	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12	PSO1,PSO2, PSO3	2
34.	EC8501	Digital Communication	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO10, PO12	PSO1,PSO2, PSO3, PSO4	3
35.	EC8553	Discrete-Time Signal Processing	PO1, PO2, PO3,PO4,PO5, PO8,PO9,PO10,PO11,PO12	PSO1,PSO2, PSO3	4
36.	EC8552	Computer Architecture and Organization	PO1,PO2,PO3,PO4, PO6, PO8, PO10, PO12	PSO1,PSO2, PSO3	3
37.	EC8551	Communication Networks	PO1, PO2, PO4, PO8, PO10, PO12	PSO1,PSO2,PSO3	3
38.	EC8562	Digital Signal Processing Laboratory	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12	PSO1,PSO2, PSO3	2
39.	EC8561	Communication Systems Laboratory	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12	PSO1,PSO2, PSO3	2
40.	EC8563	Communication Networks Laboratory	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12	PSO1, PSO3	2
41.	EC8691	Microprocessors and Microcontrollers	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3	3
42.	EC8095	VLSI Design	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3	3
43.	EC8652	Wireless Communication	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO3	3
44.	EC8651	Transmission Lines and RF Systems	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO11, PO12	PSO1,PSO2, PSO3	3
45.	EC8681	Microprocessors and Microcontrollers Laboratory	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO2, PSO3	2
46.	EC8661	VLSI Design Laboratory	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO12	PSO1,PSO3	2
47.	EC8701	Antennas and Microwave Engineering	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO10, PO11, PO12	PSO1,PSO3	3
48.	EC8751	Optical Communication	PO1,PO2,PO3,PO4, PO5, PO8, PO10, PO11, PO12	PSO2,PSO3	3
49.	EC8791	Embedded and Real Time Systems	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO11, PO12	PSO1,PSO2	3
50.	EC8702	Ad hoc and Wireless Sensor Networks	PO1, PO2, PO3, PO4, PO5, PO8, PO10, PO12	PSO1,PSO3	3
51.	EC8711	Embedded Laboratory	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO12	PSO1,PSO2	2
52.	EC8761	Advanced Communication Laboratory	PO1,PO2,PO3,PO4,PO5, PO6, PO8, PO9, PO10, PO11, PO12	PSO1,PSO2, PSO3	2
				Total Credits	92
		Professional Elective (PE)			
53.		Professional Elective – I	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2, PSO3	3
54.		Professional Elective – II			3
55.		Professional Elective – III			3
56.		Professional Elective – IV			3
57		Professional Elective – V			3
				Total Credits	15
		Open Electives (OE)			
58.		Open Elective - I	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2, PSO3	3
59.		Open Elective - II			3
				Total Credits	**6**
		EEC – Employability Enhancement Course			
60.	HS8381	Interpersonal Skills / Listening & Speaking	PO1,PO4,PO9,PO10,PO11,PO12	PSO1	1
61.	EC8611	Technical Seminar	PO2, PO4, PO5, PO6, PO8, PO9,PO10, PO12	PSO1, PSO2,PSO3	1
62.	EC8811	Project Work	PO1, PO2, PO3, PO4, PO5, PO6,PO7,PO8, PO9, PO10, PO11,PO12	PSO1, PSO2,PSO3	10
				Total Credits	**12**

The Anna University Curriculum for Regulation2017s summary of credits is shown in the following Table 2.1.1.6 and Figure 2.1.1.5.

Table 2.1.1.6: Summary of credits of AU curriculum R-2017

Sl. No.	Subject Area	Credits Per Semester								Credit Total	Percentage %
		I	II	III	IV	V	VI	VII	VIII		
1.	HS	4	4	-	3	-	3	-	-	14	**07.57**
2.	BS	12	7	4	4	-	-	-	-	27	**14.59**
3.	ES	9	5	5	-	-	-	-	-	19	**10.27**
4.	PC	-	9	15	17	19	16	16	-	92	**49.73**
5.	PE	-	-	-	-	3	3	3	6	15	**08.11**
6.	OE	-	-	-	-	3	-	3	-	06	**03.24**
7.	EEC	-	-	1	-	-	1	-	10	12	**06.49**

Total	25	25	25	24	25	23	22	16	185	100

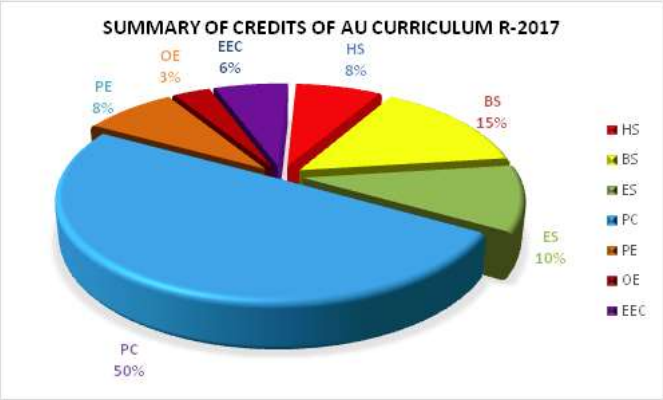


Figure 2.1.1.5 Summary of credits of AU Curriculum R-2017

Curricular Gap Identification Process:

The analysis used to identify the curricular gap is as follows:

According to Figure.2.1.1.6, the method utilized to determine the curricular gap for obtaining POs and PSOs is based on feedback from stakeholders

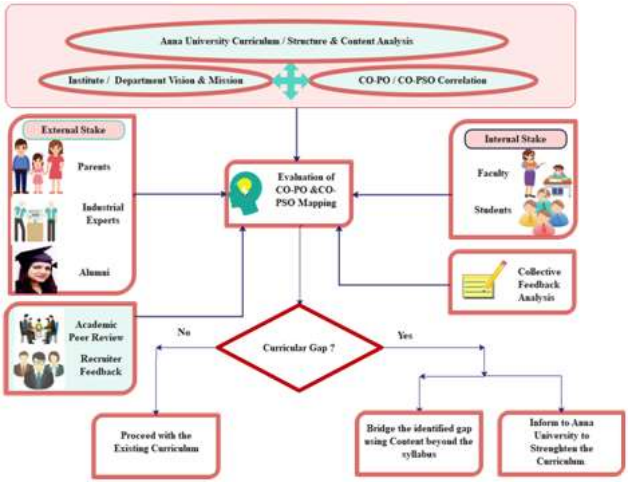


Figure 2.1.1.6 Process to identify curricular gaps for the attainment of POs/PSOs

A.List the Curriculum gaps for the attainment of defined POs & PSOs

1. **Comparison with Anna University Curriculum as shown in below Table2.1.1.7 and Figure 2.1.1.7 shows the Curriculum comparison of Anna University Regulation 2021 and 2017.**

Table 2.1.1.7 Course wise credits for Anna University curriculum

S.No.	Coursework– Subject Area	Anna University (No. of Credits)	
		R2021	R2017
1	Humanities and social sciences (HS)	12	14
2	Basic sciences (BS)	25	27
3	Engineering Sciences (ES)	21	19
4	Professional Core (PC)	58	92
5	Professional Elective (PE)	18	15
6	Open Electives (OE)	12	6
7	Employability Enhancement Course (EEC)	16	12
	TOTAL CREDITS	**162**	**189**

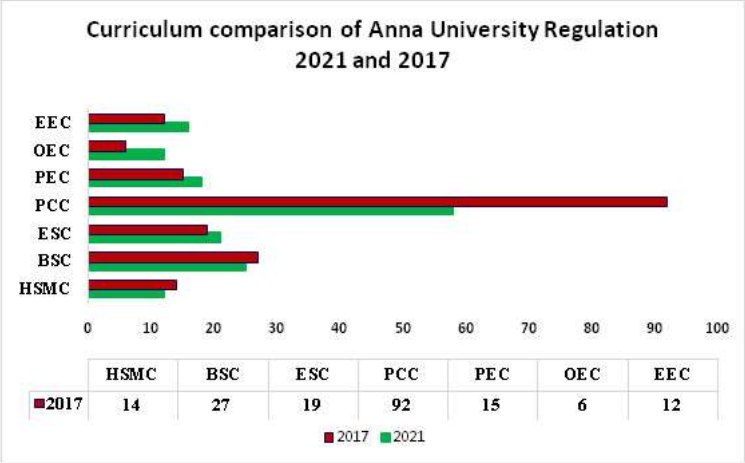


Figure 2.1.1.7 Curriculum comparison of Anna University Regulation 2021 and 2017

2. Feedback/Suggestions from Alumni, Employers, Industrial experts, Academic Experts from reputed Institutions.

The list of curricular gaps provided by various academic experts and Industrial Experts is shown in the table below.

Stakeholders	Identified Gap in Curriculum
Alumni	MATLAB
	Networking Technology
	Sensor Technology
	Medical Instrumentation
	VLSI Design using CADENCE Tools
Industrial Experts	Robotics
	Smart Wireless Technologies with LoRa, Multiuser MIMO
	Machine Learning
	Digital Image Processing
	PCB Designing and Simulation
	Sensors and Actuator
Academic Experts	Applications of Signals & Systems
	5G Communication Networking
	Wireless Communication
Recruiter	SQL
	JAVA,Python Programming
	Embedded C
	IoT with Raspberry Pi
Parent	Strategies for Success
	Current trends in Marketing
	Entrepreneurship awareness
Employer	Innovation and Product Development
	Soft skill and Reasoning aptitude
Students and Faculty members	Problem Solving Techniques
	Smart Cities – Opportunities for Engineering Graduates

3. Feedback/Suggestions from DAC members

The Department Advisory Committee members recommended a variety of courses to close any gaps in the curriculum and improve job placement prospects. The list of courses recommended by DAC members is shown in the table below.

S.No.	Gap in Curriculum

1.	Mini projects can be included in All Laboratory Experiments
2.	Programming skills.
3.	Value Added Course
4.	Different software/hardware tools are utilized in the laboratory for similar experiments.

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10) Institute Marks : 10.00

2021-22

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	MATLAB	Value Added Course	04/08/2021	Mr.G.C.Jagan AP/ECE Jeppiaar Engineering College,Chennai	98	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO3, PSO4
2	Arduino with Internet of Things (IoT)	Guest Lecture	24/08/2021	Ms.AntoPerosha, Mr.Vijay Technical Lead –M/s Billennium-Chennai	97	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO3, PSO4
3	Smart Wireless Technologieswith LoRa, Multiuser MIMO	Guest Lecture	03/09/2021	Mrs. C.Anitha AP/ECE Jeppiaar Engineering College,Chennai	98	PO3, PO5, PO8,PO10, PSO1, PSO3, PSO4
4	Digital India Smart Cities	Guest Lecture	20/09/2021	Mr.M.Thirumalai Siemens General Manager	95	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO3, PSO4
5	5G Communication Networking	Guest Lecture	21/10/2021	Mrs.Santhiya A AP/ECE Jeppiaar Engineering College,chennai	90	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
6	InnovationandProduct Development	Guest Lecture	20/10/2021	Mr.Prasanna., Mr.Senthil Kumar. NSIC Tech. Engineer	98	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
7	IoT with Raspberry Pi	Guest Lecture	01/11/2021	Mr.Selvaraj. SS.Technologies.Engineer	97	PO1, PO2, PO5, PO8, PO10,PO12, PSO1, PSO3
8	Data Acquisition protocols	Guest Lecture	22/11/2021	Mr. S.Benjamin Arul AP/ECE Jeppiaar Engineering College, chenna	97	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8, PO9, PO10,PSO1, PSO2, PSO3
9	Embedded C	Workshop	09/12/2021	Mr. Sakthivel E AP/ECE Jeppiaar Engineering College, chennai	95	PO2,PO4,PO8,PO11,PO10,PO12, PSO1
10	Entrepreneur ship awareness	Guest Lecture	31/01/2022	Dr.KavithaDhamaodharan- Mind Masters Academy	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
11	Problem Solving TechniquProblem Solving Techniqueses	Guest Lecture	10/2/2022	Mrs Archana Rajamanickam- Econ Systems Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
12	Machine Learning	Guest Lecture	18/2/2022	Mr.A.Dominic Savio - Fidelity Investments	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
13	Smart Cities – Opportunities for Engineering Graduates	Guest Lecture	5/3/2022	Mr.A.K.Madhan - Honeywell	96	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
14	Sensors and Actuator	IndustrialVisit	14/3/2022	Emerson Automation	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2

2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Overcoming Challenges in Taking Online Classes	Guest Lecture	05/06/2020	Dr.Stephen Chinnaswamy Strides Consulting Inc- Chennai	98	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO3, PSO4
2	Embedded Systems	Webinar	13/6/2020	Mr. MATHAN MUTHUSAMY, Senior Engineer, TATA Elxsi, Thiruvananthapuram	95	PO1, PO2, PO3, PO5, PO8,PO10, PSO1, PSO3, PSO4
3	ARTIFICIAL INTELLIGENCE WITH REAL TIME DATA	Webinar	13/6/2020	Dr. A.ATHIFSHAH, Chairman and Managing Director, ABE Semiconductor Design	90	PO1, PO2, PO8, PO9, PO10,PO12, PSO1,
4	CLOUD AND DATA CENTER	Webinar	17/6/2020	Mr P VIJAY, Director, RJP Infotek, Chenna	90	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
5	ETHICAL HACKING	Webinar	15/6/2020	Mr V.SRIRAM, Engineer, RJP Infotek, Chenna	95	PO1, PO2, PO3, PO5, PO8,PO10, PSO1, PSO3, PSO4
6	BLOCKCHAIN	Webinar	22/6/2020	Dr. K. Vasanth, Professor, Vidya Jyothi Institute of Technology, Hyderabad	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
7	NETWORKING	Webinar	2/6/2020	Mr P S Chakraavarty, SME-IT Infrastructure, RJP Infoteck, Chennai	92	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO3, PSO4
8	Embedded C	WEBINAR	18/6/2020	Dr. Balachandran.G AP/ECE Jeppiaar Engineering College,Chennai	98	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
9	INDUSTRY 4.0	WEBINAR	20/7/20	Dr ANAND NAYYAR, Researcher and Scientist , Duy Tan University.	98	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
10	Strategies for Success	WEBINAR	4/8/2020	Dr.Jobin Christ Professor /ECE Rajalakshmi Engineering-Chennai	97	PO1, PO2, PO5, PO8, PO10,PO12, PSO1, PSO3
11	Machine Learning	WEBINAR	05/8/2020	Mrs.R.Gracelin Sheeba AP/ECE Jeppiaar Engineering College, Chennai	99	PO2,PO4,PO8,PO11,PO10,PO12, PSO1
12	Applications of Signals & Systems	WEBINAR	20/08/2020	Dr. J.Jebastine Professor/ECE Jeppiaar Engineering College, Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8, PO9, PO10,PSO1, PSO2, PSO3
13	Current trends in Marketing	Guest Lecture	10/9/2020	Mr.S.Ranjith AP/ECE Jeppiaar Engineering College, Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
14	Sensors and Actuator	Guest Lecture	21/09/2020	Dr. Balachandran.G AP/ECE Jeppiaar Engineering College, Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
15	INDUSTRIAL REVOLUTION 4.0 THE ARTIFICIAL INTELLIGENCE ERA	Guest Lecture	06/11/2020	Mr.A.K.Madhan – Honeywell, Hyderabad	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
16	Smart Wireless Technologies with LoRa, Multiuser MIMO	Guest Lecture	10/12/2020	Dr. Nanammal.V AP/ECE Jeppiaar Engineering College, Chennai	90	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
17	JAVA, Python Programming,	Guest Lecture	05/01/2021	Mr.Surender- Sands India Private Ltd, Chennai	95	PO1, PO2, PO3, PO4, PO8,PO9,PO10,PO11,PSO1, PSO2
18	PCB Designing and Simulation	Guest Lecture	11/01/2021	Dr. K. Vasanth, Professor, Vidya Jyothi Institute of Technology, Hyderabad	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	JAVA, Python Programming	Guest Lecture	5/8/2019	Mr V.SRIRAM, Engineer, RJP Infotek, Chennai	98	PO1, PO2, PO6, PO7, PO10,PO12, PSO1, PSO3
2	Embedded C	Guest Lecture	20/8/2019	Mr. R. Mahesh, Sub-Divisional Engineer, RTTC BSNL, Chennai	97	PO1, PO3, PO8, PO9, PO10,PO12, PSO1, PSO3
3	IoT with Raspberry Pi	Guest Lecture	28/8/2019	Mr.A.K.Madhan Product Security Expert – Honeywell Bengaluru	98	PO1, PO2, PO3, PO5, PO8,PO10, PSO1, PSO3
4	Strategies for Success	Guest Lecture	10/9/2019	Mr.Carnelian Lamech S, Technical Lead Cognizant R&D, Chennai	100	PO1, PO2, PO8, PO9, PO10,PO12, PSO1, PSO2
5	SQL	Guest Lecture	18/9/2019	Mr. A. Dominic Savio, Fidelity Investments Chennai	98	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
6	5G Communication Networking	Guest Lecture	25/9/2019	Mr. Sakthivel E AP/ECE Jeppiaar Engineering College	98	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
7	Applications of Signals & Systems	Guest Lecture	30/9/2019	Mr P.Vijay, Engineer, RJP Infotek, Chennai	97	PO1, PO2, PO5, PO8, PO10,PO12, PSO1, PSO3
8	Digital Image Processing	Guest Lecture	03/10/2019	Dr.Jobin Christ Professor /ECE Rajalakshmi Engineering-Chennai	99	PO2,PO4,PO8,PO11,PO10,PO12, PSO1
9	MATLAB	Guest Lecture	16/10/2019	K.Tham/Data Architect Inspac Solution Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6, PO7, PO8, PO9, PO10,PSO1, PSO2, PSO3
10	Sensor Technology	Guest Lecture	22/10/2019	Mrs Archana Rajamanickam- Econ Systems Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
11	VLSI Design using CADENCE Tools	Guest Lecture	29/10/2019	Dr.BalaChandran.G AP/ECE Jeppiaar Engineering College	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
12	Robotics	Guest Lecture	05/11/2019	Mr. Sathish, AROBOT Technologies, Chennai	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
13	Entrepreneurship awareness	Guest Lecture	19/11/2019	H.Krishnakumar/HR EMERSON Industrial automation	96	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
14	Innovation and Product Development	Guest Lecture	5/02/2020	Mr.T.R.Chenthil AP/ECE Jeppiaar Engineering College,Chennai	95	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2,
15	Soft skill and Reasoning aptitude	Guest Lecture	19/02/2020	Dr.V.Nanammal AP/ECE Jeppiaar Engineering College,Chennai	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2
16	Smart Cities – Opportunities for Engineering Graduates	Guest Lecture	25/02/2020	Mr. Swamynathan, AROBOT Technologies, Chennai	97	PO1, PO2, PO3, PO4, PO5,PO6,PO8,PO9,PO10,PO11,PSO1, PSO2

2.2 Teaching - Learning Processes (100) Total Marks 100.00

2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)

Institute Marks : 25.00

Describe Processes followed to ensure/improve quality of Teaching & Learning

- Teaching is perceived as gaining knowledge, sharing ideas and focusing the learners and evaluating the learning outcomes of teaching. Teaching and learningis an action required to accomplish the POs and PSOs of the department. The department has a vision of educating and training the students in all advanced technology withProfessional ethics for the progress of the society.
- The Plan-Do-Check-Act (PDCA) technique is used in our Institute to ensure/improve the quality of teaching and learning through the Internal Quality Assurance Cell (IQAC). Figure 2.2.1.1 depicts the structure of the PDCA strategy.

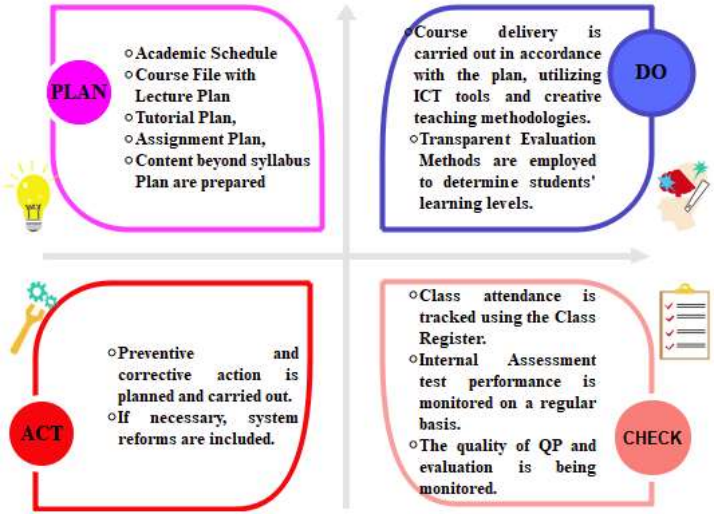


Figure 2.2.1.1 Structure of PDCA

- For the proper execution of the Teaching-Learning process, the Institute adopts conventional, rigorous, and transparent academic methods. Through Risk Identification, Risk Analysis, Risk Evaluation, and Risk Treatment, this Quality Management System effectively mitigates hazards.
- During the teaching learning process, risks are detected and preventative actions are implemented in the system to prevent recurrence of risk. Monitoring the mentoring process, the quality of the question paper and evaluation, special classes, and other risk mitigation techniques have been implemented.
- In general, there are two conceptions of the Teaching and Learning process: effective teaching and effective learning.
- Blooms taxonomy of cognitive thinking has been proportionately applied in the teaching and evaluation process.
- Figure 2.2.1.2 depicts the process of effective teaching and learning as Planning, Execution, Assessment & Testing, and Complementary techniques to boost learning.

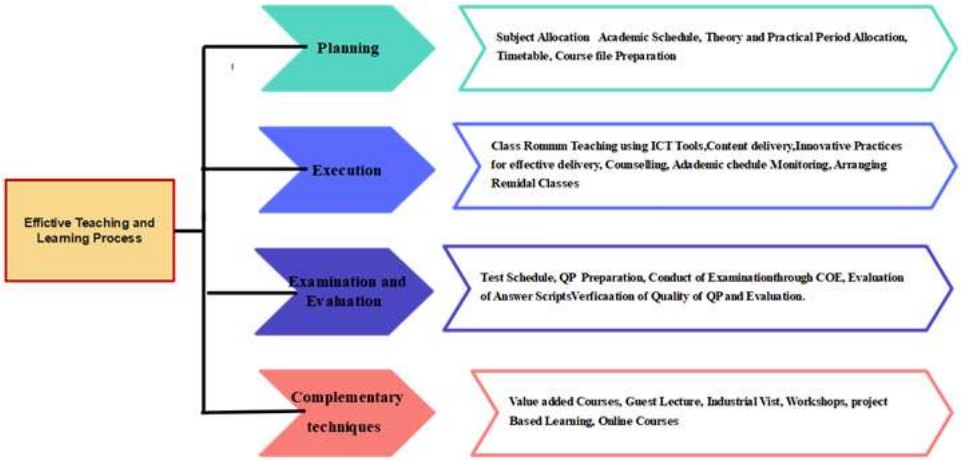


Figure2.2.1.2 Effective Teaching Learning Process

The systematic teaching learning process adopted is depicted in the Figure 2.2.1.3

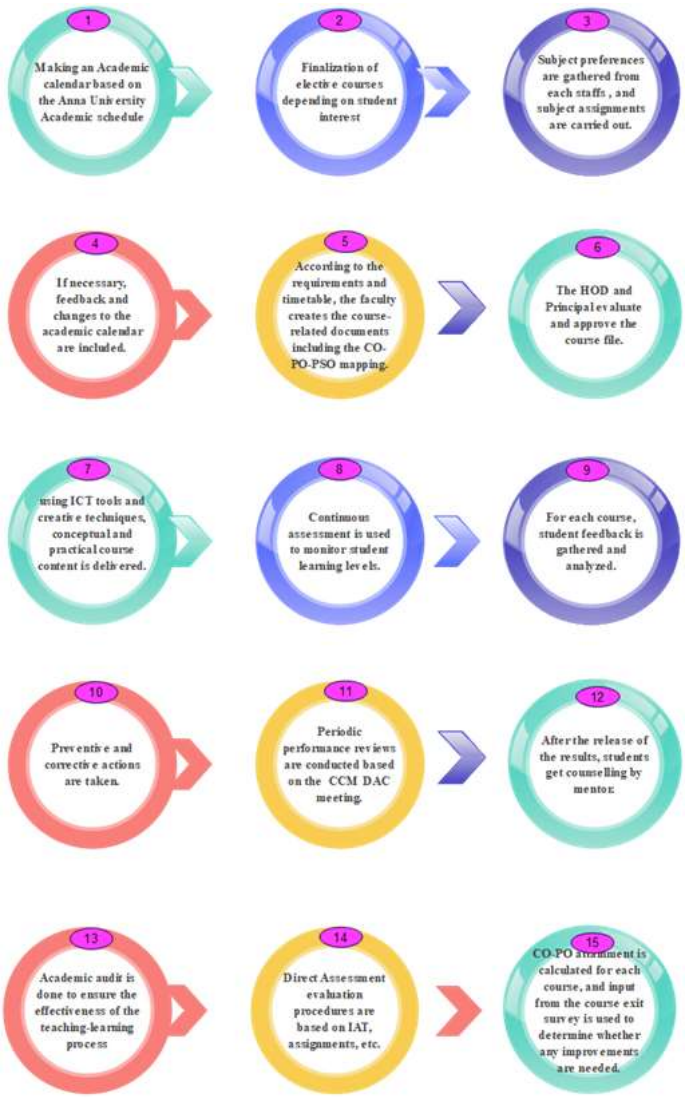


Figure 2.2.1.3 Systematic Teaching Learning Process

Contents of the Theory Course file

In every semester, all the faculty members will prepare the theory course file with the followingdocumentsfor each course at least one week prior to the commencement of classes. The documents are verified by the concerned HOD and Principal.

- Syllabus Copy
- Lecture Plan
- Course objectives and course outcomes
- Tutorial plan with tutorial sheets if applicable
- Assignment plan with assignment sheets if applicable Content beyond plan if applicable
- Teaching – Learning material (Notes of lesson neatly typed/written with good hand writing with appropriate margin on all sides of the paper and any other downloaded and edited material, soft copies of NPTEL Video, Online course materials relevant to the subject)
- Use of Video Lectures (NPTEL)
- Individual Time Table
- Class Time Table
- Question Papers of immediate previous University examination for the subject concerned.
- Any other relevant material

The sample copy of course file contents like Course objective and outcome, lecture plan, tutorial plan, assignment plan, use of NPTEL Videos, Content Beyond Syllabus – Lecture Plan, Class Timetable and Individual Timetable etc., are shown Figure 2.2.1.4.

Sample Course File :

Individual Timetable

Lesson Plan

Lesson Plan

Mini Project Marks

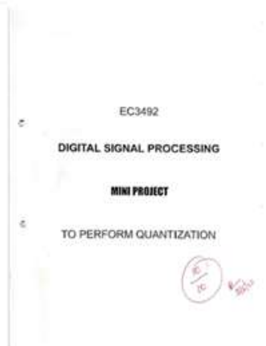
Seminar Report


DIGITIAL SIGNAL PROCESSING

SEMINAR TOPICS :

- IIR Filter
- FIR Filter
- Comparison IIR VS FIR

Mini Project Report

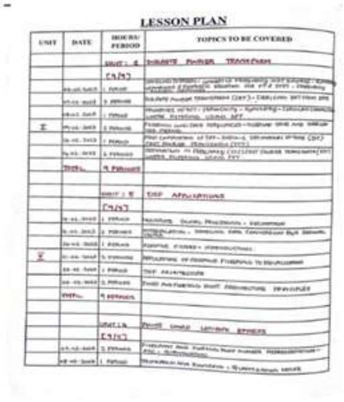

EC3492

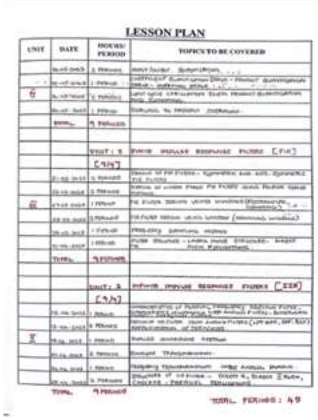
DIGITAL SIGNAL PROCESSING

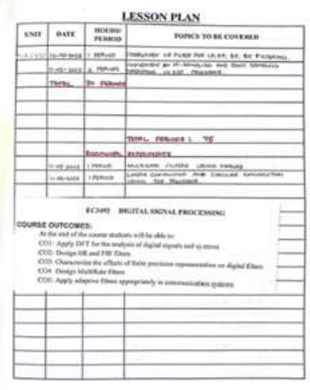
MINI PROJECT

TO PERFORM QUANTIZATION

LOG BOOK







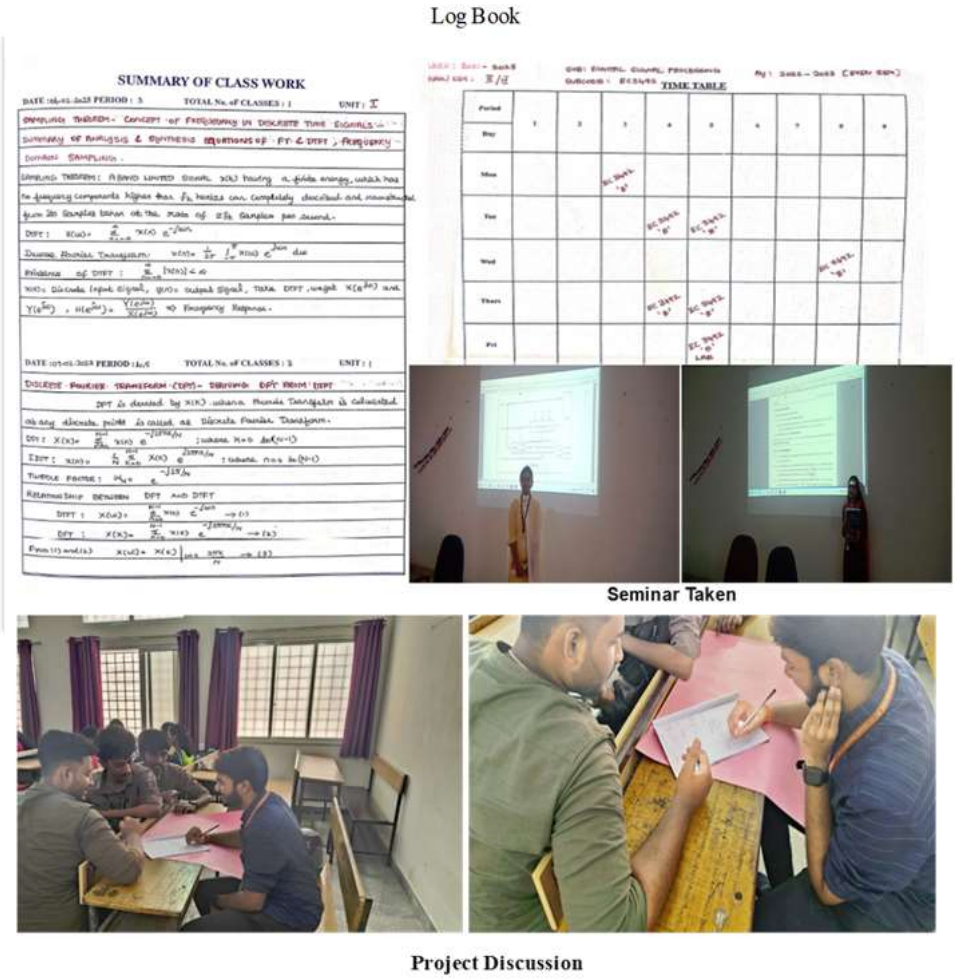
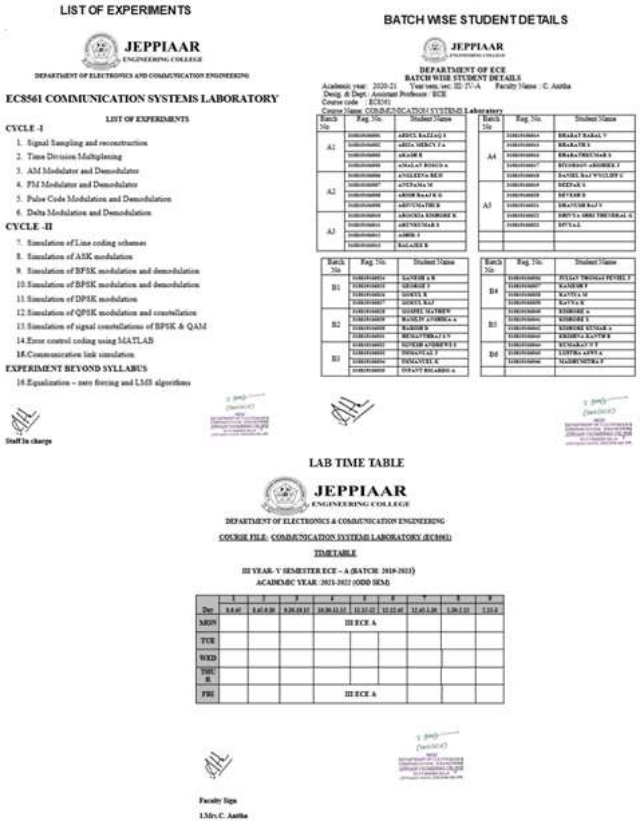


Figure 2.2.1.4 Theory Course File Contents

Contents of the Practical Course file

Each faculty member who is handling the practical courses will prepare these documents at least one week prior to the commencement of classes and verified by concerned HOD and Principal. A sample copy of Practical Plan and Batch and Lab timetable are given in the Figure 2.2.1.5 and 2.2.1.6



LIST OF EXPERIMENTS

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

EC8561 COMMUNICATION SYSTEMS LABORATORY

LIST OF EXPERIMENTS

CYCLE -I

1. Signal Sampling and reconstruction
2. Time Division Multiplexing
3. AM Modulator and Demodulator
4. FM Modulator and Demodulator
5. Pulse Code Modulation and Demodulation
6. Delta Modulation and Demodulation

CYCLE -II

7. Simulation of Line coding schemes
8. Simulation of ASK modulation
9. Simulation of BFSK modulation and demodulation
10. Simulation of BPSK modulation and demodulation
11. Simulation of DPSK modulation
12. Simulation of QPSK modulation and constellation
13. Simulation of signal constellations of BPSK & QAM
14. Error control coding using MATLAB
15. Communication link simulation

EXPERIMENT BEYOND SYLLABUS

16. Equalization – zero forcing and LMS algorithms

Staff In charge

BATCH WISE STUDENT DETAILS

JEPPIAAR

DEPARTMENT OF ECE

BATCH WISE STUDENT DETAILS

LAB TIME TABLE

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

COURSE FILE: COMMUNICATION SYSTEMS LABORATORY (EC8561)

TIMETABLE

III YEAR- V SEMESTER ECE – A (BATCH: 2018-2022)

ACADEMIC YEAR: 2021-2022 (ODD SEM)

Faculty Sign

I/Mrs.C. Anitha

Figure 2.2.1.5 and 2.2.1.6 - Contents of Practical Course File

A. **Adherence to academic calendar.**

- A detailed academic schedule is prepared well in advance in order to facilitate for planning of course deliver and others academic events.
- The Affiliating Body Anna University, Chennai gives an academic schedule for every semester. It provideopening and closing dates of the semester, internal assessment test schedule, University laboratory and theory examination dates for upcoming semester.
- As per Anna University academic schedule the institute frame the academic calendar after finalizing the institutional activities before the commencement of every semesterwhich incorporatesreopening and closing dates of the semester, common holidays, internal assessment test schedule, study holidays, etc.
- With institute academic calendar as reference, faculty member along with Head of the department conduct department meeting to frame academic plans such as lesson plan, timetable and course file.
- Thedepartment academicplanner includes conduction of events like

- Guest lectures
- Industrial visits
- Internship
- Conferences
- SDP, FDP
- Value added course
- Society activities
- Career development activities etc.

- Students are advised to plan their internship, training and industrial visits in accordance with thecalendar.
- Figure 2.2.1.7 depicts the process of developing and adhering to an academic schedule.Figure 2.2.1.8 depicts Anna Universitys and our institution Academic Calendar.

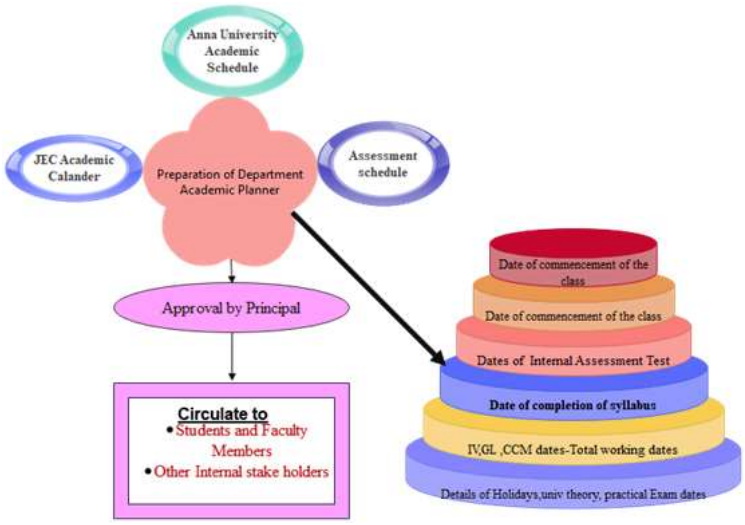


Figure 2.2.1.7 Process for developing and adhering to an academic calendar

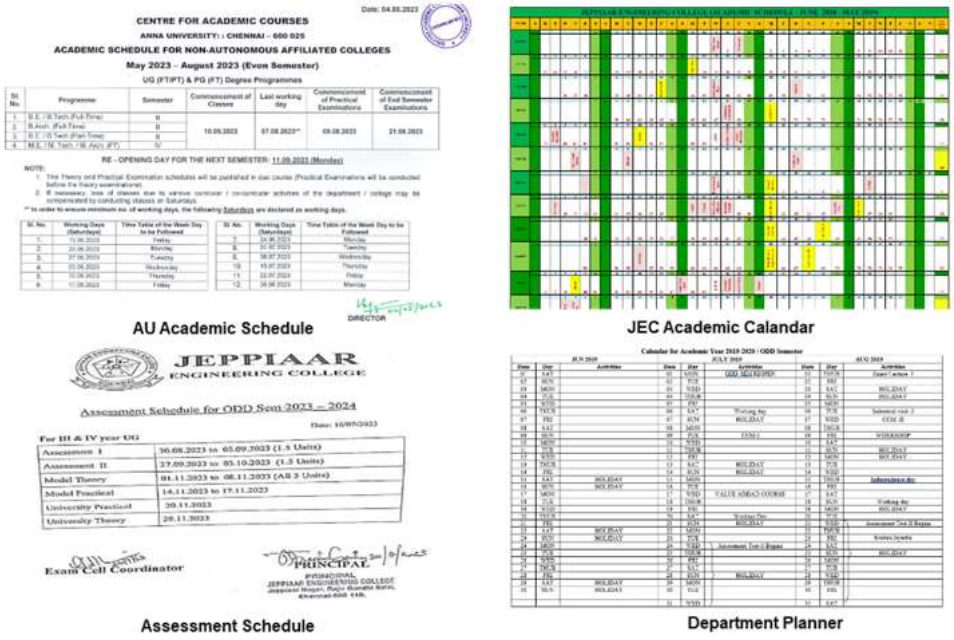


Figure 2.2.1.8 Academic Calendar Preparation

A copy of academic calendar is distributed to all the faculty members at least two weeks before the commencement of each semester in order to prepare the course documents for effective teaching. Also, it is distributed to other internal stakeholders like Physical Director, Librarian, Training & Placement Officer, Hostelwardens for pre-planning any other activities.

B. Use of various instructional methods and pedagogical initiatives

Instructional Methods is a non-traditional form of lecturing, which focuses on demonstration, recitation, memorization, or combinations of all and interaction with students and put forth their views. The objective of instructional methods is to provide direction for the instructional process by clearly stating the intended learning outcomes. Generally, Teaching and Learning process have two perceptions such as effective teaching and effective learning .Figure 2.2.1.9 gives the list of instructional methods and pedagogical Initiatives

Figure 2.2.1.9 List of instructional methods and pedagogical Initiatives.

The Instructional Methods and Pedagogical Initiatives comprises of

Learning Management System (LMS):

Learning Management System (LMS) helps the students to learn beyond classroom environment. All the faculty members created LMS through CAMU for the course

Course materials, information, posting Assignments are done through CAMU which helps the students to access the materials round the clock.

Passive Learning: This methodology uses the traditional way of teaching using chalk and talk

Active Learning: Active learning is an approach for actively engaging the students in the classroom. Therefore, active learning activities are conducted for short duration to increase the attention span of the student which helps to transfer knowledge in a better way.

Instructional Methods

The college has taken several steps to portray and channelize the energies and time for fruitful way in the teaching – learning process. The faculty of department adopts various innovative Teaching & Learning methodologies to create the best learning environment for student. To accomplish this, different teaching strategies are followed like preparation of course plans; develop course material, effective content delivery and pedagogical initiatives.

The subjects to the faculty members are allocated based on competency matrix.

- The copies of the time tables are made available in the department notice board, class notice board.
- The faculty members prepare course planand course materials for the respective courses for the effective content delivery.
- Faculty membermaintains a course file that includes time table, syllabus, course plan, university question papers; Question bank, internal test and assignments question papers, sample answer scripts and mark statements, remedial class details.
- The progress of the course plan is verified through course file and class record periodically by the Head of the Department.
- The lecture mode of delivery is varied depending upon the nature of the subject. To improve the teaching and learning process various instructional methods are formulated by the faculty members with the pedagogical initiatives.
- To equip the faculty members for improving the teaching methodology, the faculty members at regular intervals are exposed to various faculty development programs, workshops, seminars, orientation programs at various levels.

Pedagogical Methods

- The various pedagogical methods like Practical, Lecture Mode, Audio Visual aids, Language lab, Industrial visit, Workshop, technical quiz, Group Discussion, Conference were utilized.
- These methodologies include traditional black board teaching, presentations, collaborative learning methods are used where every concept is explained with real world illustrations, design and problematic aspects are conveyed by a short cut method.
- Invited talks and seminars on the current trends are done regularly from the industry persons. The teaching process has a blend of concepts, applications and problem-based teaching.
- Projector is used for delivering NPTELvideoLectures .
- The collaborative learning is achieved through tutorialcase studies wherein the interaction between students and teachers are high.
- These also facilitated the use of internet clippings and animation modules. At the same time, several tutorials available in the internet are also supplemented, which provides modulation of voices persons and stimulate the students for higher studies.

Collaborative learning:

- Collaborative learning is a mode in which students learn through collaboration with their peers. Collaborative learning methodology is used to enhance the student's higher level thinking, oral communication, and self-management and leadership skills.Strategy followed for collaborative learning is grouping of students and work together to complete the task. This type of learning helps for solving problems in Tutorial hours and to enhance self-learning skills through activities.

E-Learning:

- All the faculty members are encouraged to pursue online courses from foreign University through Edx (MITx) and Coursera. Based on experience gain through online course, the faculty members use the resource and enhance the teaching methodology. Faculty member use NPTEL videos, Conceptual videos and Animated Videos which add value to the teaching learning process.

Use of Technology: Faculty members use Virtual laboratory, simulation tool and software to make the students to have better conceptual understanding.

Experiential Learning: Students are exposed to experiential learning environment through mini projects, Interdisciplinary projects, Value Added Courses and Programming language skills

Mini Projects: In order to encourage the students, are celebrated through which a platform is provided to showcase their talents. The glimpses of students doing their mini projects are shown in Figure 2.2.1.10

Figure 2.2.1.10 Participation in Project Expo

Value added course: The hands-on experience on latest technologies are given through Value Added Courses in which the students will work individually or working in team in technologies like Robotic, IoT, Sensors, LoRa, etc. as shown in Figure 2.2.1.11. It is important for educational institutions to supplement the curriculum as:

1. To make students better prepared to meet industry demands.
2. To bridge the skill gaps and make students industry ready.
3. To provide an opportunity to students to develop inter-disciplinary skills.

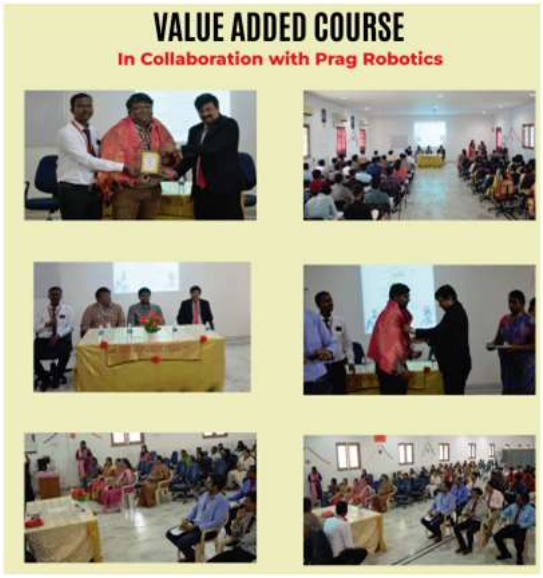


Figure 2.2.1.11 VAC Program

ProgrammingLanguage Skills: Studentsare motivated to learnprogramming languages likeC, C++, Java,python and SQL with hands-on experience which stimulates them to chooseIT based career.

C. Methodologies to support weak students and encourage bright students:

Process of identification of slow learners and bright students is illustrated below:

- The Jeppiaar Engineering College always had the culture of encouraging bright students by providing them necessary guidance and moral support. The students learning levels are evaluated depending on their performance.
- Bright students and slow learners are determined in the first year based on cut-off marks, classroom involvement, and questioning abilities.
- Bright students and slow learners are identified in the upcoming semester based on University Examination performance (CGPA) and active involvement in events organized inside and outside the college.
- Students with a CGPA greater than 8.5 are classified as Bright students.
- Slow learners are students that have a CGPA of less than 7.
- Figure 2.2.1.12 depicts the process of identifying slow learners and bright students, as well as the actions done.

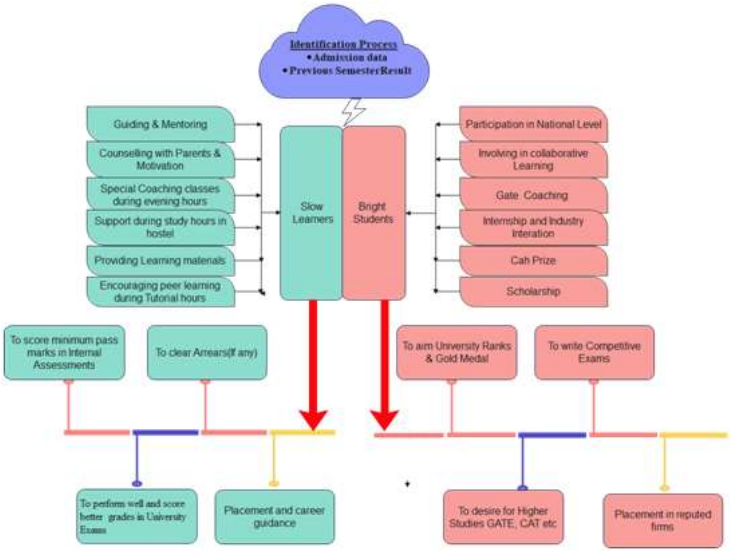


Figure 2.2.1.12 depicts the process of identifying slow learners and bright students

Methodology to enrich the skills of bright students:

Scholarship:

The Jeppiaar Engineering College constantly provides scholarships to Meritorious students. Every year, some students study on a fee waiver.Table 2.2.1.1 displays the number of students who received scholarships for each academic year.

Table 2.2.1.1 Number of students benefited through scholarship

S.No	Academic Year	No of Students received Scholarship			
		I Year	II Year	III Year	IV Year
1	2022-2023	10	10	8	4
2	2021-2022	10	8	4	3
3	2020-2021	7	4	3	3

Cash Prizes and Medals:

- Various motivational programs have been established in order to motivate bright students. They are encouraged to engage in numerous competitions, workshops, and conferences.
- Bright students with strong academic records are encouraged to take competitive examinations such as GATE, GRE, and others.
- Medals and financial incentives are awarded to students who achieve a O grade in theory, the top three students in each class who achieve university level ranks, and the batch topper in university Examination. Table 2.2.1.2 depicts the numerous methodologies for identifying bright students. Figure 2.2.1.13 depicts a sample copy for bright students motivation

Table 2.2.1.2 Identification and motivation for Bright Students

Identification Criteria	Actions taken
Top ten academic toppers	• Motivate them to continue their Excellency in academics. • Display of topper student's details • To take participate in inter collegenational/international fest. • To take up competitive examinations like GATE, GRE etc.
Top three students of each class.	• Awarded with medals and certificate.
Students securing'O 'Grade in Theory subject	• Awarded with medals.
Students securing ranks at university level.	• Distribution of Gold medals.
Batch Topper in university examination	• "Dr.M. S. Swaminathan" Award

Figure 2.2.1.13 Sample copy for Bright Students motivation

BestOutgoingStudentAward ("Dr.M. S. Swaminathan" Award)**:**The outstanding students are also nominated for the departments Best Outgoing Students Awards. Tables 2.2.1.3 and Figure 2.2.1.14 provide the details of the Dr.M. S. Swaminathan" Award

Table 2.2.1.3 Details of the Dr.M. S. Swaminathan" Award

S.No	Name of the Student	CGPA	Batch
1.	JAMİLA.L.M	8.8	2017-2021
2.	HARSHINI A	9.04	2016-2020
3.	PAVITHRA A	9.02	2015-2019

Figure 2.2.1.14 Dr.M. S. Swaminathan" Award

Motivation for University Ranks: Mentors, class advisors, and the department head continuously encourage identified bright students to achieve University Ranks. Table 2.2.1.4 displays information on University Rank Holders, and Figure 2.2.1.15 depicts ansample copy of a University Rank Holders certificate.

Table 2.2.1.4 Details of University Rank Holders

S.No	Name of the Student	Batch	CGPA	RANK
1	HARSHINI A	2016-2020	9.04	21
2	PAVITHRA A	2015-2019	9.02	23
3	ELIZABETH ABRAHAM	2014-2018	9.06	16
4	DHARANI. K	2014-2018	9.04	18
5	VAISHNAVI. V	2014-2018	9.00	22
6	ANGELINE KESHYA. D	2014-2018	8.81	41
7	SOUNDHARYA. L	2014-2018	8.79	43
8	REMILA DASLIN. M	2014-2018	8.77	45
9	KAVIPRIYA. G	2014-2018	8.75	47

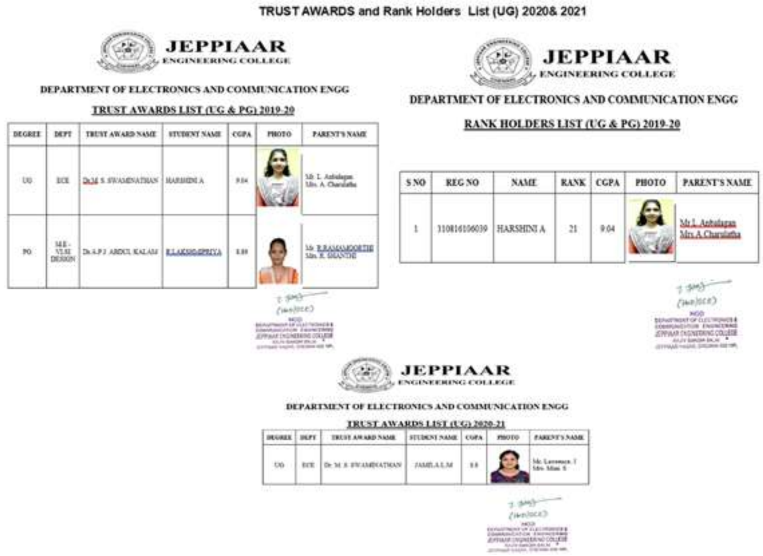


Figure2.2.1.15 Details of University Rank Holders

Encouraging to pursue Online Courses: Bright students are supported to take online courses through Edx, Coursera, and other platforms for their enrichment. Table 2.2.1.5 shows the number of students who finished online courses for each academic year, and Figure 2.2.1.16 shows the specifics of online courses completed and an example certificate.

Table 2.2.1.5 Details of online courses completed by students

S.No	Academic Year	Online Course
1	2022-2021	85
2	2021-2020	75
3	2020-2019	60

Figure 2.2.1.16 Sample copy of Online courses completed certificate

Motivation for Higher Studies:

Bright students are enticed to take numerous higher education admission exams such as GATE, CAT, and others.Figure 2.2.1.17 depicts a sample copy of the brilliant student's higher Study information.

PG ADMISSION LETTER

SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

PROVISIONAL ADMISSION LETTER

Date: 17.05.2021

SNAP ID : 210122136
Category : OPEN
GE-PIWAT ID : 20MP0201
Constituent : Symbiosis Institute of Digital and Telecom Management (SIDTM)
Programme: MBA (DTM)

Dear M POOJA ,

Congratulations!

We are pleased to inform you that you have been selected for admission to the two-year full time MBA (DTM) 021-2023 at Symbiosis Institute of Digital and Telecom Management (SIDTM).

Please note that this admission is provisional and will be confirmed on payment of fees (As per Annexure I) on or before 01-June-2021, 11:59 PM, subject to the fulfilment of eligibility conditions (As per Annexure II) and in accordance with the rules of the Symbiosis International (Deemed University) (SIU).

DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI - 600 025
and
DIRECTORATE OF COLLEGIATE EDUCATION, CHENNAI - 600 006
TAMIL NADU MBA ADMISSION 2020
PROVISIONAL ALLOTMENT ORDER FOR MBA COURSES*

Ref.No.TNMBA/GCT/ALLOT/2020 Date: 16/11/2020

The under mentioned candidate is informed that he/she has been PROVISIONALLY allotted for admission to the First Year of the following Degree course and College of study as detailed below as per his/her option:

Application No	: 1202011070
TANCET 2020 Reg.No	: 11241399
Admission No	: 2020/1422/MBA/10039
Name of the candidate	: NAVAMANI N
Community	: BC
Course & Category	: MBA - Minority
College Allotted	: 1422-SRM Valliammai Engineering College (AUTONOMOUS), Kattankulathur, Chennai 603203
Quota	: BC

The candidate should report to the Principal/Dean/Director of the above college allotted with original documents mentioned overleaf on or before 25-11-2020

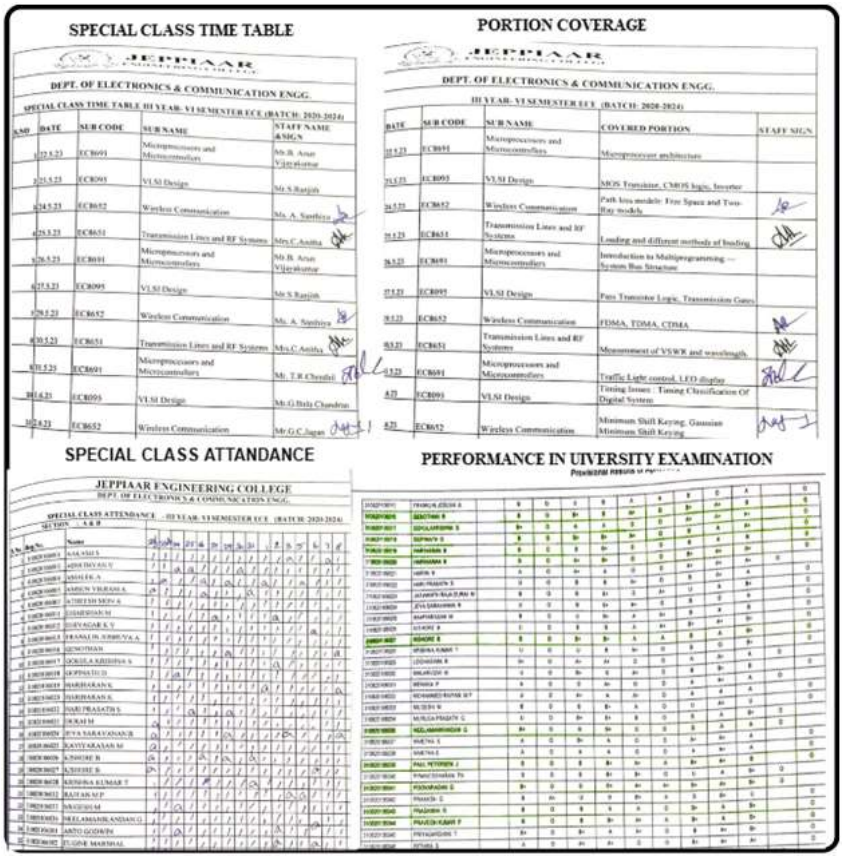
Figure 2.2.1.17 Higher Study details

Methodologies to support weak students

- Tutorial lessons for weak students were held every evening for two hours. Periodic tests were conducted, and extra care was taken to score well in both internal and university examinations.
- The students who are lacking of English language skills will be trained by language experts through BEC and step class.Study camp will be conducted for weak students those who stay in hostel. The hostel students will be trained for exam by conducting coaching classes in hostel.
- The performance of the slow learners is intimated regularly to their parents. Table 2.2.1.6 illustrates the Guidelines to identify Weak students. Figure 2.2.1.18 illustrates the special class timetable, portion coverage, and attendance

Table 2.2.1.6: **Guidelines to identify Weak students**

Identification Criteria	Actions taken
Students scoring less than 60% of marks in Internal Assessment.	1. Student counselor mentor their progress regularly advising students about attending classes, making up classes missed, and getting additional help. 2. Intimating parents to counsel their wards. 3. Conduction of orientation classes
Diploma students who entered with less basics of mathematics	Conduction of orientation classes.
Students who fail in semester exams	Conduction of extra coaching classes to those who failed in previous semester subjects.



SPECIAL CLASS TIME TABLE

JEPPIAAR

DEPT. OF ELECTRONICS & COMMUNICATION ENGG.

SPECIAL CLASS TIME TABLE III YEAR- VI SEMESTER ECE (BATCH: 2020-2024)

S.NO	DATE	SUB CODE	SUB NAME	STAFF NAME &SIGN
	22.5.21	EC8691	Microprocessors and Microcontrollers	Mr.B. Arun Vijayakumar
	25.5.21	EC8093	VLSI Design	Mr.S.Ranjith
	24.5.21	EC8652	Wireless Communication	Ms. A. Sasthiya
	25.5.21	EC8651	Transmission Lines and RF Systems	Mrs.C.Anitha
	26.5.21	EC8691	Microprocessors and Microcontrollers	Mr.B. Arun Vijayakumar
	27.5.21	EC8093	VLSI Design	Mr.S.Ranjith
	28.5.21	EC8652	Wireless Communication	Ms. A. Sasthiya
	30.5.21	EC8651	Transmission Lines and RF Systems	Mrs.C.Anitha
	31.5.21	EC8691	Microprocessors and Microcontrollers	Mr. T.R.Chenthil
	31.5.21	EC8093	VLSI Design	Mr.G.Bala Chandran
	1.6.21	EC8652	Wireless Communication	Mr.G.C.Jagan

PORTION COVERAGE

JEPPIAAR

DEPT. OF ELECTRONICS & COMMUNICATION ENGG.

III YEAR- VI SEMESTER ECE (BATCH: 2020-2024)

DATE	SUB CODE	SUB NAME	COVERED PORTION	STAFF SIGN
22.5.21	EC8691	Microprocessors and Microcontrollers	Microprocessor architecture	
24.5.21	EC8093	VLSI Design	MOS Transistor, CMOS logic, Inverter	
24.5.21	EC8652	Wireless Communication	Path loss models: Free Space and Two-Ray models	
25.5.21	EC8651	Transmission Lines and RF Systems	Loading and different methods of loading	
26.5.21	EC8691	Microprocessors and Microcontrollers	Introduction to Multiprogramming — System Bus Structure	
27.5.21	EC8093	VLSI Design	Pass Transistor Logic, Transmission Gates	
28.5.21	EC8652	Wireless Communication	FDMA, TDMA, CDMA	
30.5.21	EC8651	Transmission Lines and RF Systems	Measurement of VSWR and wavelength	
31.5.21	EC8691	Microprocessors and Microcontrollers	Traffic Light control, LED display	
1.6.21	EC8093	VLSI Design	Timing Issues : Timing Classification Of Digital System	
2.6.21	EC8652	Wireless Communication	Minimum Shift Keying, Gaussian Minimum Shift Keying	

SPECIAL CLASS ATTANDANCE

JEPPIAAR ENGINEERING COLLEGE

DEPT. OF ELECTRONICS & COMMUNICATION ENGG.

SPECIAL CLASS ATTENDANCE – III YEAR- VI SEMESTER ECE (BATCH: 2020-2024)

PERFORMANCE IN UIVERSITY EXAMINATION

Figure 2.2.1.18 Special Class timetable, portion coverage, and attendance.

Quality of classroom teaching

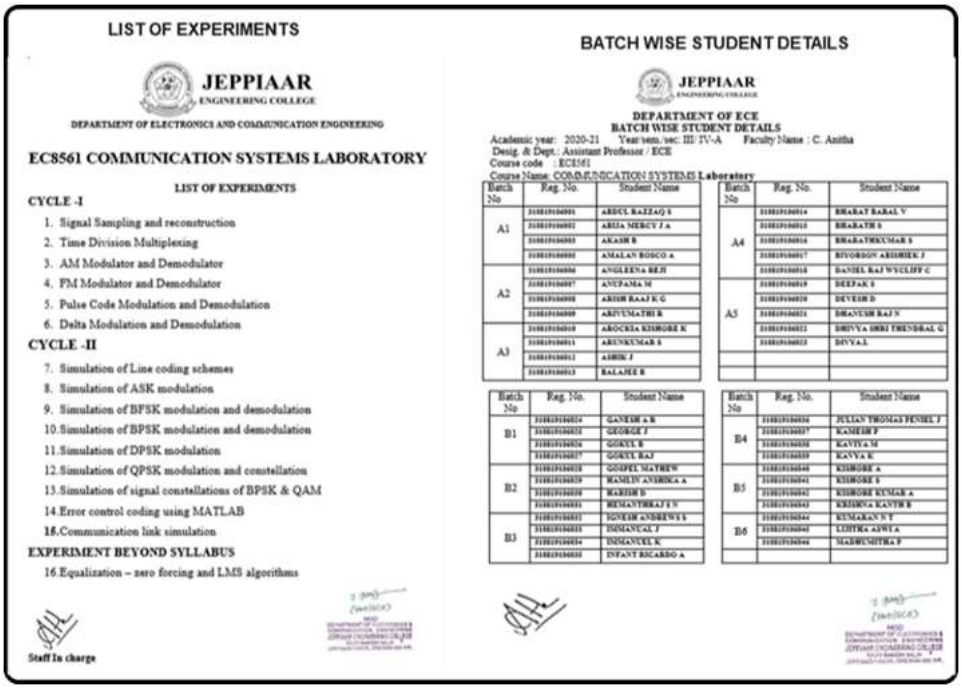
- Advanced teaching aids such as LCD projectors are used in order to make students to understand the concepts and interpret in a better manner. The faculty are now oriented towards Outcome Based Education (OBE) and are actively utilizing the OBE to cater the learning needs of students by innovative way.
- Each classroom is well-equipped with ICT equipment to create a better atmosphere for successful teaching and learning.
- Faculty members use presentations (PPTs) to bring lessons to life with rich, engaging activities that capture students attention, combining real-time assessment and real-world experience into the learning process. Faculty members use active learning activities to create a dynamic classroom environment to break up the monotony of students during class hours.
- In the classroom, components and models are used to demonstrate concepts. Real-time examples are provided in the form of videos.
- For tutorial lessons, the collaborative learning style is used, which requires students to sit in groups and solve problems.
- The Department Head and Principal visit classes on a regular basis to examine the teaching process and offer ideas to faculty members.

Conduct of experiments

- All experiments prescribed in the curriculum were conducted with advanced instruments. Laboratory experiments in lab classes will create an opportunity for the students to implement the concepts they studied in theoretical classes. As per the university guidelines 10-12 experiments are to be conducted.
- One or two experiments are conducted beyond the specified list for relevant courses. Course committee of respective specialization form a group with a team leader to discuss the preparation of manual, Material requirements, conduction of experiments and cycle of experiments before commencement of semester.
- The Laboratories sessions were conducted in session of 2.15 hours. In each session the faculty explains the circuits/logic, connections, procedure and experimentation. The students will write the complete experiment concerned in the observation book, and then rig up /code/debug/execute/verify the theoretical results with the experimentation results and the same can be documented in the record book which will be evaluated.
- Viva questions will be prepared in advance for all the experiment. The college organize inter collegiate contests, Symposiums, to encourage students to demonstrate their practical skills.

D. Continuous Assessment in the laboratory

- According to Anna University regulations, students are exposed to practical learning during laboratory sessions.
- The laboratory manual is drafted by the faculty members in charge of the lab, based on the curriculum established by Anna University. The lab manual containslist of Experiments, Aim, Objective, Required Apparatus, Theory, Procedure, Circuit Diagram, Tabulation, Model Graph, Inference and Discussions, Result, Viva-Voce, Applications, and References. Additional experiments are added to the laboratory guides as needed.
- Additional experiments relating to theory courses are carried out depending on the academic schedule, as illustrated in Figure 2.2.1.19



LIST OF EXPERIMENTS

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

EC8561 COMMUNICATION SYSTEMS LABORATORY

LIST OF EXPERIMENTS

CYCLE -I

1. Signal Sampling and reconstruction
2. Time Division Multiplexing
3. AM Modulator and Demodulator
4. FM Modulator and Demodulator
5. Pulse Code Modulation and Demodulation
6. Delta Modulation and Demodulation

CYCLE -II

7. Simulation of Line coding schemes
8. Simulation of ASK modulation
9. Simulation of BFSK modulation and demodulation
10. Simulation of BPSK modulation and demodulation
11. Simulation of DPSK modulation
12. Simulation of QPSK modulation and constellation
13. Simulation of signal constellations of BPSK & QAM
14. Error control coding using MATLAB
15. Communication link simulation

EXPERIMENT BEYOND SYLLABUS

16. Equalization – zero forcing and LMS algorithms

Staff In charge

BATCH WISE STUDENT DETAILS

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ECE
BATCH WISE STUDENT DETAILS

Academic year: 2020-21 Year/sem./sec: III/ IV-A Faculty Name : C. Anitha
Desig. & Dept.: Assistant Professor / ECE
Course code : EC8561
Course Name: COMMUNICATION SYSTEMS Laboratory

Batch No	Reg. No.	Student Name
A1	310819106001	ABDUL RAZZAQ S
	310819106002	ABSIA MERCY J A
	310819106003	AKASH R
	310819106004	AMALAN BOSCO A
A2	310819106006	ANGELENA BEJI
	310819106007	ANUPAMA M
	310819106008	ARJUN RAAJ K G
	310819106009	ARJUNAATHI R
A3	310819106010	AROCKIA KISHORE K
	310819106011	ARUNKUMAR S
	310819106012	ASHIK J
	310819106013	BALAJEE R

Batch No	Reg. No.	Student Name
A4	310819106014	BHARAT BABAL V
	310819106015	BHARATH S
	310819106016	BHARATHKUMAR S
	310819106017	BIVORSOV ARIMHER J
	310819106018	DANIEL RAJ WYCLIFF C
A5	310819106019	DEEPAK S
	310819106020	DEVESH D
	310819106021	DHANUSH RAJ N
	310819106022	DHIVYA SREE THENDRAL G
	310819106023	DIVYA L

Batch No	Reg. No.	Student Name
B1	310819106024	GANESH A R
	310819106025	GEORGE J
	310819106026	GOKUL S
	310819106027	GOKUL RAJ
B2	310819106028	GOSPEL MATHEW
	310819106029	HAMLIN ANUSHKA A
	310819106030	HARISH D
	310819106031	HEMANTHRAJ I N
B3	310819106032	IGNESH ANDREW S
	310819106033	IMMANUEL J
	310819106034	IMMANUEL K
	310819106035	INFANT RICARDO A

Batch No	Reg. No.	Student Name
B4	310819106036	JULIAN THOMAS PENIEL J
	310819106037	KAMESH P
	310819106038	KAVIYA M
	310819106039	KAVYA K
B5	310819106040	KISHORE A
	310819106041	KISHORE S
	310819106042	KISHORE KUMAR A
	310819106043	KRISHNA KANTH R
B6	310819106044	KUMARAN S T
	310819106045	LIMTHA ALWIA
	310819106046	MADHUMITHA P

Figure 2.2.1.19 Details of additional experiment in practical plan and Batchwise students.

- Students are divided into two batches based on class strength, with a maximum of 30 to 35 students each batch. Every week, the two laboratory classes are arranged in simultaneously. The nature of the laboratory is used to create a detailed laboratory plan. Each batch of students are divided into groups of 3 to 4 students.
- The experiments are planned based on the availability of resources (i.e., one experiment for each batch or a cycle of experiments on a rotation basis). The faculty members in charge of the laboratory course are asked to do the experiment before the start of classes each semester to enrich the way the laboratory is conducted.
- On the first laboratory session, introductory lessons are held to explain each experiment, as well as the safety laws and regulations that must be observed in the laboratory.
- The laboratory is staffed by two faculty members and a lab technician to ensure that the practical course runs smoothly.
- Students will conduct the experiments as instructed by faculty members and record the results. The experiments output is verified by a faculty member, and if any clarifications are required, the students ask the faculty members to clear their doubts.
- Students perform the necessary calculations and plot the graph (if necessary), and they are asked to analyze the concept both theoretically and practically.
- On a rotating basis, one group from each laboratory session is requested to deliver a presentation regarding the experiment and its applicability. The presentation in the practical course helps to assess the students technical knowledge and communication skills. Individual student presentations are recorded and grades are assigned.
- Following the completion of the experiment, students are asked to complete the record in subsequent laboratory sessions.

- The process followed while conducting the laboratory course is shown in Figure 2.2.1.20

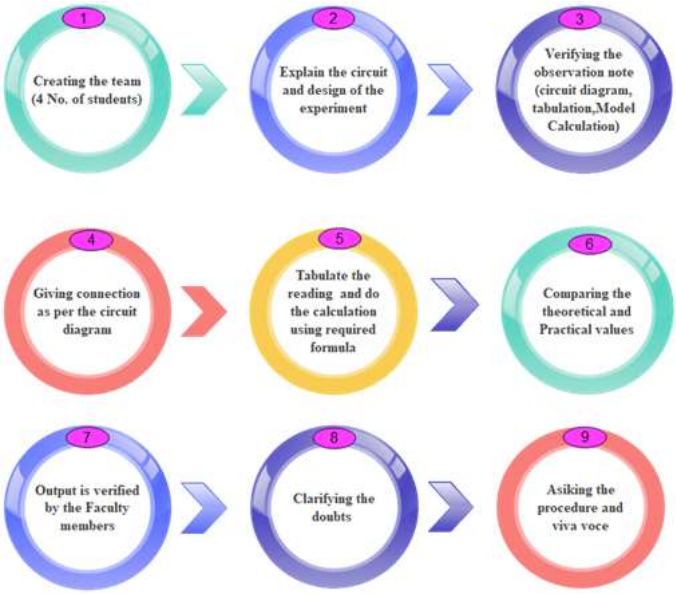


Figure:2.2.1.20 Process followed while conducting in the Laboratory Course

E.CONTINUOUS ASSESSMENT IN THE LABORATORY

In the event of practical courses, the maximum internal assessment grade shall be 60. Every practical exercise / experiment must be evaluated based on the execution of the experiment / exercise and the keeping of records. At least one test must be performed.

The following factors were used to arrive at the Internal Assessment score of 60:

- 75 marks will be awarded for successfully completing all of the necessary experiments in the laboratory, and
- 25 marks will be awarded for the test.
- The total mark is converted to a maximum of 60 marks and rounded to the nearest integer.

The laboratory courses continuous assessment is based on the two techniques listed below.

- Evaluation of Laboratory Observation, Record
- Model Practical Examination

Evaluation of Laboratory Observation, Record (75 marks)

v. The Evaluation of Laboratory Observation, Record for each experiment is based on three categories namely performance, record note and viva-voce.

- Performance: Students performance are analyzed during the execution of the experiment based on circuit connection, recording observation, calculations, plotting he graph (if required)
- Record Note: The marks are awarded based on timely submission, mistakes, neatness and presentation.
- Viva-Voce: The marks are awarded based on their conceptual understanding and oral communication The marks awarded for Evaluation of Laboratory Observation, Record for each experiment is shown in Table 2.2.1.7.

Table2.2.1.7 Evaluation of Laboratory Observation, Record during Laboratory

S.No	Description	Marks
1	**Performance:** Students' experiment completion levels are tracked, and grades are assigned accordingly.	25
2	**Record Note:** Completion and submission of weekly workout record work within one week of completion	25
3	**Viva-Voce:** Students' response abilities are recorded and graded accordingly.	25
	Total	75

Model Practical Examination

- For 100 marks, a model practical examination of 3 hours duration is held following the completion of all experiments or in the middle of the semester (depending on the availability of working days).
- Tables 2.2.1.8, 2.2.1.9 and 2.2.1.10 show the assessment for model practical examinations based on the characteristics of the laboratory and Internal Assessment calculation accordance with Anna University regulations.

Table 2.2.1.8 Assessment of Circuit based practical courses

Aim & Procedure (10)	Circuit Diagram (25)	Design & Calculation (20)	Connection and Output (20)	Result & Graphs (15)	Viva-voce (10)	Total (100)

Table 2.2.1.9 Assessment of Program based practical courses

Aim & Algorithm (15)	Program/ Procedure (35)	Observation / Execution (30)	Result (10)	Viva-voce (10)	Total (100)

Table2.2.1.10 Internal Assessment during Laboratory

Internal Assessment (100 Marks)	
Evaluation of Laboratory Observation, Record	Test
75	25

F.Student feedback of teaching learning process and actions taken

- Feedbacks were taken from the students regarding subjects, faculties, etc. regularly in-order to solve their problems. As per their expectation, the teaching aids will be modified by the faculty and make them to understand efficiently.
- Provide text books and reference books for all the students for effective teaching learning process. The feedback will be collected for all the courses.
- Based on the feedback received from the student head of the department will suggest the respective staff to attend the FDP related to that subject in order to improve their teaching.Students provide feedback on the Teaching - Learning process, as illustrated in Table 2.2.1.11.

Table No 2.2.1.11 **List of Feedback Methods**

S.No.	Feedback Mechanism	No. of times/semester
1	Class Committee Meeting	Thrice in a semester
2	Program end survey	Once in a Year
3	Course end survey	Once in a semester
4	Faculty Feedback	Once in a semester
5	HOD's Feedback	Once in a semester
6	Semester end students feedback	Once in a semester

Figure 2.2.1.21 depicts a flow chart of the student feedback system of the Teaching - Learning process and the actions made as a result.

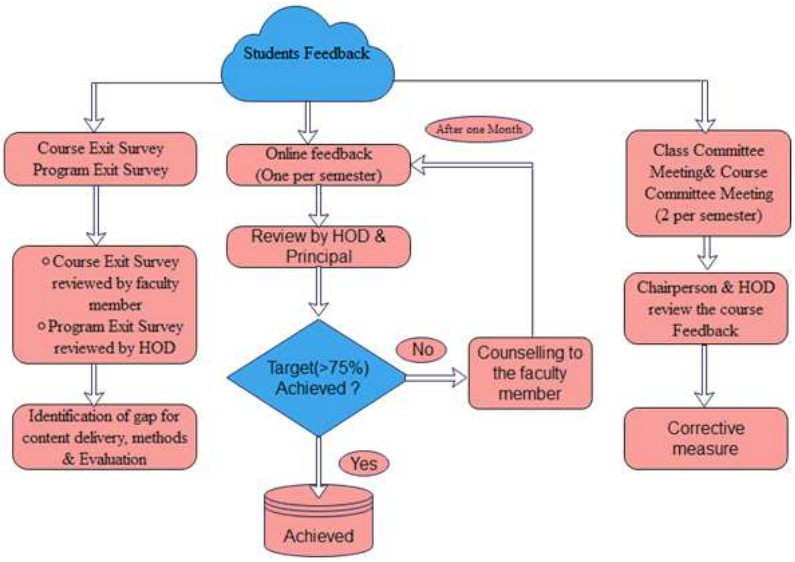
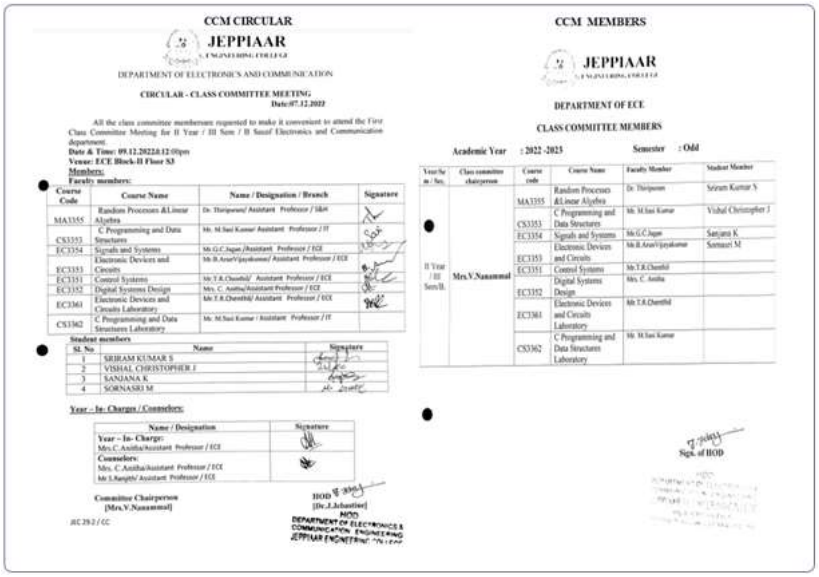


Figure2.2.1.21 Students feedback system of Teaching-Learning process action taken

Class Committee Meetings

- According to Anna University Regulation, a Chairperson for Class Committee Meeting is nominated by the Head of the Department for each class at the start of the semester.
- Class Committee Meetings are held three times per semester, preferably in the second week, following before the Internal Assessment Tests I and II.
- The meeting is used to obtain student feedback on the Teaching Learning Process. Each courses content delivery is elaborated by the student representative.
- The Chairperson of the Committee Meeting and the Head of the Department review the student feedback. In the event that pupils encounter challenges, teaching members are advised to take corrective action.
- Figure 2.2.1.22 depicts a sample copy of CCM details



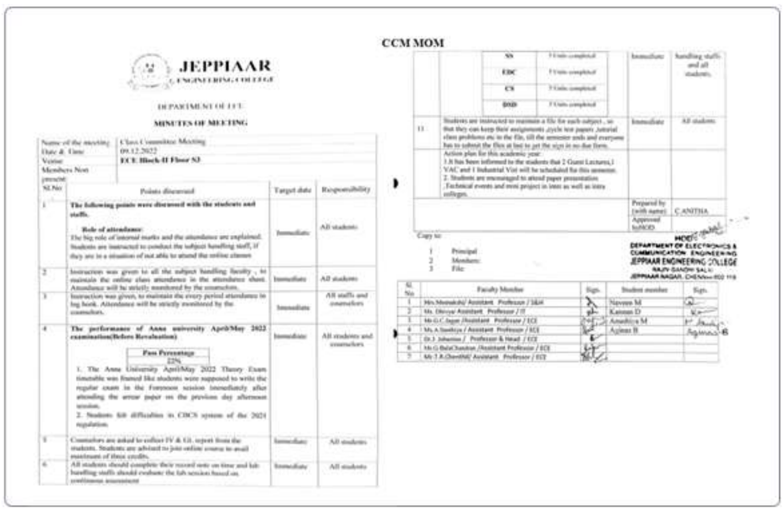


Figure 2.2.1.22 Class Committee Constitution, Circular and Minutes

Online Feedback System:

The principal created a Google form to obtain automated, transparent input from all students concerning the teaching-learning process followed by faculty members. Following the Internal Assessment Test - I, all students provide comments on the faculty members teaching-learning process using an online portal.

The parameters for the theory course and lab course are listed in the table 2.2.1.12 and table 2.2.1.13.

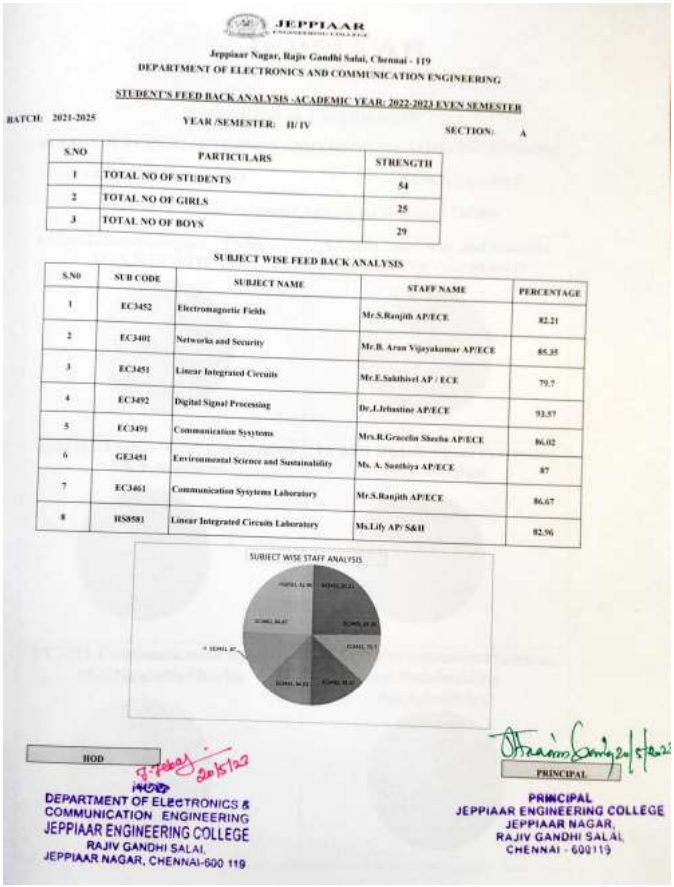
Table 2.2.1.12 Feedback on Theory Courses

S. No.	Questionnaire	Rating/ Feedback
1	Subject knowledge of the teacher	1-10
2	Communication skills of the teacher	1-10
3	Creativity of the teacher to make the class interesting	1-10
4	Usage of relevant practical examples in the class by the teacher	1-10
5	Encouragement given by the teacher to the students when asking the questions in the class	1-10
6	Availability of the teacher during non-class hours for doubt clarification	1-10
7	Special attention given by the teacher to the students who scored low marks in Assessment tests by means of extra classes, special coaching etc.,	1-10
8	Teacher giving assignments, properly evaluating the exam papers & assignments and retuning them on time	1-10
9	Level of skills and competencies instilled by the teacher which will be useful for your career	1-10
10	Challenging and interesting level of the course handled by the teacher	1-10
11	State the good things about the teacher	Statement
12	State the area of improvements for the teacher while teaching your junior students in future	Statement

Table 2.2.1.13 **Feedback on Laboratory Courses**

S. No.	Questionnaire	Rating/ Feedback
1	Adequacy of the number of experiments offered	1-10
2	Subject knowledge of the teacher handling lab	1-10
3	Guidance and assistance from the teacher during lab classes	1-10
4	Encouragement given by the teacher to the students when asking the questions in the lab classes	1-10
5	Teacher being punctual in starting/ ending the lab class and his/her continuous availability during the lab classes	1-10
6	State your overall experience of this lab/ feedback	Statement

- The Head of the Department generates consolidated information of student input for individual faculty members and classes for analysis, as shown in Figures 2.2.1.23
- Based on the input, faculty members who received less than 70% will be counseled by the Department Head on the characteristics that are low.
- After a month, the subject with less than 70% of the marks receives re-feedback. If the same circumstance occurs again, the Institutions Head will take further measures.



JEPPIAAR

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 119

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

STUDENT'S FEED BACK ANALYSIS -ACADEMIC YEAR: 2022-2023 EVEN SEMESTER

BATCH: 2021-2025 YEAR /SEMESTER: II/ IV SECTION: A

S.NO	PARTICULARS	STRENGTH
1	TOTAL NO OF STUDENTS	54
2	TOTAL NO OF GIRLS	25
3	TOTAL NO OF BOYS	29

SUBJECT WISE FEED BACK ANALYSIS

S.NO	SUB CODE	SUBJECT NAME	STAFF NAME	PERCENTAGE
1	EC3452	Electromagnetic Fields	Mr.S.Ranjith AP/ECE	82.21
2	EC3401	Networks and Security	Mr.B. Arun Vijayakumar AP/ECE	85.35
3	EC3451	Linear Integrated Circuits	Mr.E.Sakthivel AP / ECE	79.7
4	EC3492	Digital Signal Processing	Dr.J.Jebastine AP/ECE	93.57
5	EC3491	Communication Systems	Mrs.R.Graceln Sheeba AP/ECE	86.02
6	GE3451	Environmental Science and Sustainability	Ms. A. Santhiya AP/ECE	87
7	EC3461	Communication Systems Laboratory	Mr.S.Ranjith AP/ECE	86.67
8	HS8581	Linear Integrated Circuits Laboratory	Ms.Lily AP/ S&H	82.96

SUBJECT WISE STAFF ANALYSIS

HOD

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING JEPPIAAR ENGINEERING COLLEGE RAJIV GANDHI SALAI, JEPPIAAR NAGAR, CHENNAI-600 119

PRINCIPAL

PRINCIPAL JEPPIAAR ENGINEERING COLLEGE JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600119

Figures 2.2.1.23 : Feedback Analysis

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20) Institute Marks : 20.00

A. Quality of questions papers and Assignments:

Affiliated Scheme

- Each course, theory component, theory with laboratory component, and practical (including project work and viva voce Examinations) will be graded for a total of 100 points.
- The continuous internal assessment will carry 40 marks for all theory components while the End - Semester University examination will carry 60 marks .
- Students are examined on a continual basis by administering two Internal Assessment Tests per semester, Unit Tests (optional - not included in assessment), and Model Test(s).
- Internal Assessment tests are administered centrally by our institutions Examination Control Office in accordance with a well-defined procedure.

Internal Assessment Test Question Paper Setting Procedure

- The academic timetable includes the sections for Internal Assessment Tests, the date of the tests, and the deadline for submitting the internal assessment question paper.
- The faculty member creates two question papers for individual courses and three for shared courses in accordance with the standards indicated in Figure 2.2.2.1 for all three Internal Assessment examinations. The question paper contains questions based on Revised Blooms taxonomy (RBT) levels that are matched to Course Outcomes (COs) in order to assess students at various RBT levels. The question paper setting standards assist faculty members in ensuring an equitable distribution of questions across all COs and learning levels.

The following assessment processes are adopted for a course:

The internal examination question paper format is framed / updated by Controller of Examination (COE) in discussion with Principal based on affiliated University model. The tests are conducted for a maximum of 60 marks for Assessment TestI, II&III and 100 marks for Model Exam.

Table No 2.2.2.1: Internal assessment

Assessment name	Portion Covered	Time duration	Marks
Assessment I	Unit 1 & Unit 2(0.5)	2 hours	60
Assessment II	Unit 2 (0.5)& Unit 3	2 hours	60
Model Examination	All 5 Units	3 hours	100

The HOD reviews the Question Paper for compliance with the requirements. The criteria were developed in compliance with the Question paper format as published by the affiliating university from time to time. Figure 2.2.2.1 depicts the process of creating Internal Assessment question papers.

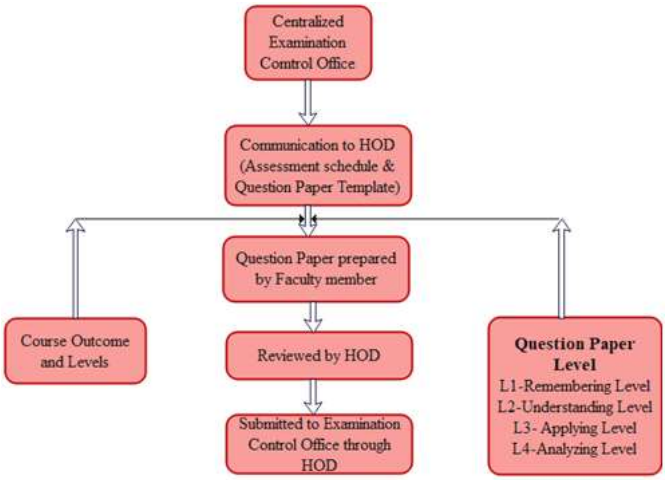
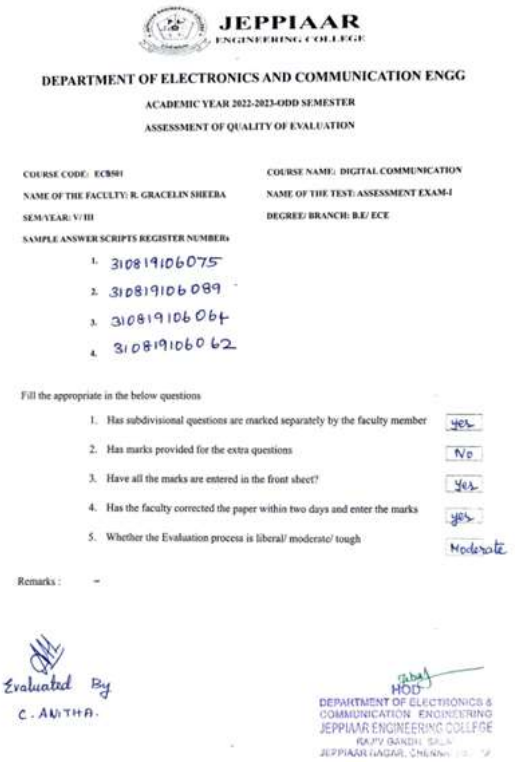


Figure2.2.2.1The process of Internal Assessment question paper setting

The sample copy of the question paper quality assessment is shown in Figure.2.2.2.2 below



JEPPIAAR
ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGG

ACADEMIC YEAR 2022-2023-ODD SEMESTER

ASSESSMENT OF QUALITY OF EVALUATION

COURSE CODE: EC8501 COURSE NAME: DIGITAL COMMUNICATION

NAME OF THE FACULTY: R. GRACELIN SHEEBA NAME OF THE TEST: ASSESSMENT EXAM-I

SEM/YEAR: V/III DEGREE/ BRANCH: B.E/ ECE

SAMPLE ANSWER SCRIPTS REGISTER NUMBERs

1. 310819106075
2. 310819106089
3. 310819106064
4. 310819106062

Fill the appropriate in the below questions

1. Has subdivisional questions are marked separately by the faculty member — yes
2. Has marks provided for the extra questions — No
3. Have all the marks are entered in the front sheet? — Yes
4. Has the faculty corrected the paper within two days and enter the marks — yes
5. Whether the Evaluation process is liberal/ moderate/ tough — Moderate

Remarks : -

Evaluated By
C. ANITHA.

HOD
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE
RAJIV GANDHI SALAI
JEPPIAAR NAGAR, CHENNAI

Figure.2.2.2.2 sample copy of the question paper quality assessment

Procedure for conducting Internal Assessment Tests

Two Internal Assessment examinations and Model Exam are administered in accordance with university regulation and timetables. The CEO is in charge of performing Internal Assessment Tests. For Internal Assessment Tests,The CEO and Head of the Institution deploy internal squad members to monitor the smooth conduct of tests. Figure 2.2.2.3 depicts an example copy of the Internal Assignment Test Question Paper and Figure 2.2.2.4 shows the Sample for scheme of Evaluation.

JEPPIAAR
ENGINEERING COLLEGE

DEPARTMENT OF ECE SET :B

EC3351 – TRANSMISSION LINES & RF SYSTEMS [R-2021]

YEAR / SEM : III / V DATE:01.09.2023 MAX.MARKS : 60

ASSESSMENT TEST - 1

PART A (10*2=20 Marks)

1. Describe the different parameters of a transmission line. (C314.1,PO1) BTL-2
2. Define Reflection loss. (C314.1,PO1) BTL-1
3. State characteristic impedance? (C314.1,PO1) BTL-1
4. Find the reflection coefficient of a 50 ohm transmission line when it is terminated by a load impedance of 60+j40 ohm. (C314.1,PO1) BTL-3
5. A lossless line has a characteristic impedance of 400Ω. Determine the standing wave ratio if the receiving impedance is 800+j0.0Ω. (C314.1,PO1) BTL-3
6. Give the general equations of a transmission line. (C314.1, PO1) BTL-1
7. Define wavelength of the line. (C314.1,PO1) BTL-1
8. Enumerate loading? (C314.1,PO1) BTL-1
9. Express the condition to be satisfied for dissipation less line. (C314.2,PO1) BTL-3
10. What are the secondary constants of a line? Write the expression for the secondary constants. (C314.2,PO1) BTL-1

PREPARED BY:-
(Course Co-ordinator)
[R. GRACELIN SHEEBA]
[C. ANITHA]

VALIDATED BY:-
(Year In-charge)
[C. ANITHA]

PART B (2*13 = 26 Marks)

11. a) Derive the transmission line equation and hence obtain expression for voltage and current on a transmission line (C314.1,PO1, PO2) BTL-3

Or

b) i) Explain in detail about the waveform distortion. Also derive the condition for a distortion less line? (C314.1,PO1, PO2) BTL-3

12. a) A communication line has L=3.67 mH/km, G=0.08 μ mho/km, C=0.0083μF/km and R=10.4 Ω /km. Determine the characteristic impedance, phase constant, velocity of propagation, wavelength, sending and receiving end current for given frequency f=1000 Hz, sending end voltage is 1 volt and transmission line length is 100 kilometers (C314.1,PO1,2,3) BTL-3

Or

b) Explain in detail the different types of loading a cable? Derive the attenuation and Phase constant and velocity of propagation for a loaded cable. (C314.1, PO1, PO2, PO3) BTL-2

PART C (1 x 14 = 14 Marks)

13. a) Define the reflection coefficient and voltage standing wave ratio and draw the voltage and current waveforms when the transmission line is terminated by matched load, short circuit, open circuit and reactance terminations. BTL-2

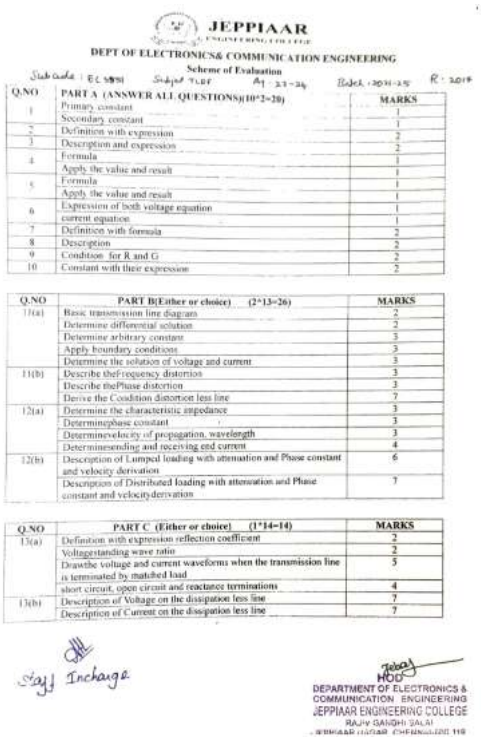
Or

b) Explain the voltage and current on the dissipation less line. BTL-2

(HoD/ECE)

HOD
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE
RAJIV GANDHI SALAI
JEPPIAAR NAGAR, CHENNAI-600 119.

Figure 2.2.2.3 Sample Internal Assessment Test Question Paper



JEPPIAAR
ENGINEERING COLLEGE

DEPT OF ELECTRONICS& COMMUNICATION ENGINEERING

Scheme of Evaluation

Sub code : EC 3551 Subject : CEF Ay : 23-24 Batch : 2021-25 R : 2017

Q.NO	PART A (ANSWER ALL QUESTIONS)(10*2=20)	MARKS
1	Primary constant	1
	Secondary constant	1
2	Definition with expression	2
3	Description and expression	2
4	Formula	1
	Apply the value and result	1
5	Formula	1
	Apply the value and result	1
6	Expression of both voltage equation	1
	current equation	1
7	Definition with formula	2
8	Description	2
9	Condition for R and G	2
10	Constant with their expression	2

Q.NO	PART B(Either or choice) (2*13=26)	MARKS
11(a)	Basic transmission line diagram	2
	Determine differential solution	2
	Determine arbitrary constant	3
	Apply boundary conditions	3
	Determine the solution of voltage and current	3
11(b)	Describe thefrequency distortion	3
	Describe thePhase distortion	3
	Derive the Condition distortion less line	7
12(a)	Determine the characteristic impedance	3
	Determinephase constant	3
	Determinevelocity of propagation, wavelength	3
	Determinesending and receiving end current	4
12(b)	Description of Lumped loading with attenuation and Phase constant and velocity derivation	6
	Description of Distributed loading with attenuation and Phase constant and velocityderivation	7

Q.NO	PART C (Either or choice) (1*14=14)	MARKS
13(a)	Definition with expression reflection coefficient	2
	Voltagestanding wave ratio	2
	Drawthe voltage and current waveforms when the transmission line is terminated by matched load	5
	short circuit, open circuit and reactance terminations	4
13(b)	Description of Voltage on the dissipation less line	7
	Description of Current on the dissipation less line	7

Staff Incharge

HOD
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE
RAJIV GANDHI SALAI

Figure 2.2.2.4 Sample for scheme of Evaluation

- Figure 2.2.2.5 shows the process of Internal Question paper setting and Evaluation scheme. All internal exams are organized and centralized by examination cell. The examination schedule will be prepared and it will be intimated to the students, departments, etc. For every semesterfour internal assessment tests like Assessment I, Assessment II,Assessment III and Model examination were conducted.
- All questions follow Revised Blooms taxonomy action verbs and mapped with CO and PO. The question paper will be validated by Programassessment and evaluation committee andHOD, to ensure the quality and the instructions, adhering the learning levels of COs and POs.
- Examination cell allot the cross department invigilation duty for the faculty members. Disciplinary action will be taken, in case of malpractices if any.
- The two sets of question paper for each subject have to be submitted by the department to the examination cell. The examination cell will select the question paper and issue during the examination. The answer sheets are evaluated through central valuation system.

After the evaluation, the answer sheets are handed over to the students for verification. The Program assessment and evaluation committee conducts the result analysis meeting with course handling faculty to improve the teaching learning process. After evaluation the learning levels are analyzed to measure the CO attainment. Action plans are proposed if target level of CO attainment is not met with PO's.

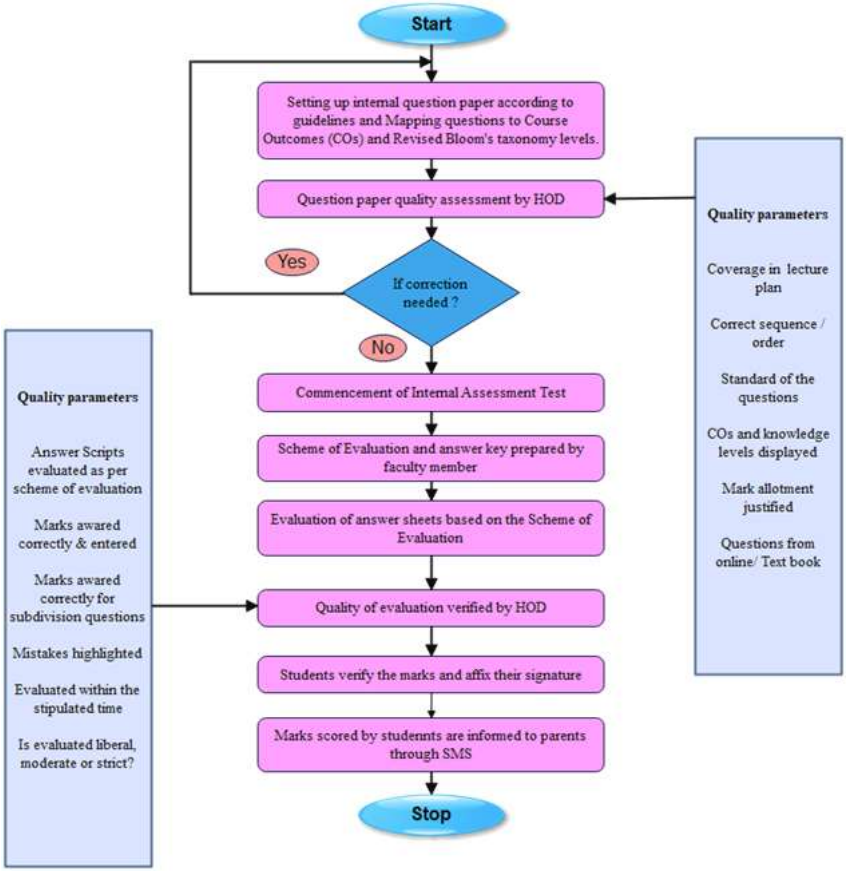


Figure 2.2.2.5 Process of Internal Question paper setting and Evaluation

B. Outcome/learning perspective

- Knowledge levels and learning levels are incorporated in the question banks and internal exam questions, that ensures COs level and its accomplishment

C.**COs relevance with Midterm / cycle test:**

- The portions for the Assessment test, Model Examination and assignment are covering the requirements of the CO's. COs are assessed based on the assessment criteria set by the faculty and validated by the course coordinator and HOD.
- Three Assessment Examinations are conducted for 60marks as per university exam pattern

D. Assignments and its relevance to COs

- The quality and periodicity of Assignments are monitored by scrutinizing committee.
- Challenging questions are included in the assignment that drives the students to search various resources for the appropriate solution.
- Students felt that these exercises had led them to have a meticulous and comprehensive learning. It also promotes better interaction among the students and with their teachers in the subject matters.

Assignments, Seminars and Tutorial

- The bright students having high academic track records are encouraged to take up competitive examinations like GATE, GRE etc.,
- Based on the expected outcome, the students are assessed and the additional activity such as assignments, seminars, tutorial and two minutes talk are given to the students with the schedule of events / target date. The above activities are decided in consultation with the course coordinator and HOD. The activity is informed to students in the prescribed format.
- Assignments, tutorials and seminars are announced by the respective faculty members with submission and presentation dates.
- Assignment and tutorials questions are prepared using Revised Bloom's Taxonomy process. Assessment tools for assignment, tutorials and seminar are framed to evaluate the students' performance are given in Tables

Assessment Tool for Assignments

Rubric components	Below expectation	Satisfactory	Excellent
Content(8)	The content is generic or partly relevant (0-3)	The content is accurate but incomplete (4-6)	The content is accurate and complete (7-8)
Presentation(2)	Presentation is not up to the scale (0)	Presentation is neat but not in order (0-1)	Presentation is neat and orderly (1-2)
Student's Score(10)	0-3	4 -7	8-10

Assessment Tool for Seminar

Categories	Level 1	Level 2	Level 3

Knowledge and Understanding (4)	limited knowledge of facts, terms and concepts (0-1)	considerable knowledge of facts, terms and concepts (2-3)	thorough knowledge of facts, terms and concepts (4)
Communication(4)	Content delivery with limited effectiveness (0-1)	Content delivery with considerable effectiveness (2-3)	Content delivery with high degree of effectiveness (4)
Presentation Skills(2)	Inadequate (0)	Average (1)	Good (2)
Student's Score (10)	0-2	4 - 7	8 - 10

Assessment Tool for Tutorial

Categories	Level 1	Level 2	Level 3
Submission of assignment and tutorial task(5)	Not submitted / submitted with inadequate content (0-1)	Submitted with satisfactory content but overdue (2-3)	Submitted on date with appropriate content (4-5)
Attendance(5)	Student misses all tutorials(0)	Student misses ne tutorial (4)	Student attends all tutorials (5)
Student's Score (10)	0 – 1	2 – 7	9 – 10

2.2.3 Quality of student projects (25) Institute Marks : 25.00

- Projects identified are important component at B.E level, which imparts and improves the ability, practical hand on experience and knowledge on the engineering. These skills improve the employability of the candidates. These skills also help to initiate the process of interviewing.
- An orientation session is arranged and details are informedto students about project. The Project work is supervised by the corresponding guide and HOD.
- Students can apply technical knowledge and analytical skills learned in different courses.
- The project may be prototype, application, and research or backed by analysis and simulation. The projects are assessed using the objectives met by the project. The assessment is carried out through proper periodical reviews.

A. Identification of projects and allocation methodology to Faculty Members

- A project coordinator is appointed by the Head of the department who is responsible for planning, scheduling and execution of all the activities related to the student project work.
- The project coordinator collects the list of project titles along with area of interest from the students. These topics are compared and analyzed with the department staff specialization. Based on this project guide will be allotted for all the students. The topics cover wide range of components, product, research, review, applications sciences, standards, safety, ethics etc.
- The topic, student name, facilitator name and project schedule of review presentation are finalized and displayed in the notice board.
- All the students are educated to understand about the importance of doing project with social relevance. The students are instructed to start the project work at VII semester and are extended to VIII semester. Project work is done in group with a maximum of four students.
- Project work is expected to be proposed by students and they can also be supported by faculty members of the core group. Students are instructed to choose any of the research topics referred from reputed journals, which have to be implemented as their final year projects.Figure 2.2.3.1 shows the Project Monitoring and Review process

Staff Area of Interest:

Student Area of Interest

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

STAFF AREA OF INTEREST

BATCH (2019-2023) AY YEAR 2022-2023

SL.NO	NAME OF THE FACULTY	DESIGNATION	SPECIALIZATON
1	Dr.J. Jebastine	Professor	Signal Processing
2	Dr.Anita Titus	Professor	Image Processing
3	Dr.CH.Venkata Siva Prasad	Associate Professor	Image Processing
4	Dr.M.P Prabakaran	Associate Professor	Optical communication
5	Dr.V.Geetha	Associate Professor	Power Electronics & Industrial drives
6	Dr.V.Velmurugan	Associate Professor	Wireless Networks
7	Dr.Purushothaman K.E	Associate Professor	Wireless communication
8	Mr.G.C.Jagan	Assistant Professor	Communication Systems
9	Mrs.C. Anitha	Assistant professor	Applied Electronics
10	Mr.R. Arun Vijayakumar	Assistant professor	Communication Systems
11	Mr.T.R.Chenthil	Assistant Professor	Applied Electronics
12	Dr.Balachandran.G	Assistant professor	VLSI Design
13	Dr.V.Nanammal	Assistant professor	VLSI Design
14	Mr.M. Simavasan	Assistant professor	VLSI Design
15	Mr. S.Benjamin Arul	Assistant professor	Electronics and Control
16	Mr. Ranjith S	Assistant professor	VLSI Design
17	Mr. R.Vivek Krishna	Assistant professor	Electronics and Control
18	Mrs.R.Gracelin sheeba	Assistant professor	Communication system
19	Mrs.Santhiya A	Assistant professor	Wireless communication
20	Mr. Sakthivel E	Assistant professor	Embedded System,IOT,EV Desing
21	Mrs.Y. Anitha	Assistant professor	Communication Systems
22	Mrs.M. Logeswari	Assistant professor	Communication and Network
23	Mrs.L. Kanagadurga	Assistant professor	Communication Systems
24	Mrs.Thillaiyarasi S	Assistant professor	VLSI Design
25	Mrs.S.Saraswathi	Assistant professor	Applied Electronics
26	Mr. S.K. Bims Siva Singh	Assistant professor	VLSI Design
27	Mr. S.K. Sanu Siva Singh	Assistant professor	Power Electronics & drives

Guide Allocation

Prepared by

Project Title

JEPPIAAR ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PROJECT BATCH LIST

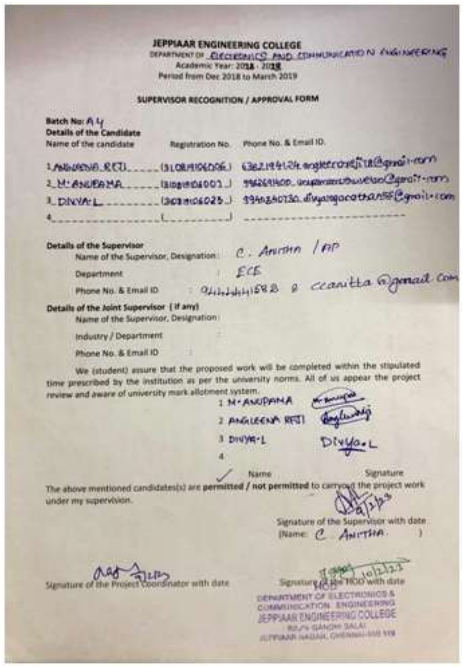
BATCH:2019-23 | **AY YEAR:2022-2023**

Sl No	Batch No	Register No	Name	Area of Project	Title	Supervisor
1	A1	310819106001	ABDUL RAZZAQ S	Wireless Communication	Developing Wireless Video Surveillance Robot using Facial Detection Technique	Dr.J.Jebastine
2		310819106003	AKASH B			
3		310819106036	JULIAN THOMAS PENIEL J			
4	A2	310819106002	ABIJA MERCY J A	Computer Vision	Smart presentation using hand gesture	Dr.J.Jebastine
5		310819106038	KAVIYA M			
7	A3	310819106005	AMALAN BOSCO A	Ev Design	Design And Implementation of Brushless DC Motor Controller in Electric Vehicle	Mrs.C.Anitha
8		310819106008	ARISH RAAJ K G			
9		310819106028	GOSPEL MATHEW			
10	A4	310819106006	ANGLEENA REJI	IOT	Implementation of biometric access control for electric vehicle	Mrs.C.Anitha
11		310819106007	ANUPAMA M			
12		310819106023	DIVYA.L			
13	A5	310819106009	ARIVUMATHI R	Communication	Developing subsea communication systems using optical hubs	Mr.G.C.Jagan
		310819106045	LIJITHA ASWI A			
14		310819106022	DHIVYA SHRI THENDRAL G			
15	A6	310819106010	AROCKIA KISHORE K	IOT	Automatic Fire Fighting Robot	Mr.G.C.Jagan
16		310819106012	ASHIK J			
17		310819106013	BALAJEE B			
18	A7	310819106011	ARUNKUMAR S	WSN	Wireless surveillance camera using webserver	Mr.B.Arun Vijayakumar
19		310819106014	BHARAT BARAL V			
20		310819106018	DANIELRAJ WYCLIFF C			
21	A8	310819106015	BHARATH S	IOT	Home Automation Using Iot	Mr.T.R.Chenthil
22		310819106016	BHARATHKUMAR S			
23		310819106019	DEEPAK S			
24	A9	310819106017	BIYORSON ABISHEK J	IOT	controlling Electrical appliances using IOT and AR	Mr.G.Balachandran
25		310819106040	KISHORE A			

Sl No	Batch No	Register No	Name	Area of Project	Title	Supervisor
56	B4	310819106054	NANDHAKUMAR S	Embedded System	Solar-Powered Vacuum Cleaner	Mr.G.C.Jagan
57		310819106082	SUDHARSHAN B			
58		310819106091	VINOTH N			
59	B5	310819106055	NANDHINI L	IOT	Designing a Battery Management System with LCD for electric vehicle	Mr.S.Ranjith
60		310819106064	RAMYA N			
61		310819106075	SARIKA P			
62	B6	310819106056	NAVEENKUMAR K	Embedded system	Biometric Authentication Voting System	Mr.B.Arun Vijayakumar
63		310819106301	MUTHU RAJ .S			
64		310819106302	VENKATESH .S			
65	B7	310819106057	NISHANTH C	Project Title Embedded system	Mobile operated smart forklift	Mr.T.R.Chenthil
66		310819106062	PRAVEEN M			
67		310819106076	SHANMUGANATHAN S			
68	B8	310819106058	NITHISH J	IoT	Automobile Safety Technology Development using Vehicular Safety Device	Mr.G.Balachandran
69		310819106060	PAVITHRAN			
70		310819106068	SAISARATH B			
71	B9	310819106069	SAM WILSON R	IOT	Wireless LED Display	Mrs.V.Nanammal
72		310819106079	SIVA VARTHANAN			
73		310819106080	SREE RAGHAVENDRA R			
		310819106059	NITHISH KUMAR R			
74	B10	310819106061	PRASANTH M	Embedded system	Designing a Seatbelt Safety Alert and Wireless Music System For electric vehicle	Mr.S.Ranjith
75		310819106063	PRAVEEN KUMAR R			
76		310819106067	ROHAN SRI M			
78	B11	310819106071	SANJAI KUMAR V	ML	Mobile Based Augmented Reality	Dr.J.Jebastine
79		310819106086	SYED KABEER S			
80		310819106093	VISHNURAAJ V			
81	B12	310819106072	SANJAY ANAND L	Antenna	Multiband & Wideband 'C-shaped' Monopole Antenna for 5G and WLAN Application	Mr.E.Sakthivel
82		310819106074	SARAVANAN E			
83		310819106081	SRI MURUGAN M			
84	B13	310819106077	SHARATH KUMAR R	Embedded System	Solar-powered Trash Collector with Robotic Arm	Dr.J.Jebastine
85		310819106083	SUDHARSHAN S			
86		310819106084	SUSHIL KUMAR R			
87	B14	310819106078	SHEWAG R	VLSI	Voice recognized System using Machine-learning framework with FPGA board	Mrs.R.Gracelin Sheeba
88		310819106088	VARUN H			
89		310819106089	VIGNESH K			
90	B15	310819106087	TRISHA A	VLSI	Water Quality Management in Aquaculture	Ms.A.Santhiya
91		310819106092	VISHNU PRIYA M S			

Prepared by

Supervisor Recognition Form



JEPPIAAR ENGINEERING COLLEGE
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Academic Year: 2018 - 2019
Period from Dec 2018 to March 2019

SUPERVISOR RECOGNITION / APPROVAL FORM

Batch No: A 4
Details of the Candidate
Name of the candidate Registration No. Phone No. & Email ID.

1. ANUPAMA. N (T) (310815106006)
2. M. ANUPAMA (310815106007)
3. DIVYA L (310815106023)
4. ( )

Details of the Supervisor
Name of the Supervisor, Designation : C. Anitha / AP
Department : ECE
Phone No. & Email ID : 9[illegible]1588 @ canitha@gmail.com

Details of the Joint Supervisor (if any)
Name of the Supervisor, Designation :
Industry / Department :
Phone No. & Email ID :

We (student) assure that the proposed work will be completed within the stipulated time prescribed by the institution as per the university norms. All of us appear the project review and aware of university mark allotment system.

1 M. ANUPAMA
2 ANGLEENA REJI
3 DIVYA L
4

Name Signature

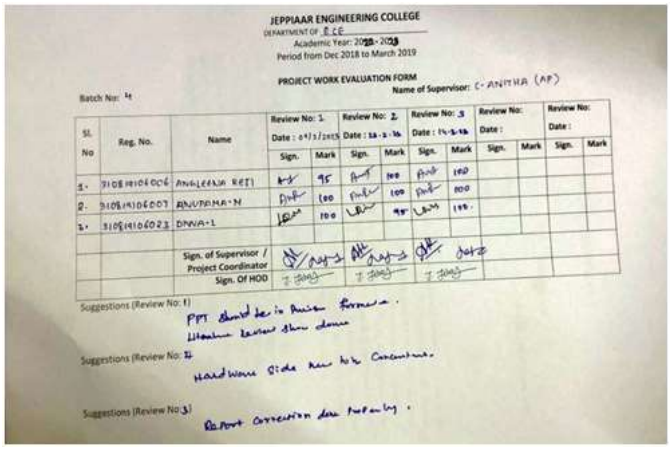
The above mentioned candidates(s) are **permitted / not permitted** to carry out the project work under my supervision.

Signature of the Supervisor with date
(Name: C. ANITHA)

Signature of the Project Coordinator with date

Signature of the HOD with date
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE

Evaluation Form



JEPPIAAR ENGINEERING COLLEGE
DEPARTMENT OF ECE
Academic Year: 2018 - 2019
Period from Dec 2018 to March 2019

PROJECT WORK EVALUATION FORM
Name of Supervisor: C. ANITHA (AP)

Batch No: 4

Sl. No	Reg. No.	Name	Review No: 1 Date : 04/3/2019		Review No: 2 Date : 22-2-19		Review No: 3 Date : 14-3-19		Review No: Date :		Review No: Date :	
			Sign.	Mark	Sign.	Mark	Sign.	Mark	Sign.	Mark	Sign.	Mark
1.	310815106006	ANGLEENA REJI		95		100		100				
2.	310815106007	ANUPAMA.N		100		100		100				
3.	310815106023	DIVYA.L		100		95		100				
		Sign. of Supervisor / Project Coordinator										
		Sign. Of HOD										

Suggestions (Review No: 1)
PPT should be in Power formats.
Literature survey should be done

Suggestions (Review No: 2)
Hardware Side more work Concentrate.

Suggestions (Review No:3)
Report correction done properly.

Fig 2.2.3.1 Project Monitoring and Review process

The student shall register for Project Work-I in pre-final semester and Project Work-II in final semester. Project work may be allotted to a single student or to a group of students not exceeding 4 per group. Project Work-II may/may not be a continuation of Project Work-I. If Project Work II is not a continuation of Project Work I, then the topic and constitution of the project team members need not be the same.

Project Work shall be carried out under the supervision of a "qualified teacher" in the Department concerned. In this context "qualified teacher" means the faculty member possessing (i) PG degree or (ii) Ph.D. degree.

The Project Work-II carried out in industry/academic/research institutions need not be a continuation of Project Work-I. In such cases, the Project Work-II shall be jointly supervised by a supervisor of the department and an expert as a joint supervisor from the organization and the student shall be instructed to meet the supervisor periodically and to attend the review committee meetings for evaluating the progress. The review meetings, if necessary, may also be arranged in online mode with prior approval from the Head of the Department and suitable record of the meetings shall be maintained

The project report shall carry a maximum of 20 marks. The project report shall be submitted as per the approved guidelines as given by the Director, Centre for Academic Courses. Same marks shall be awarded to every student within the project group for the project report. The viva-voce examination shall carry 40 marks. Marks are awarded to each student of the project group is based on the individual performance in the viva voce examination.Table No 2.2.3.1 Shows the Project Schedule

Review I	Review II	Review III	End Semester Examinations				
			Project Report		Viva-Voce Examination		
			Internal	External	Internal	External	Supervisor
10	15	15	10	10	10	20	20

Table No 2.2.3.1: Showing the Project Schedule

Timeline	Task	Particulars
SEMESTER SEVEN		
12th week	Call for project batch	Students are invited to plan their batch and get it registered with the project coordinator of the department. The student submitting project titles are pre-evaluated by a team of experts.
14th week	Synopsis	The submitted project titles are reviewed by a Project Coordinator.
SEMESTER EIGHT		
1st week	Guide allotment	Guide will be allotted based on student's areas of interest and faculty specialization.
4th week	First Review	Students are instructed to submit requirement specification and give a PowerPoint presentation for the project. (Evaluation phase I by a team of faculty)
8th week	Second Review	Students are instructed to submit Design document of the project and give a PowerPoint presentation for the project. (Evaluation phase II by a team of faculty)
12th week	Third Review	Students are instructed to submit complete project report and give a PowerPoint presentation for the project. (Evaluation phase III by a team of faculty)

B. Projects and their contribution towards attainment of POS:

Based upon the functional area like VLSI, Embedded, Wireless Communication, Networking, Medical Electronics, Image Processing, Photonics, Optical Communication, Signal Processing and Robotics the projects are categorized as follows:

- Application oriented
- Design and manufacturing
- Product and process development
- Research

After categorizing the projects, they will be mapped with POs and PSOs and the attainments are assessed based on the following:

- Depth in fundamentals
- Clarity in problem analysis
- Methodology adopted
- Future scope of the work pertaining to environment and safety
- Novelty of work with standards and ethics
- Team work
- Cost effectiveness and project management
- Employability

c.Project Monitoring &Review Process

- Students will continue the project work with the guidance given by their allotted guide and students are instructed to report their work weekly.
- Reviews are conducted properly by review committee members at regular intervals with prior information for efficient and quality implementation of the work. Suggestions are given in the reviews to improve the quality of the project.
- After completion of the work, depending upon the type of the work, it is recommended for the publication in journals and patent.

D. Assessing individual and team performance

The performance of the individual team member of the project is assessed at the time of presentation in reviews by considering the following criterions:

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

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

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

E. Quality of completed projects/ working prototypes

The quality of the project is evaluated based on the conversion possibility of the ideas synthesized in the course of project into a tangible outcome based on the metrics such as

- Modern Tool Usage
- Social Impact
- Presentation
- Documentation
- Conference/Journal Publications and Relevance to PO's.

F.Evidences of papers published/ awards received by projects Evaluation

This assessment of the project is based both on the presentations in the reviews and the final report. The evaluation criteria are shown in Table. Internal marks for the projects are allocated by means of the students' performance in the progress review meeting which is conducted with the presence of Project co-coordinator, HOD, Guide and Staff members.

List of Students Projects for CAY 2022– 23

S. No	Project Title	Type of the Project	PO											PSO			Achievements (Any awards or Funds granted)
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
1	An IOT enabled real time communication and location tracking system for vehicular emergency	IOT communication	3	3	3	3	3	2	2	1	2	2	3	2	3	2	2	Best Project Award
2	Design and development for drivers driving pattern Analysis for automatic license issuing System	Embedded system	3	3	3	3	3	3	3	1	2	2	1	2	3	3	2	Best Project Award

2.2.4 Initiative related to industry interaction (15)

Institute Marks : 15.00

Initiatives related to industry interaction

The department has joined hands with the various industries in their core engineering field with an objective to strengthen interaction with industries, to keep our students updated with the latest trends, enhance the knowledge and inculcate the practical exposure. The industry personnel's involve in the design of value added course as an additional input to the students about the latest technology. Few laboratories in the department are attached to the industries to provide training program for the usage of modern tools, design contest and hands on training. Apart from knowledge sharing, the industries provide working modules and boards for the benefit of the students. The students can implement their own ideas and develop their projects using the sponsored kits or facilities provided by the industry.

List of Faculty Interaction with Industry

S.No	Name and Designation	Organization	Nature of Program
1	Mr. G. Balachandran	BSNL	Internship Training
2	Mrs.C.Anitha Mrs.Santhiya	NIELIT	Faculty updation program
3	Dr.J.Jebastine Mr.T.R.Chenthil	Wipro Technologies	Leadership Quality
4	Dr.J.Jebastine Mrs.R.Gracelin Sheeba.	Infosys	Leadership Quality
5	Dr.J.Jebastine Mr.G.C.Jagan	BOSCH	Training on BOSCH Inline

A. **Industry supported laboratories**

A dedicated committee named Industry institute interaction cell has been formed, to check and monitor periodically the activities such as

- To source Industrial consultancy and funded projects
- To identify and impart in-plant training to develop their technical knowledge.
- To set up core specific lab for students training purpose
- To arrange guest lecture by the industrial experts for the growing trends of technology
- To organize value added certificate programs to equip students as industry ready
- To make MOU with core industries so as to share their needs, solution and infrastructure.

List of Industry supported Laboratories

S.No.	Name of Industry	Associated Laboratory	Benefits	Relevance to POs and PSOs
1.	STEP-The Hindu, Chennai	Communication Skill Lab	Soft Skill Training	PO10,PSO3
2.	NIELIT, Chennai	Embedded Systems Lab	Faculty development programs, Short Term Course, Guest Lecture, Workshop	PO3, PO5,PSO1,PSO2
3.	NIELIT, Chennai	VLSI Design Lab.	Faculty development programs, Short Term Course, Guest Lecture, Workshop	PO5, PO9,PSO1,PSO2
4.	Vi Micro Systems	Computer Network Lab	Guest Lecture, Workshop	PO4, PO5,PSO1,PSO2
5.	BSNL	Communication system Lab	Hands on training	PO4,PO9,PSO1

B.Industry involvement in the program design and partial delivery of any regular courses for students:

Expert from industry will be part of Governing board, Department Advisory board who contribute for program designing. The feedback of industry expert are given much importance in framing vision, mission, PEO of the department. In the curriculum gap identification process Industry expert also play an important role. The industry expert advice is also play an important role in project topic identification. The adjunct faculty from industry also involves course delivery.

List of Initiatives with Organization

S.No.	Company name	Type of initiatives	Activities with organization
1.	NIELIT, Chennai	MOU	Value Added course, Workshop, Sponsored Research, Mini Project, FDP
2.	BSNL, Chennai		Certified course, Inplant Training, EETP Training
3.	IYF		Cultural Activities
4.	IEMA		Industrial Visit
5.	MSME		Funding Student Project, Entrepreneurship
6.	Vi Micro Systems, Chennai		Guest Lecture, Workshop
7	Gate Pathshala		To offer Gate coaching
8.	STEP- The Hindu, Chennai		Soft Skill Training

List of Industry Supported Program

Industry Supported Program: **1. BSNL, RTTC ,Chennai**

Objective:
1. To produce expertise and experience telecom engineers in the area of communication.
2. To provide training courses to update the latest telecom industrial exposure
3. To conduct various events such as inplant training seminars, internship, project, online certificate program.

Impact analysis:
1. To understand the technology in a better manner and make the edge in the students career.
2. With the help of the hands on training, the students utilize the facility to do their projects / mini projects.
3. Guest lectures are organized to update the practical skills and knowledge in the relevant field.

S.No	Name of the program	Resource person
1	Workshop	IOT in communication system
2	Hands on training	Mr.R.Mahesh
3	Workshop	Mr.R.Baskar
4	Inplant Training	Mr.D.Sridharan
5	Guest lectures	Ms. Pappammal

Industry Supported Program: **2. NIELIT, Chennai**

Objective:
1. Training for both the Faculties and the students.
2. Sharing of facilities.
3. Joint venture programs.
4. Project work and problems solving, Research and Development.

Impact analysis:
1. Students can fabricate PCB for their mini projects by the facilities available in PCB lab under the guidance of the experts from the industry
2. With the help of workshops, the students can do their projects.
3. Faculty updation program and Guest lectures are used to update the practical skills and knowledge in the relevant field.

S.No	Name of the program	Resource person
1	Hands on training	.R. Suresh Babu NIELIT, Chennai
2	Hands on training	J.R. Suresh Babu NIELIT, Chennai
3	Faculty up-dation program	Mr.Ajay. NIELIT, Chennai
4	Workshop	Mr.Anand NIELIT, Chennai
5	Guest lectures	Mr.Kartick NIELIT, Chennai
6	Projects	Mr. Janarthanan NIELIT, Chennai
7	Certified training program	Mr.Krishna Moorthy NIELIT, Chennai

Industry Supported Program: **3. Vi Micro Systems, Chennai**

Objective:
1. To promote the academic Industry interaction.
2. To impart training through industry experts to produce employable graduates.
3. To provide a complete solution for various laboratories in technical training institutions to targets the requirements in advanced design and industry based technology developments

Impact analysis:
1. Workshop provides the platform to identify the problem and solve it through the projects.
2. The practical skills and knowledge is developed in the various field

S.No	Name of the program	Resource person
1	Projects	Mr.K.Kannan Vi Micro Systems, Chennai
2	Hands on training	Mr.C.Vijaya Babu Vi Micro Systems, Chennai
3	Guest lectures	Mr.S.Suresh Vi Micro Systems, Chennai
4	Projects	Mr.K.Kannan Vi Micro Systems, Chennai

Industry Supported Program: **4. MSME**

Objective:
1. Improving product designs and quality while reducing manufacturing cost of the product to make them globally competitive and acceptable.
2. Increase the employability of students completing their education and internship

Impact analysis:
1. Workshop provides the platform to do innovative projects.
2. With the motivation students can do their final year project with new innovation concern.

Industry Supported Program: **5. STEP- The Hindu, Chennai**

Objective:
1. English language proficiency with face-to-face campus training,
2. Online training and interaction with STEP committee members.

Impact analysis:
1. Fruitful outcome in academic, research, engineering and training areas.
2. Understanding towards working environment.
3. Students gained from this exposure to incorporate an entrepreneurial spirit.

2.2.5 Initiative related to industry internship/summer training (15)

Institute Marks : 15.00

A. **Industrial training/tours for students**

- The students are encouraged to visit industries, undergo in-plant training and internships. The internships are arranged by the Training and Placement Cell. After completion of inplant training and internships, a detailed report is submitted by the students.
- The assessment team assesses the quality of the training or internship and the students are asked to present the outcomes of the training in front of the class students. Feedbacks are collected from students after their industrial training and internship. Based on the training feedback, initiatives are taken for further processes.
- As an added advantage, some students placed in the same industry upon completion of internship. The alumni coordinator constantly interacts with alumni those who are working in the industries and request them to provide necessary guidelines and supports for their junior's internship.
- The final year students were taken for 3-5 days industrial tour in their 6th or 8th semester. Table2.2.5.1 to Table 2.2.5.6 shows the number of students involved in industry related activities.

Table No 2.2.5.1: Number of Industrial Visits, Internship and In-plant Training

S. No.	Academic year	Industrial Visits	Internship program	In-plant training
1	2021-22	7	2	7
2	2020-21	1	3	7
3	2019-20	6	3	8

Table No 2.2.5.2: Number of Students Participation in Industrial Visits

S. No.	Academic year	Industrial Visits	In-plant training
1	2021-22	170	80
2	2020-21	172	102
3	2019-20	174	95

Table No 2.2.5.3: Tour Details

S. No.	Academic year	Year	Place	Number of Students
1	2021-22	III Year	WIPRO - Kerala	110
2	2019-20	III Year	Infosys-Mysore	90

Table No 2.2.5.4: List of Industrial Visits (2021-2022)

S. No	Name Of The Industry	Duration	Related Course of Study
1	TVS Training and Service	1 Day	Electrical Instrumentation Embedded System
2	Emerson Automation	1 Day	Signal Processing Electrical Instrumentation
3	North Chennai Thermal Power Station	1 Day	Optical Communication & Networks, Transmission Line & Waveguides
4	Thermal Power Station	1 Day	Coal fired power project
5	ISRO - VSSC, Trivandrum	1 Day	Satellite Communication, Wireless Communication,
6	Retech Solution	1 Day	Embedded System
7	All India Radio, Kochi	1 Day	Communication Theory, Digital Communication.

Table No 2.2.5.5: List of Industrial Visits (2020-2021)

S. No	Name Of The Industry	Duration	Related Course of Study
1	All India Radio, Chennai	1 Day	Communication Theory, Digital Communication.

Table No 2.2.5.6: List of Industrial Visits (2019-2020)

S. No	Name Of The Industry	Duration	Related Course of Study
1	TVS Training and Service	1 Day	Electrical Instrumentation Embedded System
2	Emerson Automation	1 Day	Signal Processing Electrical Instrumentation
3	North Chennai Thermal Power Station	1 Day	Optical Communication & Networks, Transmission Line & Waveguides
4	Thermal Power Station	1 Day	Coal fired power project
5	ISRO - VSSC, Trivandrum	1 Day	Satellite Communication, Wireless Communication,
6	Retech Solution	1 Day	Embedded System

B. Industrial /internship /summer training of more than two weeks and post training Assessment

All the students must undergo summer training and the certificate copy must be produced at the time they come back from their summer vacation.

Sl. No	Name of the Industry	Duration	No. of students benefited	Outcome
1	BSNL	7 days	20	Gained knowledge on Embedded System
2	Uniq Technologies	15 days	62	Gained knowledge on MATLAB
3	Regional Telecom Training Centre	15 days	10	Communication Based Knowledge
4	Airports Authority of india	15 days	25	Communication Based Knowledge
5	NSIC	10 days	70	Microcontroller Based Product Design
6	NLC India Limited	7 days	15	Power Generation Process

Impact analysis of industrial training:

- During the semester breaks, students are encouraged to participate in industrial/inplant training and internships in reputable industries/companies to gain practical exposure to the latest technologies utilized in industries using the learn by doing principle. Students are encouraged to participate in IPT/Internships in the core and software industries based on their willingness. It assists students in bridging the gap between industry and institute.
- Based on their IPT/Internship experience, students choose open elective courses that meet industry needs.
- IPT/Internship training inspires students to complete their mini/major projects in industries.
- Initially, a request letter with a genuine certificate is given to industry to request approval for IPT/Internship with training dates. During the period, the students will participate in IPT/Internships while adhering to the industrys laws and regulations. After being placed in their final year, students are permitted to go to their respective industries for internships during semester breaks and weekends in the final semester.
- Following the IPT/Internship, the students share their experience in the industry to the IPT/Internship consultative committee, and the contents of the IPT/Internship are submitted as a report. Figure 2.2.5.1 depicts an example of a student presentation.
- During their vacation, faculty members embark on industrial visits to stay up to date on latest advancements in their respective fields by connecting with industry professionals. During the holidays, staff members encourage and guide students to participate in industrial training/internships.
- The alumni faculty coordinator maintains frequent contact with alumni working in industries and recommends that they give required instructions and assistance for their juniors internships.Figure 2.2.5.2 shows the Alumini guidelines.

Figure 2.2.5.1 Presentation ofinternship / IPT experience by the students

Figure 2.2.5.2 Alumini provide necessary guidelines and supports to their juniors.

The sample copy of Internship Training certificates is shown in Figure 2.2.5.3

Figure 2.2.5.3 Sample copy of Internship Training certificates

The sample copy of the IPT report, sample images of IPT centres and certificates are shown in Figure 2.2.2.4

Figure2.2.5.4 Sample copy of Inplant Training (IPT) Centres

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

Total Marks 120.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

Total Marks 20.00

:

PSO3	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.
PSO1	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.
PSO2	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)

Institute Marks : 5.00

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

Course Name :	C2 05	Course Year :	2019-2020

Course Name	Statements
C2 05.1	Use digital electronics in the present contemporary world
C2 05.2	Design various combinational digital circuits using logic gates
C2 05.3	Do the analysis and design procedures for synchronous and asynchronous sequential circuits
C2 05.4	Use the semiconductor memories and related technology
C2 05.5	Use electronic circuits involved in the design of logic gates

Course Name :	C2 11	Course Year :	2019-2020

Course Name	Statements
C2 11.1	Analyze different types of amplifier, oscillator and multivibrator circuits
C2 11.2	Design BJT amplifier and oscillator circuits
C2 11.3	Analyze transistorized amplifier and oscillator circuits
C2 11.4	Design and analyze feedback amplifiers
C2 11.5	Design LC and RC oscillators, tuned amplifiers, wave shaping circuits, multivibrators, power amplifier and DC convertors.

Course Name :	C3 01	Course Year :	2020-2021

Course Name	Statements
C3 01.1	Design PCM systems
C3 01.2	Design and implement base band transmission schemes
C3 01.3	Design and implement band pass signaling schemes
C3 01.4	Analyze the spectral characteristics of band pass signaling schemes and their noise performance
C3 01.5	Design error control coding schemes

Course Name :	C3 13	Course Year :	2020-2021

Course Name	Statements
C3 13.1	Upon completion of the course, students will be able to have clear understanding
C3 13.2	Managerial functions like planning, organizing, staffing, leading & controlling and have same basic knowledge on international aspect of management
C3 13.3	Examine development of different organizational structures and staffing process
C3 13.4	Analyze the various motivational and leadership theories and process of communication.
C3 13.5	Evaluate the concept of system process control, productivity problems and management.

Course Name :	C4 02	Course Year :	2021-2022

Course Name	Statements
C4 02.1	Realize basic elements in optical fibers, different modes and configurations.
C4 02.2	Analyze the transmission characteristics associated with dispersion and polarization techniques.
C4 02.3	Design optical sources and detectors with their use in optical communication system.
C4 02.4	Construct fiber optic receiver systems, measurements and coupling techniques.
C4 02.5	Design optical communication systems and its networks.

Course Name :	C4 10	Course Year :	2021-2022

Course Name	Statements
C4 10.1	Analyze the satellite orbits
C4 10.2	Analyze the earth segment and space segment
C4 10.3	Analyze the satellite Link design
C4 10.4	Analyze the satellite access and coding methods
C4 10.5	Design various satellite applications

3.1.2 CO-POmatrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5) Institute Marks : 5.00

1 . course name : C205

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	3	3	3	2	2	3	-	-	-	-	1	1
C205.2	3	3	3	2	2	3	-	-	-	-	1	1
C205.3	3	3	3	2	2	-	-	-	-	-	1	1
C205.4	3	3	3	2	2	-	-	-	-	-	1	1
C205.5	3	3	3	2	2	-	-	-	-	-	1	1
Average	**3.00**	**3.00**	**3.00**	**2.00**	**2.00**	**3.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**1.00**

2 . course name : C211

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C211.1	3	3	3	3	2	1	-	-	-	-	1	1
C211.2	2	3	3	3	2	1	-	-	-	-	1	1
C211.3	3	2	3	3	2	1	-	-	-	-	1	1
C211.4	3	2	3	3	2	1	-	-	-	-	1	1
C211.5	2	1	3	3	1	1	-	-	-	-	1	1
Average	**2.60**	**2.20**	**3.00**	**3.00**	**1.80**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**1.00**

3 . course name : C301

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	2	2	3	-	1	-	-	-	-	-	1	1
C301.2	2	2	3	-	1	-	-	-	-	-	1	1
C301.3	2	2	3	-	2	-	-	-	-	-	1	1
C301.4	2	2	3	3	2	3	-	-	-	-	1	1
C301.5	2	2	3	-	2	-	-	-	-	-	1	2
Average	**2.00**	**2.00**	**3.00**	**3.00**	**1.60**	**3.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**1.20**

4 . course name : C313

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313.1	-	-	-	-	-	2	2	3	-	3	3	3
C313.2	-	-	-	-	-	2	2	3	-	3	3	3
C313.3	-	-	-	-	-	2	2	3	-	3	3	3
C313.4	-	-	-	-	-	2	2	3	-	3	3	3
C313.5	-	-	-	-	-	2	2	3	-	3	3	3
Average	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**	**2.00**	**3.00**	**0.00**	**3.00**	**3.00**	**3.00**

5 . course name : C402

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C402.1	3	3	2	2	-	1	-	-	-	-	-	-
C402.2	3	3	2	2	-	1	-	-	-	-	-	-
C402.3	3	3	3	2	-	1	-	-	-	-	3	3
C402.4	3	3	2	2	-	1	-	-	-	-	-	-

C402.5	3	3	3	2	-	1	-	-	-	-	3	3
Average	**3.00**	**3.00**	**2.40**	**2.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.00**	**3.00**

6 . course name : C410

Course	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**
C410.1	3	3	2	2	1	2	-	-	-	-	-	2
C410.2	3	3	2	2	1	2	-	-	-	-	-	2
C410.3	3	3	2	2	1	2	-	-	-	-	-	2
C410.4	3	3	2	2	1	2	-	-	-	-	-	2
C410.5	3	2	3	2	2	3	-	-	3	1	3	2
Average	**3.00**	**2.80**	**2.20**	**2.00**	**1.20**	**2.20**	**0.00**	**0.00**	**3.00**	**1.00**	**3.00**	**2.00**

1 . Course Name : C205

Course	PSO1	PSO2	PSO3
C205.1	3	-	-
C205.2	3	3	3
C205.3	3	-	-
C205.4	3	-	-
C205.5	3	-	-
Average	**3.00**	**3.00**	**3.00**

2 . Course Name : C211

Course	PSO1	PSO2	PSO3
C211.1	3	-	-
C211.2	3	3	3
C211.3	3	-	-
C211.4	3	3	3
C211.5	3	3	3
Average	**3.00**	**3.00**	**3.00**

3 . Course Name : C301

Course	PSO1	PSO2	PSO3
C301.1	3	2	2
C301.2	3	2	2
C301.3	3	2	2
C301.4	3	-	-
C301.5	3	2	2
Average	**3.00**	**2.00**	**2.00**

4 . Course Name : C313

Course	PSO1	PSO2	PSO3
C313.1	1	1	1
C313.2	1	1	1
C313.3	1	1	1
C313.4	1	1	1
C313.5	1	1	1
Average	**1.00**	**1.00**	**1.00**

5 . Course Name : C402

Course	PSO1	PSO2	PSO3
C402.1	2	2	-
C402.2	2	2	-
C402.3	2	2	3
C402.4	2	2	3
C402.5	2	2	3
Average	**2.00**	**2.00**	**3.00**

6 . Course Name : C410

Course	PSO1	PSO2	PSO3
C410.1	3	-	-
C410.2	3	-	-
C410.3	3	-	-
C410.4	3	-	-
C410.5	3	3	3
Average	**3.00**	**3.00**	**3.00**

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10) Institute Marks : 10.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	PO1	1	PO3	1	PO5	PO6	2	1	1.7	2.4	1.0	3.0
C102	3	3	3	PO4	PO5	PO6	PO7	PO8	3	PO10	PO11	PO12
C103	2.4	3	2.4	2.6	2.8	PO6	PO7	PO8	PO9	PO10	PO11	3
C104	2	2	1	PO4	PO5	PO6	2	PO8	PO9	PO10	PO11	2
C105	2.4	2.6	2.6	2.3	1.8	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	3.0	1.8	2.8	1.8	PO5	PO6	PO7	PO8	PO9	1.8	PO11	PO12
C107	2.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	3.0	PO10	PO11	PO12
C108	3.0	3.0	2.0	2.0	PO5	2.0	2.0	PO8	PO9	PO10	PO11	2.0
C109	PO1	1.0	PO3	1.0	PO5	PO6	2.0	PO8	2.0	2.8	2.0	3.0
C110	3.0	3.0	3.0	PO4	PO5	PO6	PO7	PO8	3.0	PO10	PO11	PO12
C111	2.6	2.2	2.0	1.8	PO5	1.0	2.0	PO8	PO9	PO10	PO11	2.6
C112	3.0	3.0	2.0	1.4	PO5	PO6	1.4	PO8	PO9	PO10	PO11	1.4
C113	2.0	2.0	1.0	PO4	1.0	PO6	1.0	PO8	PO9	PO10	PO11	PO12
C114	3.0	2.5	2.0	2.0	PO5	PO6	1.0	PO8	PO9	PO10	PO11	PO12
C115	3.0	2.4	2.0	2.0	1.4	PO6	PO7	PO8	PO9	PO10	1.0	2.0
C116	2.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	3.0	PO10	PO11	PO12
C201	3.0	3.0	2.0	2.0	1.0	PO6	PO7	PO8	PO9	PO10	1.0	2.0
C202	3.0	2.8	2.8	3.0	3.0	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C203	3.0	2.6	3.0	1.8	3.0	1.0	PO7	PO8	PO9	PO10	1.0	2.0
C204	3.0	2.8	1.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C205	3.0	3.0	3.0	2.0	2.0	3.0	PO7	PO8	PO9	PO10	1.0	1.0
C206	3.0	3.0	2.8	2.0	2.0	3.0	PO7	PO8	PO9	PO10	1.0	3.0
C207	3.0	1.0	3.0	1.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C208	3.0	3.0	3.0	1.0	3.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0
C209	PO1	PO2	PO3	PO4	1.0	1.0	2.0	2.0	2.6	3.0	2.0	2.0
C210	3.0	3.0	2.0	2.0	2.0	PO6	PO7	PO8	PO9	PO10	1.0	2.0
C211	2.6	2.2	3.0	3.0	1.8	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C212	3.0	2.0	3.0	1.0	3.0	1.0	PO7	PO8	1.0	2.0	3.0	2.0
C213	2.6	2.4	1.6	1.6	1.0	1.0	PO7	PO8	PO9	PO10	1.0	1.6
C214	3.0	2.0	3.0	3.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	2.0
C215	1.0	1.0	PO3	1.0	PO5	3.0	3.0	3.0	PO9	PO10	1.0	2.0
C216	3.0	3.0	3.0	2.0	2.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0

C217	3.0	3.0	3.0	2.2	3.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0
C301	2.0	2.0	3.0	3.0	1.6	3.0	PO7	PO8	PO9	PO10	1.0	1.2
C302	3.0	2.6	3.0	1.0	3.0	1.0	PO7	PO8	1.0	2.0	3.0	3.0
C303	2.6	2.0	2.4	2.0	PO5	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C304	1.0	1.0	2.0	1.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C305	PO1	PO2	PO3	PO4	PO5	3.0	PO7	PO8	3.0	3.0	2.2	2.6
C306	2.2	1.4	2.0	2.6	1.8	1.6	1.0	1.2	PO9	PO10	PO11	1.6
C307	3	2.2	1.8	3	2.5	2.3	PO7	PO8	2	2	3	2.6
C308	3.0	2.0	3.0	3.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C309	3.0	2.0	3.0	3.0	2.0	1.0	PO7	PO8	PO9	PO10	PO11	PO12
C310	2.8	2.0	3.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C311	3.0	2.0	3.0	2.3	3.0	1.0	PO7	PO8	1.0	2.0	2.0	2.8
C312	3.0	2.0	2.0	1.6	1.6	1.0	PO7	PO8	PO9	PO10	1.0	1.2
C313	PO1	PO2	PO3	PO4	PO5	2.0	2.0	3.0	PO9	3.0	3.0	3.0
C314	2.6	2.6	2.4	2.2	2.2	1.4	PO7	PO8	PO9	PO10	1.0	1.0
C315	2.8	2.2	2.2	2.2	2.0	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316	3.0	3.0	3.0	2.0	2.0	2.0	PO7	PO8	PO9	PO10	PO11	PO12
C317	2.0	3.0	2.0	3.0	3.0	2.0	PO7	PO8	PO9	PO10	1.0	3.0
C318	PO1	1.0	PO3	2.0	3.0	PO6	PO7	1.0	3.0	3.0	PO11	PO12
C319	PO1	PO2	PO3	PO4	PO5	PO6	1.0	3.0	3.0	3.0	3.0	3.0
C401	3.0	3.0	3.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C402	3.0	3.0	2.4	2.0	PO5	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C403	3.0	2.8	2.4	3.0	3.0	3.0	PO7	PO8	PO9	PO10	PO11	PO12
C404	2.6	2.0	3.0	2.0	3.0	1.0	PO7	PO8	PO9	2.0	3.0	2.0
C405	3.0	1.2	1.4	1.2	3.0	1.6	PO7	PO8	PO9	2.0	1.4	2.0
C406	3.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	PO9	1.0	1.0	2.0
C407	1.0	2.2	2.2	2.2	3.0	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C408	3.0	1.8	2.0	2.0	2.6	1.2	PO7	PO8	PO9	PO10	3.0	3.0
C409	PO1	PO2	PO3	PO4	PO5	2.3	3.0	3.0	3.0	2.5	3.0	2.0
C410	3.0	2.8	2.2	2.0	1.2	2.2	PO7	PO8	3.0	1.0	3.0	2.0
C411	3.0	3.0	2.8	2.8	2.6	2.6	3.0	2.8	3.0	3.0	2.8	3.0

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses :

Course	PSO1	PSO2	PSO3
C101	2.0	PSO2	1.0
C102	3.0	PSO2	1.0
C103	PSO1	PSO2	1.0
C104	PSO1	PSO2	2.0
C105	3.0	PSO2	PSO3
C106	1.0	PSO2	1.0
C107	2.0	PSO2	PSO3
C108	PSO1	PSO2	2.0
C109	PSO1	PSO2	2.0
C110	2.8	1.0	PSO3
C111	PSO1	2.0	3.0

C112	3.0	2.0	PSO3
C113	3.0	2.0	PSO3
C114	3.0	1.7	1.7
C115	3.0	2.0	2.0
C116	2.0	2.0	PSO3
C201	2.0	PSO2	PSO3
C202	3.0	1.5	PSO3
C203	3.0	3.0	PSO3
C204	3.0	2.0	PSO3
C205	3.0	3.0	3.0
C206	3.0	3.0	3.0
C207	2.0	3.0	3.0
C208	2.4	3.0	3.0
C209	PSO1	PSO2	2.0
C210	2.0	2.0	PSO3
C211	3.0	3.0	3.0
C212	3.0	3.0	3.0
C213	3.0	2.0	PSO3
C214	3.0	2.3	1.0
C215	PSO1	PSO2	2.0
C216	3.0	2.0	2.0
C217	3.0	2.0	1.0
C301	3.0	2.0	2.0
C302	3.0	3.0	3.0
C303	3.0	PSO2	PSO3
C304	3.0	2.0	1.0
C305	PSO1	PSO2	2.0
C306	1.8	1.3	1.0
C307	2.6	3.0	3.0
C308	3.0	2.0	3.0
C309	3.0	2.0	PSO3
C310	2.0	2.2	2.2
C311	3.0	3.0	1.0
C312	2.0	2.0	2.0
C313	1.0	1.0	1.0
C314	2.0	2.2	2.2
C315	2.6	2.0	2.0
C316	2.4	1.4	1.2
C317	2.0	3.0	2.0
C318	3.0	2.8	2.8
C319	PSO1	PSO2	2.2
C401	2.0	3.0	3.0
C402	2.0	2.0	3.0
C403	2.0	2.4	1.8

C404	3.0	1.3	2.0
C405	1.6	1.6	3.0
C406	3.0	2.0	PSO3
C407	2.0	2.6	3.0
C408	3.0	2.0	PSO3
C409	PSO1	PSO2	2.2
C410	3.0	3.0	3.0
C411	3.0	2.8	2.8

3.2 Attainment of Course Outcomes (50) Total Marks 50.00

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10) Institute Marks : 10.00

Course outcomes are declarations that detail what knowledge or skills a learner will have acquired as a result of a learning activity. Typically, outcomes are expressed in terms of knowledge, skills, or attitudes. It is a quantifiable, observable, and precise statement that makes it obvious what knowledge and skills a student should possess after learning. After finishing a course or a series of courses, it describes the information, skills, and values that students are able to display. What a program is supposed to achieve is described in its program outcomes (POs). POs outline the knowledge and skills that students should have by the end of the program. POs are to be in line with the graduate attributes as specified in the NBA. Program Specific Outcomes (PSOs) are assertions that specify what students should be able to perform after completing a particular engineering degree. Evaluation of the efficacy of the teaching and learning process is based on the clearly stated course outcomes, POs, and PSOs.

The learning link (Level of Learning Achieved) between a courses course outcomes and program outcomes is shown in the course correlation matrix. This matrix clearly shows whether or not the students are able to meet the goals and results of the course. The matrix is a useful tool for assessing the curriculum, content, and structure of any course. The below table (Table No: 3.2.1.1 Process for mapping the values for CO-PO Matrix) gives information about the action verbs used in the POs and the nature of POs, stating whether the POs are technical or non-technical, with an understanding of the intention of each PO and the Bloom's level to which each of these action verbs in the POs correlates to. After understanding the POs, write the COs for a course and correlate the COs with the POsTable No: 3.2.1.1 Process for mapping the values for CO-PO Matrix

Table No: 3.2.1.1 Process for mapping the values for CO-PO Matrix

<table>
<tr><th>Type</th><th>POs</th><th>POs action Verbs</th><th>POs Blooms Levels</th><th>COs Bloom's Level(s)</th></tr>
<tr><td rowspan="13">Technical Skills</td><td>PO1</td><td>Apply</td><td>L3</td><td rowspan="13">L1 to L4 ---Theory Courses,
L1 to L5 ---- Laboratory Courses,
L1 to L6----Mini Project and MajorProject</td></tr>
<tr><td rowspan="3">PO2</td><td>Identify</td><td>L2</td></tr>
<tr><td>Formulate</td><td>L6</td></tr>
<tr><td>Review</td><td>L2</td></tr>
<tr><td rowspan="2">PO3</td><td>Design</td><td>L6</td></tr>
<tr><td>Develop</td><td>L3, L6</td></tr>
<tr><td rowspan="3">PO4</td><td>Analyze</td><td>L4</td></tr>
<tr><td>Interpret</td><td>L3</td></tr>
<tr><td>Design</td><td>L6</td></tr>
<tr><td rowspan="2">PO5</td><td>Create</td><td>L6</td></tr>
<tr><td>Select</td><td>L1, L2</td></tr>
<tr><td rowspan="2">PO6</td><td>Apply</td><td>L3</td></tr>
<tr><td>Assess</td><td>L5</td></tr>
<tr><td rowspan="6">Transferable Skills</td><td>PO7</td><td colspan="3" rowspan="6">Thumb Rule -experience and common sense
IfL1 Action Verbs of a CO---- Correlates with any of PO7 to PO12 ,then assign 1
IfL2 to L3 Action Verbs of a CO ---- Correlates with any of PO7 to PO12 , then assign 2
IfL4 to L6 Action Verbs of a CO ---- Correlates with anyof PO7 to PO12 ,then assign 3</td></tr>
<tr><td>PO8</td></tr>
<tr><td>PO9</td></tr>
<tr><td>PO10</td></tr>
<tr><td>PO11</td></tr>
<tr><td>PO12</td></tr>
</table>

Procedure followed while assigning the values by mapping COs to POs.

- Based on the significance of each CO for the given course, choose action verbs for a CO from various Blooms levels.
- When writing COs, stick to using only one action verb; if necessary, utilize many action verbs
- Values to CO-PO (technical POs in particular) matrix are assigned by
- Evaluating the COs significance in regard to the POs. Strongly matchingCOs receive a score of 3, moderately matching COs receive a score of 2, and weakly matching COs receive a score of 1, with the remaining values denoted by a "-symbol
- If an action verb used in a CO is repeated at multiple Bloom's levels, then reconsider which Bloom's level is the best fit for that action verb.

For measuring the attainment of Course Outcomes, various tools are used. The process of CO attainment is described in Figure 3.2.1.1.

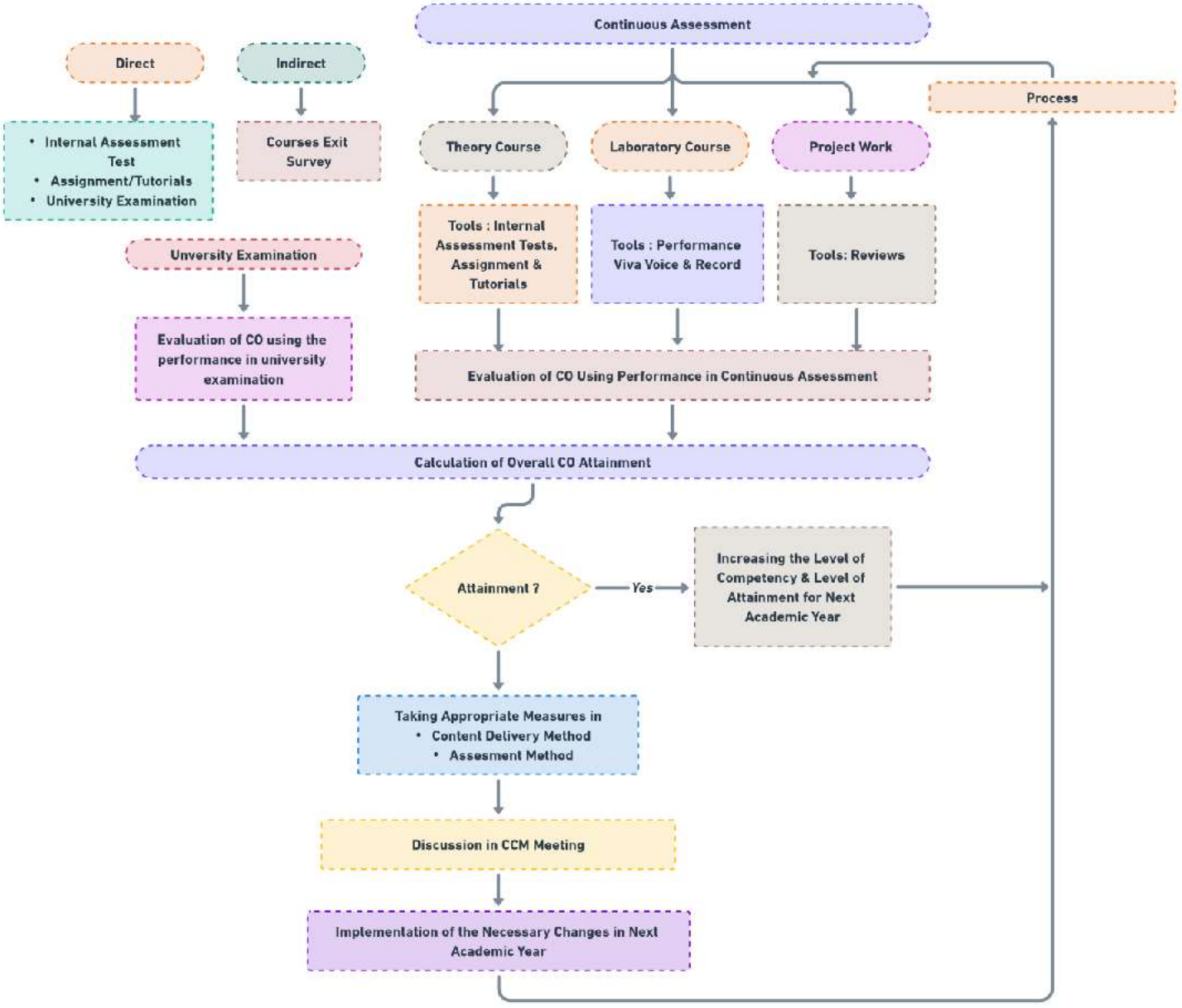


Figure 3.2.1.1 : Process of CO attainment

Direct Assessment:

Evaluation Methods	Process
Internal Assessment Tests	Three Internal Assessment Tests are conducted per semester to evaluate the attainment of course outcomes. Each questions are mapped with COs and blooms level.
Assignments & Tutorials	The tutorials and assignments are given to the students based on the subject nature. For four credit papers tutorials are mandatory. Tutorial and Assignment sheets are prepared by the faculty member with COS and levels.
Continuous Assessment & Model Exam (Laboratory Course)	The evaluation criteria for each experiment are based on performance, viva-voce and record mark. The attainment of COS is calculated through continuous assessment and model practical performance.
Project Reviews	Three reviews are conducted periodically to monitor and evaluate the progress of the project using project rubrics. Viva-Voce is conducted at the end of the semester as per University norms
University Examination	At the end of each semester, final examination is conducted for Theory and Laboratory courses by Anna University, in which question paper covers the entire syllabus and all the Cos are covered in the question papers

Attainment Level:

Attainment Level	Range
3	>70%
2	>60 - <70
1	> 50 - <60
0	<50

Theory courses:

For each theory course, faculty member calculates the course outcome attainment using University Examination and Internal Assessment Test. The attainment level will be calculated based on the average performance levels of both University Examination and Internal Assessment Test. The evaluation process of Internal Assessment Tests/Assignments/Tutorials/Group Discussion is counted for 20%and the remaining 80% will be given for university examination. Based on the level of CO attainment, the faculty member will decide whether to increase the competency level or change the content delivery method, assessment methods to improve attainment level for the course.

CO Attainment	Assesment Tool	Weightage	Frequency
	Internal Assesment Test	20%	Thrice in a Semester
	University Examination	80 %	Once in a Semester

Laboratory Courses:

For laboratory courses, the course outcome will be calculated based on performance, viva-voce, record work and model practical examination with the weightage of 20% for Continuous Internal Assessment and 80 % weightage for University Practical Examination. Based on the CO attainment level, the faculty member will decide whether to increase the competency level or enhance the practical knowledge of the students in order to improve attainment level for the laboratory course

CO Attainment	Assesment Tool	Weightage	Frequency
	Continuous Internal Assesment	20%	Every week
	University Examination	80 %	Once in a Semester

Laboratory Integrated Theory:

CO Attainment	Assesment Tool	Weightage	Frequency
	Internal Assesment Test	50 %	Thrice in a Semester
	University Examination	50 %	Once in a Semester

Project Work Assessment:

For project work, Continuous Internal Assessment is based on the performance in the three reviews. The Course Attainment is calculated based on the three reviews and project Viva voce.

- Every month, a project review is done to assess the projects development, and the second review will take place in front of an industry expert
- The pupils receive suggestions for ongoing updating and development.
- Evaluation of each review is based on the parameters discussed in teaching learning process.

The faculty member will decide the competency level and attainment level for project work considering the average performance level of the students.

CO Attainment Calculation:

The course outcomes for all the courses are calculated in terms of percentage using the formula

$$\text{COx in \%} = \frac{\text{Marks obtained by the students in COx}}{\text{Maximum Marks alloted in COx}} \times 100$$

Where, x= [1 to N], N= Number of COs.

Each course outcome is calculated for all the students based on marks obtained by the students.

$$\textit{COx Attainment in \%} = \frac{\textit{no. of Students scored more than or equal to 60\% of Marks in COx}}{\textit{no. of Students}} \times 100$$

Where, x= [1 to N], N= Number of Course Outcomes

CO Attainment level is defined based on the following criteria:

COX Attainment Level	3	80% of the Students scoring more than or equal to 60% of Marks in COX
	2	70% of the Students scoring more than or equal to 60% of Marks in COX
	1	60% of the Students scoring more than or equal to 60% of Marks in COX

After calculating the attainment levels of each COs from the performance of Internal Assessment Test 1, 2 & 3, the attainment level of Internal Assessment Test is calculated with ratio of sum of all COs attained by total number of COs as shown below

$$\text{IAT Attainment Level} = \frac{\text{Sum of all COs attained by students}}{\text{Total Number of COs}}$$

Based on university grade, the attainment level of COs is calculated. The attainment level is decided based on the following criteria.

University Attainment Level	3	80% of the Students scoring more than or equal to 60% of Marks in University Exam
	2	70% of the Students scoring more than or equal to 60% of Marks in University Exam
	1	60% of the Students scoring more than or equal to 60% of Marks in University Exam

Overall CO Attainment:

The Overall Attainment for a course is sum of 20% of Internal Assesment Test Attainment Level and 80% of University Attainment Level.

A Sample CO Attainment calculation for a course is shown below.

Course Code & Title : GE8076 Professional Ethics in Engineering

Semester & Year of study : IV & 2022-23

Course Index : C409

JEPPIAAR ENGINEERING COLLEGE

Overall CO Attainment (Direct Attainment)

Department: ECE

Sub Code & Name: GE8076 Professional Ethics in Engineering

	CO1	CO2	CO3	CO4	CO5
Max Mark :	100	100	100	100	100
60% of Max Mark :	60	60	60	50	60
Count of Students More than 60% of Max Mark :	63	62	64	5	54
CO Direct attainment % :	61	60	62	55	53
CO Indirect attainment % :	97	97	97	91	97
CO Final attainment % (20% of Indirect + 80% of Direct) :	60	68	60	30	57
CO attainment in Level	3	3	3	3	1

			Internal Test Attainment (A)					Assignment Attainment (B)					University Attainment (C)					Total=50%A+30%B+20%C				
		Average	67.27	66.47	72.31	66.79	55.19	85.78	84.90	86.47	87.35	65.29	59.71	59.71	59.71	59.71	59.71					
S.No	Reg No.	Student Name	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5
1	310818106001	AARTHI PRIYADHARSI	64	27	68	56	41	80	100	80	100	30	55	55	55	55	55	52.1	55.6	63.9	64.3	49.8
2	310818106002	ABHISHA A	45	68	77	66	75	100	30	30	30	60	75	75	75	75	75	71	75.9	73.5	75.3	72
3	310818106003	ABIRAMI K	47	49	77	71	63	80	30	30	100	20	55	55	55	55	55	57.6	60.2	63.5	68.8	50.4
4	310818106004	ABISHEK P	60	44	35	47	16	100	70	30	30	30	55	65	65	65	55	70.5	59.7	51	64.6	43.3
5	310818106006	ADAM ASIF S	66	78	81	78	66	70	100	80	30	70	55	55	55	55	55	51.3	70.3	67.3	66.9	61.3
6	310818106007	AGASTHIA PAKIANA	19	68	12	54	50	20	10	100	30	20	55	55	55	55	55	69.2	61.9	69.1	61.6	46.5
7	310818106008	ANAKHA A R	66	78	12	54	63	20	30	100	70	60	55	65	65	65	55	70.3	73.3	74.1	62.7	63.4
8	310818106009	ANDREW GERMANUS	52	63	66	62	5	100	100	30	30	60	55	55	55	55	55	55.	66.4	65.3	57.2	42.2
9	310818106010	ANJALI V R	53	45	45	51	54	60	100	60	30	40	75	75	75	75	75	63.4	72.2	67	73.6	55.7
10	310818106011	ANTONY YELTSON	100	100	10	66	100	70	30	30	30	60	55	65	65	65	55	76.5	63.5	71.5	76.5	16.5
11	310818106012	ARAVIND R	50	70	60	41	10	70	100	100	100	40	55	55	55	55	55	71.4	52.0	65.5	50.0	50.4
12	310818106013	ARAVINDH B	06	70	60	71	60	60	100	30	30	100	55	55	55	55	55	60.4	70.0	60.5	60.0	67.0
13	310818106014	ARAVINTH M	53	59	10	56	50	60	100	70	100	30	95	95	85	95	95	79.4	83.2	82.5	84.3	80.5
14	310818106015	ARUN A V	83	59	10	68	53	100	90	90	30	80	55	65	65	65	55	71.4	68.2	71.5	68.9	64.4
15	310818106016	ARUN SEKAR D	60	78	75	63	20	70	90	80	100	20	55	55	55	55	55	59.5	67.4	66	66.4	36.1
16	310818106017	ASHWIN K L	62	32	12	59	19	90	80	80	30	100	55	65	65	65	55	59.1	53.1	70.1	66.2	58.2
17	310818106018	ASMITHA S	81	90	14	78	91	90	10	70	90	70	55	55	55	55	55	69.8	63.5	69.7	68.9	68.8
18	310818106019	ASWIN JOY D M	85	83	75	80	59	80	10	80	70	40	55	55	55	55	55	70.2	66.4	66	65.5	53.2
19	310818106020	AZHAR MOHAMED S	66	83	77	66	56	70	80	70	30	60	75	75	75	75	75	71.2	78.4	71.5	73.9	66.3
20	310818106021	BALAJI E	10	66	60	66	63	100	100	30	30	20	75	75	75	75	75	78.5	77.3	73.5	73.3	60.4
21	310818106022	CHARANKUMAR A	40	54	87	66	50	100	80	100	30	80	75	75	75	75	75	59.5	69.7	83.5	73.9	66.5
22	310818106023	DEEPAK RAJ R	42	27	85	71	56	20	100	80	30	20	75	75	75	75	75	56.1	65.6	79	76.8	58.3
23	310818106024	DEEPIKA K	19	63	77	51	59	20	30	70	70	30	55	65	65	65	55	74.2	63.4	63.5	61.5	56.2
24	310818106025	DEVATHA S	60	54	77	76	66	100	30	100	30	30	55	55	55	55	55	55.5	61.1	73.5	66.3	57.3
25	310818106026	DHANALAKSHMI P	26	57	57	44	36	100	100	100	30	20	55	65	65	65	55	60.5	66.6	65.5	63.7	47.5
26	310818106027	DHANUSHRAJ P	40	41	77	71	41	70	30	30	70	60	55	55	55	55	55	55.2	57.6	65.5	62.6	51.6
27	310818106028	DHARSHINI B	10	70	64	66	10	60	00	100	70	20	75	75	75	75	75	79.2	76.0	75.7	70.4	40.0
28	310818106029	DHINESH KUMAR S	12	60	12	60	47	100	10	00	30	00	55	55	55	55	55	50.1	61.0	65.1	60.0	57.0
29	310818106031	DIVAKAR PRABHU D	01	70	50	70	47	60	00	30	100	30	55	55	55	55	55	57.0	60.0	62.0	71.2	47.0
30	310818106033	DINESH U	06	49	26	86	41	70	80	80	90	70	55	55	55	55	55	52.0	58.2	53.3	55.1	50.8
31	310818106034	DHANESHWARAN J	63	54	19	68	56	100	80	80	90	70	55	55	55	55	55	57.9	59.7	69.2	65.9	58.3
32	310818106035	GOWTHAMAN R P	32	22	79	97	34	80	100	100	100	80	55	55	55	55	55	59.1	51.1	62.2	58.6	53.7
33	310818106036	GUNASHREE C	57	66	12	56	53	70	10	70	30	30	55	55	55	55	55	38.6	61.3	63.1	62.3	53.4
34	310818106037	HARITHA B	64	50	89	67		100	100	70	100	60	55	55	55	55	55	56.7	62.5	68.2	67.6	55.5
35	310818106038	HITENDRA K	57	71	55	66	56	50	10	30	30	30	55	65	65	65	55	57.6	67.8	67	70.3	59.3
36	310818106039	INBARAJ P	58	41	43	37	0	70	80	30	30	80	55	65	65	65	55	63.9	60.8	63.4	61.5	46.5
34	310818106037	HARITHA E	64	50	60	67		100	100	70	100	60	55	55	55	55	55	60.7	62.5	60.2	67.5	53.5
35	310818106038	HITENDRA K	57	71	55	60	56	30	70	90	30	50	65	65	65	65	65	67.6	67.0	67	70.3	50.0
36	310818106039	INBARAJ P	58	41	43	37	0	70	60	90	90	80	65	65	65	65	65	63.8	50.8	63.4	61.6	48.5
37	310818106040	JAMFUDAM SAI PAVA	43	44	51	61	47	100	70	70	90	80	0	0	0	0	0	32.8	27.2	29.8	35.3	30.1
38	310818106041	JAYAPRIYA J	75	73	83	80	66	80	80	80	90	20	55	55	55	55	55	66	65.7	68.4	69.5	51.3
39	310818106042	JEEVA AMIRTHA S K	69	93	81	73	81	70	90	90	70	90	65	65	65	65	65	73.5	78.7	74.8	68.4	74.8
40	310818106043	JELSHIYA DINO D	40	39	58	54	34	70	80	90	90	80	55	55	55	55	55	53.5	55.5	62.9	61.7	53.7
41	310818106044	JENISHA R	60	44	68	63	47	100	70	70	80	30	55	55	55	55	55	65.5	54.7	61.9	62.4	47.6
42	310818106045	KALAIVANI K	47	68	79	68	56	90	70	90	80	20	55	55	55	55	55	59.6	67.9	63.2	63.9	48.3
43	310818106046	KAVIYA S	66	63	17	80	81	100	70	80	100	40	65	65	65	65	65	72.3	65.4	71.6	75.5	64.8
44	310818106047	KEERTHANA M	35	27	60	63	44	100	60	80	80	70	65	65	65	65	65	63	56.6	65.5	67.4	53.7
45	310818106048	KEERTHANA R	15	71	36	29	50	90	100	90	80	60	65	65	65	65	65	73	73.8	61.9	57.2	53.5
46	310818106049	KRISHNA PRASAD S A	28	32	19	29	47	100	70	70	30	80	55	55	55	55	55	55.9	51.1	47.2	54.2	57.6
47	310818106050	LAKSHMIPRIYA M	43	56	17	13	66	60	60	100	100	20	65	65	65	65	65	61.4	65.5	73.6	74.4	56.3
48	310818106051	LOGESHWARAN S	62	53	73	71	12	70	60	60	30	100	55	55	55	55	55	60.1	53.2	67.2	65.5	65.1
49	310818106052	MACKNUS FELIX V	60	40	70	60	10	00	60	30	30	20	55	55	55	55	55	54.0	50.2	65.5	64.4	00.0
50	310818106053	MARIYA DESONA S	70	60	75	61	60	30	70	70	100	60	55	55	55	55	55	66.5	61.0	64	65.0	60.8
51	310818106054	MISHAM SOLOMON	47	88	62	41	56	90	80	80	90	80	55	55	55	55	55	58.6	71.8	62.1	57.8	60.3
52	310818106055	MOHAMED ATHAM S	58	73	79	51	66	70	70	70	100	90	55	55	55	55	55	58.8	60.4	65.2	62.3	65.3
53	310818106056	MOHAMED SUHAIL J	25	77	55	44	73	100	100	100	100	80	55	55	55	55	55	55	52.6	64	60.7	47.4
54	310818106057	MONIKA D	77	78	81	85	59	80	70	100	80	70	65	65	65	65	65	71.6	59.9	76.8	74	64.2
55	310818106058	MOZHI ARASI V	47	59	26	54	56	80	80	100	80	50	95	95	95	95	95	77.6	81.5	75.9	79.7	74.3
56	310818106059	MURALIDHARAN D	26	54	87	73	50	80	100	80	30	70	75	75	75	75	75	64.9	73.1	73.6	77.4	66.5
57	310818106060	NAVEEN M	32	59	83	73	63	90	100	100	70	30	55	55	55	55	55	55.1	65.2	72.4	63.4	52.4
58	310818106061	NAVEEN V M	87	83	79	78	91	80	80	90	70	30	55	55	55	55	55	65.6	70.4	68.2	64.9	60.8
59	310818106062	NEHA S	55	61	91	68	56	100	80	90	80	90	55	55	55	55	55	64	53.8	72.8	63.3	62.3
60	310818106063	NILE SAHANI H Y	31	53	83	73	34	80	20	100	30	30	65	65	65	65	65	75.8	78.4	77.4	72.4	70.7
61	310818106065	PAUL LIVING X	89	83	17	73	63	100	70	70	30	60	65	65	65	65	65	75.2	77.4	63.6	72.4	63.4
62	310818106066	PON VIGNESWARAN V	17	68	53	68	66	100	80	60	30	70	55	55	55	55	55	70.6	65.0	53.4	65.5	61.3
63	310818106067	POONGKUZHALI G	31	65	60	71	16	60	60	30	60	70	55	55	55	55	55	70.6	60	63.5	64.5	64.5
64	310818106068	PRAKADISH K S	70	10	67	10	04	70	70	100	70	00	55	55	55	55	55	65.8	54.0	70.6	64.0	60.7
65	310818106069	PRAMIKA K	70	60	17	60	60	70	100	00	00	100	65	65	65	65	65	70.8	71.4	71.6	60.0	72.0
66	310818106070	PRAVEENRAJ G	17	10	17	10	75	00	70	30	00	00	55	55	55	55	55	60.0	53.4	60.6	65.0	56
67	310818106071	PREETHI K	64	95	88	94	88	80	80	80	90	60	55	55	55	55	55	71.7	74	68.9	73.7	65.8
68	310818106072	PRIYADHARSHINI S	83	68	58	83	12	100	80	90	100	90	65	65	65	65	65	77.4	58.9	67.8	77.4	72.1
69	310818106073	PRIYANKA S	69	90	64	51	69	70	90	70	90	80	55	55	55	55	55	68.2	72.5	60.7	60.3	64.2
70	310818106074	RAJAVENDHAN G	47	88	96	73	50	100	80	100	90	50	55	55	55	55	55	61.6	59.9	76.9	67.4	52.5
71	310818106075	RAKESH KUMAR A	53	49	17	78	47	80	80	70	70	60	0	0	0	0	0	31.9	30.7	37.1	37.4	26.1
72	310818106077	RANJITH K	58	35	24	68	34	70	80	70	100	60	55	55	55	55	55	70.5	74	51.1	67.9	67.7
73	310818106078	RISHVANTH T	66	59	87	83	53	90	70	90	90	90	55	55	55	55	55	65.3	59.2	71.6	73.4	61.4
74	310818106079	SAHAYA RAGUL X	35	29	79	73	31	70	80	90	80	100	75	75	75	75	75	62	52.2	79.2	75.4	66.8
75	310818106081	SAIPHANEETH S	58	73	81	66	53	100	70	90	70	30	55	55	55	55	55	64.5	53.4	68.8	61.3	43.4
76	310818106083	SANGEETHA V	74	63	72	66	73	100	20	100	80	30	65	65	65	65	65	74.7	53.4	74.1	65.5	56.2
77	310818106084	SARAVANAN G	62	53	17	53	34	70	100	30	30	60	65	65	65	65	65	55.1	70.2	73.6	65.2	72.7
78	310818106085	SARAVANAN S	62	35	87	30	16	60	70	70	100	30	75	75	75	75	75	5.1	60	77.6	64.5	76.5
79	310818106086	SASIKUMAR S	61	66	63	63	56	70	50	100	70	60	75	75	75	75	75	75.6	6.5	62.4	75.4	66.3
80	310818106087	SATHIYAN D S	60	60	60	00	04	70	100	30	30	00	75	75	75	75	75	00.0	05.4	02.3	01.0	70.7
81	310818106088	SESHADRI D	70	60	67	50	00	30	60	100	100	100	75	75	75	75	75	70.8	77.5	00.6	75.2	60.0
82	310818106089	SHALOM ANAND D	79	73	89	64	56	100	100	80	90	80	0	0	0	0	0	40.1	41.8	42.7	37.2	32.8
83	310818106090	SHARON CANDEDA J	79	76	85	61	59	70	80	100	70	90	75	75	75	75	75	75.2	78.0	83	69.3	73.2
84	310818106091	SHREYA V	83	83	84	87	12	90	70	70	100	60	55	55	55	55	55	70.4	56.7	65.7	73.5	61.1
85	310818106092	SIVA SANKARAN V	70	80	84	74	56	90	80	100	100	100	75	75	75	75	75	76.5	77.5	82.7	79.7	74.3
86	310818106093	SIVAYOGAN R	72	67	54	7	53	100	100	60	30	60	55	55	55	55	55	71.2	67.6	66.1	56.6	53.4
87	310818106094	SOUNDHARYA K	50	53	52	54	50	70	50	100	70	50	55	55	55	55	55	65.5	70.4	72.1	65.7	63.5
88	310818106095	SRIKANTH M	75	74	01	66	50	30	70	70	100	60	0	0	0	0	0	40.5	60.2	00.0	30.0	27.0
89	310818106096	SRIMADHUMITHA K	30	54	75	66	10	30	30	100	100	100	55	55	55	55	55	72.5	53.7	70	67.0	50.2
90	310818106097	SUMATHI N	73	72	77	52	58	100	100	80	90	80	55	55	55	55	55	69.4	68.1	66.6	61.1	59.4
91	310818106098	SURYA D	38	87	92	89	78	70	90	100	70	80	75	75	75	75	75	77.9	81.6	85.1	78.2	78.9
92	310818106099	SURYA D	38	87	90	96	78	90	70	70	100	60	75	75	75	75	75	81.9	77.6	75.5	86.0	72.9
93	310818106100	SURYADHARAN K	76	77	76	64	41	90	30	100	100	100	75	75	75	75	75	78.9	74.8	80.3	76.1	69.3
94	310818106101	SWATHIKA P	32	67	32	74	59	100	100	80	90	80	65	65	65	65	65	77.1	72.6	73.1	72.1	64.1
95	310818106102	SWETHA PRIYA P	38	85	91	89	50	70	90	100	70	90	55	55	55	55	55	67.9	71	74.8	58.2	61.5
96	310818106103	THRISHNA S	32	76	77	77	53	90	70	70	100	60	55	55	55	55	55	70.1	64.3	65.8	58.8	55.4
97	310818106104	VENKATESWARAN S	30	85	92	83	43	30	50	100	100	100	55	55	55	55	55	72.5	63	75.1	72.4	53.5
98	310818106106	VIGNESH E	50	74	47	60	53	100	100	80	30	80	75	75	75	75	75	81.5	73.7	61.6	73.5	63.4
99	310818106107	VIKRAM J	56	50	32	83	78	70	30	100	70	30	55	55	55	55	55	67.3	62.5	75.1	56.4	63.3
100	310818106301	PRIYANGA	71	74	50	61	41	30	70	70	100	60	75	75	75	75	75	76.8	73.7	75.5	72.6	61.8
101	310818106701	RJETAKARTHIGA	51	74	54	61	53	50	50	100	100	100	55	55	55	55	55	71.5	65.7	72.7	65.6	65.2
102	310818106005	ABRAHAM J	52	53	55	50	72	100	100	60	30	60	55	55	55	55	55	72.1	72.4	60	72.5	65.1

After calculating each course outcomes in terms of percentage, the attainment level of the course is shown below table.

CO1	1	60% of Students scored more than or equal to 60 Marks
CO2	2	70% of Students scored more than or equal to 60 Marks

CO3	2	70% of Students scored more than or equal to 60 Marks
CO4	3	80% of Students scored more than or equal to 60 Marks
CO5	2	70% of Students scored more than or equal to 60 Marks

University Attainment is calculated as follows:

The university attainment level can be calculated as follows:

University Attainment Level	1	60% of Students scored more than or equal to 50 Marks
	2	70% of Students scored more than or equal to 50 Marks
	3	80% of Students scored more than or equal to 50 Marks

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)

Institute Marks : 40.00

CO Attainment for the Batch 2018-2022:

Course No.	Course Code	Course	CO-ATTAINMENT
C101	HS8151	Communicative English	3.0
C102	MA8151	Engineering Mathematics - I	0.6
C103	PH8151	Engineering Physics	1.0
C104	CY8151	Engineering Chemistry	3.0
C105	GE8151	Problem Solving and Python Programming	1.6
C106	GE8152	Engineering Graphics	2.0
C107	GE8161	Problem Solving and Python Programming Laboratory	3.0
C108	BS8161	Physics and Chemistry Laboratory	3.0
C109	HS8251	Technical English	3.0
C110	MA8251	Engineering Mathematics - II	2.6
C111	PH8253	Physics for Electronics Engineering	1.6
C112	BE8254	Basic Electrical and Instrumentation Engineering	2.0
C113	EC8251	Circuit Analysis	2.0
C114	EC8252	Electronic Devices	1.0
C115	EC8261	Circuits and Devices Laboratory	3.0
C116	GE8261	Engineering Practices Laboratory	3.0
C201	MA8352	Linear Algebra and Partial Differential Equations	1.0
C202	EC8393	Fundamentals of Data Structures In C	2.6
C203	EC8351	Electronic Circuits- I	2.8
C204	EC8352	Signals and Systems	3.0
C205	EC8392	Digital Electronics	2.6
C206	EC8391	Control Systems Engineering	3.0
C207	EC8381	Fundamentals of Data Structures in C Laboratory	3.0
C208	EC8361	Analog and Digital Circuits Laboratory	3.0
C209	HS8381	Interpersonal Skills/Listening &Speaking	3.0
C210	MA8451	Probability and Random Processes	3.0
C211	EC8452	Electronic Circuits II	3.0
C212	EC8491	Communication Theory	3.0
C213	EC8451	Electromagnetic Fields	3.0
C214	EC8453	Linear Integrated Circuits	3.0
C215	GE8291	Environmental Science and Engineering	3.0
C216	EC8461	Circuits Design and Simulation Laboratory	3.0
C217	EC8462	Linear Integrated Circuits Laboratory	3.0
C301	EC8501	Digital Communication	3.0
C302	EC8553	Discrete-Time Signal Processing	3.0
C303	EC8552	Computer Architecture and Organization	3.0
C304	EC8551	Communication Networks	3.0
C305	OR0551	Renewable Energy Sources	3.0
C306	GE8077	Total Quality Management	3.0
C307	EC8562	Digital Signal Processing Laboratory	3.0
C308	EC8561	Communication Systems Laboratory	3.0
C309	EC8563	Communication Networks Laboratory	3.0
C310	EC8691	Microprocessors and Microcontrollers	3.0
C311	EC8095	VLSI Design	3.0

C312	EC8652	Wireless Communication	3.0
C313	MG8591	Principles of Management	3.0
C314	EC8651	Transmission Lines and RF Systems	3.0
C315	EC8004	Wireless Networks	3.0
C316	EC8681	Microprocessors and Microcontrollers Laboratory	3.0
C317	EC8661	VLSI Design Laboratory	3.0
C318	EC8611	Technical Seminar	3.0
C319	HS8581	Professional Communication	3.0
C401	EC8701	Antennas and Microwave Engineering	3.0
C402	EC8751	Optical Communication	3.0
C403	EC8791	Embedded and Real Time Systems	3.0
C404	EC8702	Ad hoc and Wireless Sensor Networks	3.0
C405	EC8071	Cognitive Radio	3.0
C406	OME754	Industrial safety	3.0
C407	EC8711	Embedded Laboratory	3.0
C408	EC8761	Advanced Communication Laboratory	3.0
C409	GE8076	Professional Ethics in Engineering	2.8
C410	EC8094	Satellite Communication	3.0
C411	EC8811	Project Work	3.0

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50) Total Marks 50.00

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

Institute Marks : 10.00

PO& PSO Assessment Tools

Assessment tools for Program outcomes and Program Specific outcomes are categorized into two namely Direct and Indirect assessment methods. The below table gives the Direct and Indirect Assessment tools for PO& PSO assessment and Figure 3.3.1 shows the Process used for PO and PSO attainment.

S .No	PO & PSO Attainment	Assessment Tools
1	Direct Attainment	Internal Assessment Tests, End semester examinations, Tutorials, Assignments, Quiz, Mini Project, Seminar and Technical Presentation, etc
2	Indirect Attainment	• Programme End Survey • Alumni Survey

Direct Assessment Tools:

Direct assessment tools display the knowledge and skills of students based on theirperformance. They include tests, assignments, tutorials and examinations etc. whichare based on the questions that relate to specific course outcomes in each course. AsCOs are mapped to the POs and PSOs, the direct assessment tools used for COs canalso be used for POs and PSOs.

Indirect Assessment Tools:

Attainment of Program Outcome and Program Specific Outcome is also measuredthrough Indirect Assessment tools. One such tool is the opinion of graduates during thecompletion of the program. A survey is taken at the end of the programme. Besides, a survey on the attainment of each Pos and PSOs are taken from the recent alumni. They all contribute equally towards indirectassessment of attainment of POs and PSOs.

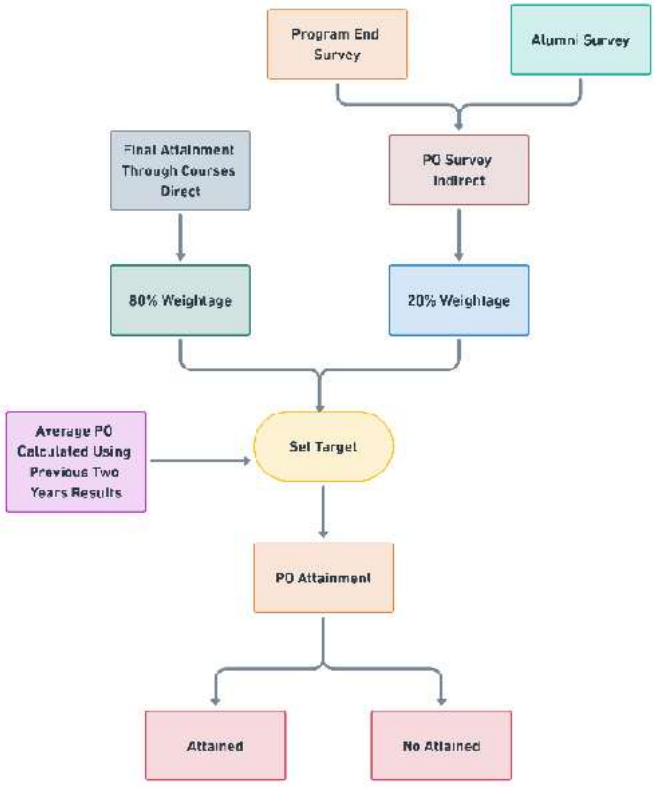


Figure 3.3.1 The Process used for PO and PSO attainment

Process involved in fixing target for PO& PSOattainment

1. Collect subject-wise results.
2. Calculate the average result value of thesubjects.
3. Substitute average result value in the Course vs PO& PSO mapping.
4. Calculate average value of thePOs and PSOs

3.3.2 Provide results of evaluation of PO&PSO (40)

Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	PO1	1.0	PO3	1.0	PO5	PO6	2.0	1.0	1.7	2.4	1.0	3.0
C102	0.6	0.6	0.6	PO4	PO5	PO6	PO7	PO8	0.6	PO10	PO11	PO12
C103	0.8	1.0	0.8	0.9	0.9	PO6	PO7	PO8	PO9	PO10	PO11	1.0
C104	2.0	2.0	1.0	PO4	PO5	PO6	2.0	PO8	PO9	PO10	PO11	2.0
C105	1.3	1.5	1.5	0.9	0.8	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	2.0	1.3	1.9	1.3	PO5	PO6	PO7	PO8	PO9	1.3	PO11	PO12
C107	2.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	3.0	PO10	PO11	PO12
C108	3.0	3.0	2.0	2.0	PO5	2.0	2.0	PO8	PO9	PO10	PO11	2.0
C109	PO1	1.0	PO3	1.0	PO5	PO6	2.0	PO8	2.0	2.8	2.0	3.0
C110	2.6	2.6	2.6	PO4	PO5	PO6	PO7	PO8	2.6	PO10	PO11	PO12
C111	1.4	1.1	1.1	0.9	PO5	0.5	1.1	PO8	PO9	PO10	PO11	1.3
C112	2.0	2.0	1.3	0.9	PO5	PO6	0.9	PO8	PO9	PO10	PO11	0.9
C113	1.3	1.3	0.7	PO4	0.7	PO6	0.7	PO8	PO9	PO10	PO11	PO12
C114	1.0	0.8	0.7	0.7	PO5	PO6	0.3	PO8	PO9	PO10	PO11	PO12
C115	3.0	2.4	2.0	2.0	1.4	PO6	PO7	PO8	PO9	PO10	1.0	2.0
C116	2.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	3.0	PO10	PO11	PO12
C201	1.0	1.0	0.7	0.7	0.3	PO6	PO7	PO8	PO9	PO10	0.3	0.7
C202	2.6	2.4	2.4	2.6	2.6	0.9	PO7	PO8	PO9	PO10	0.9	0.9
C203	2.08	2.4	2.4	1.6	2.8	0.9	PO7	PO8	PO9	PO10	0.9	1.9
C204	3.0	2.8	1.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C205	2.6	2.6	2.6	1.7	1.7	2.6	PO7	PO8	PO9	PO10	0.9	0.9
C206	3.0	3.0	2.8	2.0	2.0	3.0	PO7	PO8	PO9	PO10	1.0	3.0
C207	3.0	1.0	3.0	1.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C208	3.0	3.0	3.0	1.0	3.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0
C209	PO1	PO2	PO3	PO4	01.0	1.0	2.0	2.0	0.6	3.0	2.0	2.0
C210	3.0	3.0	2.0	2.0	2.0	PO6	PO7	PO8	PO9	PO10	1.0	2.0
C211	2.6	2.2	3.0	3.0	1.8	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C212	3.0	2.0	3.0	1.0	3.0	1.0	PO7	PO8	1.0	2.0	3.0	2.0
C213	2.6	2.4	1.6	1.6	1.0	1.0	PO7	PO8	PO9	PO10	1.0	1.6
C214	3.0	2.0	3.0	3.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	2.0
C215	1.0	1.0	PO3	1.0	PO5	3.0	3.0	3.0	PO9	PO10	1.0	2.0
C216	3.0	3.0	3.0	2.0	2.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0
C217	3.0	3.0	3.0	2.2	3.0	2.0	PO7	PO8	PO9	PO10	1.0	1.0
C301	2.0	2.0	3.0	3.0	1.6	3.0	PO7	PO8	PO9	PO10	1.0	1.2
C302	3.0	2.6	3.0	1.0	3.0	1.0	PO7	PO8	1.0	2.0	3.0	3.0
C303	2.6	2.0	2.4	2.0	PO5	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C304	1.0	1.0	2.0	1.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	1.0
C305	2.2	1.4	2.0	2.6	1.8	1.6	1.0	1.2	PO9	PO10	PO11	1.6
C306	PO1	PO2	PO3	PO4	PO5	3.0	PO7	PO8	3.0	3.0	2.2	2.6
C307	3.0	2.2	1.8	3.0	2.5	2.3	PO7	PO8	2.0	2.0	3.0	2.6
C308	3.0	2.0	3.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C309	3.0	2.0	3.0	3.0	2.0	1.0	PO7	PO8	PO9	PO10	PO11	PO12
C310	2.8	2.0	3.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	1.0	3.0
C311	3.0	2.0	3.0	2.3	3.0	1.0	PO7	PO8	1.0	2.0	2.0	2.8
C312	3.0	2.0	2.0	1.6	1.6	1.0	PO7	PO8	PO9	PO10	1.0	1.2

C313	PO1	PO2	PO3	PO4	PO5	2.0	2.0	3.0	PO9	3.0	3.0	3.0
C314	2.6	2.6	2.4	2.2	2.2	1.4	PO7	PO8	PO9	PO10	1.0	1.0
C315	2.8	2.2	2.2	2.2	2.0	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C316	3.0	3.0	3.0	2.0	2.0	2.0	PO7	PO8	PO9	PO10	PO11	PO12
C317	2.0	3.0	2.0	3.0	3.0	2.0	PO7	PO8	PO9	PO10	1.0	3.0
C318	PO1	1.0	PO3	2.0	3.0	PO6	PO7	1.0	3.0	3.0	PO11	PO12
C319	PO1	PO2	PO3	PO4	PO5	PO6	1.0	3.0	3.0	3.0	3.0	3.0
C401	3.0	3.0	3.0	2.0	2.0	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C402	3.0	3.0	2.4	2.0	PO5	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C403	3.0	2.8	2.4	3.0	3.0	3.0	PO7	PO8	PO9	PO10	PO11	PO12
C404	2.6	2.0	3.0	2.0	3.0	1.0	PO7	PO8	PO9	2.0	3.0	2.0
C405	3.0	1.2	1.4	1.2	3.0	1.6	PO7	PO8	PO9	2.0	1.4	2.0
C406	3.0	2.0	3.0	PO4	2.0	PO6	PO7	PO8	PO9	1.0	1.0	2.0
C407	1.0	2.2	2.2	2.2	3.0	1.0	PO7	PO8	PO9	PO10	3.0	3.0
C408	3.0	1.8	2.0	2.0	2.6	1.2	PO7	PO8	PO9	PO10	3.0	3.0
C409	PO1	PO2	PO3	PO4	PO5	1.8	2.4	2.4	2.4	1.8	2.0	1.6
C410	3.0	2.8	2.2	2.0	1.2	2.2	PO7	PO8	3.0	1.0	3.0	2.0
C411	3.0	3.0	2.8	2.8	2.6	1.6	3.0	2.8	3.0	3.0	2.8	2.0

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.48	2.21	2.35	2.06	2.23	1.80	1.91	2.31	2.27	2.33	1.86	2.16
Direct Attainment	2.42	2.06	2.24	1.85	2.09	1.55	1.69	2.16	2.11	2.24	1.65	1.98
InDirect Attainment	2.7	2.8	2.8	2.9	2.8	2.8	2.8	2.9	2.9	2.7	2.7	2.9

PSO Attainment

Course	PSO1	PSO2	PSO3
C101	2.0	PSO2	1.0
C102	3.0	PSO2	1.0
C103	PSO1	PSO2	1.0
C104	PSO1	PSO2	2.0
C105	3.0	PSO2	PSO3
C106	1.0	PSO2	1.0
C107	2.0	PSO2	PSO3
C108	PSO1	PSO2	2.0
C109	PSO1	PSO2	2.0
C110	2.8	1.0	PSO3
C111	PSO1	2.0	3.0
C112	3.0	2.0	PSO3
C113	3.0	2.0	PSO3
C114	3.0	1.7	1.7
C115	3.0	2.0	2.0
C116	2.0	2.0	PSO3
C201	2.0	PSO2	PSO3
C202	3.0	1.5	PSO3
C203	3.0	3.0	PSO3
C204	3.0	2.0	PSO3

C205	3.0	3.0	3.0
C206	3.0	3.0	3.0
C207	2.0	3.0	3.0
C208	2.4	3.0	3.0
C209	PSO1	PSO2	2.0
C210	2.0	2.0	PSO3
C211	3.0	3.0	3.0
C212	3.0	3.0	3.0
C213	3.0	2.0	PSO3
C214	3.0	2.3	1.0
C215	PSO1	PSO2	2.0
C216	3.0	2.0	2.0
C217	3.0	2.0	1.0
C301	3.0	2.0	2.0
C302	3.0	3.0	3.0
C303	3.0	PSO2	PSO3
C304	3.0	2.0	1.0
C305	PSO1	PSO2	2.0
C306	1.8	1.3	1.0
C307	2.6	3.0	3.0
C308	3.0	2.0	3.0
C309	3.0	2.0	PSO3
C310	2.0	2.2	2.2
C311	3.0	3.0	1.0
C312	2.0	2.0	2.0
C313	1.0	1.0	1.0
C314	2.0	2.2	2.2
C315	2.6	2.0	2.0
C316	2.4	1.4	1.2
C317	2.0	3.0	2.0
C318	3.0	2.8	2.8
C319	PSO1	PSO2	2.2
C401	2.0	3.0	3.0
C402	2.0	2.0	3.0
C403	2.0	2.4	1.8
C404	3.0	1.3	2.0
C405	1.6	1.6	3.0
C406	3.0	2.0	PSO3
C407	2.0	2.6	3.0
C408	3.0	2.0	PSO3
C409	PSO1	PSO2	1.8
C410	3.0	3.0	3.0
C411	3.0	2.8	2.8

PSO Attainment Level

Course	**PSO1**	**PSO2**	**PSO3**
CO Attainment	2.62	2.37	2.26

Direct Attainment	2.57	2.24	2.12
InDirect Attainment	2.8	2.9	2.8

4 STUDENTS' PERFORMANCE (150)

Total Marks 131.46

:

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)	120	120	120	120	120	120	120
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)	116	107	69	89	100	88	104
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	2	4	2	2	3	3
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	116	109	73	91	102	91	107

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)	116	0	0	0	0
2021-22 (CAYm1)	109	46	0	0	0
2020-21 (CAYm2)	73	69	28	0	0
2019-20 (CAYm3)	91	33	35	31	0
2018-19 (LYG)	102	71	68	68	65
2017-18 (LYGm1)	91	86	61	61	60
2016-17 (LYGm2)	107	93	69	69	67

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)	116	0	0	0	0
2021-22 (CAYm1)	109	107	0	0	0
2020-21 (CAYm2)	73	69	73	0	0
2019-20 (CAYm3)	91	89	91	91	0
2018-19 (LYG)	102	100	102	102	97
2017-18 (LYGm1)	91	88	91	91	91
2016-17 (LYGm2)	107	104	107	107	107

4.1 Enrolment Ratio (20)

Total Marks 18.00

Institute Marks : 18.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2022-23 (CAY)	120	116	96.67
2021-22 (CAYm1)	120	107	89.17
2020-21 (CAYm2)	120	69	57.50

Average [(ER1 + ER2 + ER3) / 3] : 81.11

Assessment : 18.00

4.2 Success Rate in the stipulated period of the program (40) Total Marks 30.75

4.2.1 Success rate without backlogs in any semester / year of study (25) Institute Marks : 16.00

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	102.00	91.00	107.00
Y Number of students who have graduated without backlogs in the stipulated period	65.00	60.00	67.00
Success Index [SI = Y / X]	0.64	0.66	0.63

Average SI [(SI1 + SI2 + SI3) / 3] : 0.64

Assessment [25 * Average SI] : 16.00

4.2.2 Sucess rate in stipulated period (15) Institute Marks : 14.75

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	102.00	91.00	107.00
Y Number of students who have graduated in the stipulated period	97.00	91.00	107.00
Success Index [SI = Y / X]	0.95	1.00	1.00

Average SI[(SI1 + SI2 + SI3) / 3]: 0.98

Assessment [15 * Average SI] : 14.75

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Third Year (15) Total Marks 13.28

Institute Marks : 13.28

Academic Performance	CAYm3 (2019-20)	LYG (2018-19)	LYGm1 (2017-18)
Mean of CGPA or mean percentage of all successful students(X)	8.93	8.89	8.73
Total number of successful students(Y)	91.00	102.00	91.00
Totalnumber of students appeared in the examination(Z)	91.00	102.00	91.00
API [X*(Y/Z)]:	8.93	8.89	8.73

Average API [(AP1 + AP2 + AP3)/3] : 8.85

Assessment [1.5 * AverageAPI] : 13.28

4.4 Academic Performance in Second Year (15) Total Marks 12.90

Institute Marks : 12.90

Academic Performance	CAYm2 (2020-21)	CAYm3 (2019-20)	LYG (2018-19)
Mean of CGPA or mean percentage of all successful students(X)	8.87	8.92	8.01
Total number of successful students (Y)	73.00	91.00	102.00
Total number of students appeared in the examination (Z)	73.00	91.00	102.00
API [X * (Y/Z)]	8.87	8.92	8.01

Average API [(AP1 + AP2 + AP3)/3] : 8.60

Assessment [1.5 * AverageAPI] : 12.90

4.5 Placement, Higher Studies and Entrepreneurship (40) Total Marks 36.53

Institute Marks : 36.53

Item	LYG (2018-19)	LYGm1 (2017-18)	LYGm2 (2016-17)
Total No of Final Year Students(N)	102.00	91.00	107.00
No of students placed in the companies or government sector(X)	86.00	69.00	65.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	4.00	9.00	10.00
No of students turned entrepreneur in engineering/technology (Z)	5.00	9.00	16.00
x + y + z =	95.00	87.00	91.00
Placement Index [(X+Y+Z)/N] :	0.93	0.96	0.85

Average Placement [(P1 + P2 + P3)/3] : 0.91

Assessment [40 * Average Placement] : 36.53

Program Name :
Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ABHIKSHA A	310818106002	ATOS(Syntel)	9.12.2021
2	AARTHI PRIYADHARSHINI S	310818106001	WIPRO	21.01.2022
3	ABIRAMI K	310818106003	Cognizant	19786280
4	ADAM ASIF S	310818106006	Dynamic Netsoft Technologies	14.02.2022
5	ABISHEK P	310818106004	Prodapt	1.11.2021
6	ANJALI V R	310818106010	ATOS(Syntel)	9.12.2021
7	ANTONY YUTSON .J	310818106011	MSC TECHNOLOGY	24.03.2022
8	ARAVIND R	310818106012	ATOS(Syntel)	9.12.2021
9	ARAVINDH R	310818106013	Harman connected Services	1.02.2022
10	ARAVINTH M	310818106014	ATOS(Syntel)	9.12.2021
11	ARUN A V	310818106015	Cognizant	17.01.2022
12	ARUN SEKAR	310818106016	MSC TECHNOLOGY	28.03.2022
13	ASHWIN K L	310818106017	Temenos	04.07.2022
14	ASMITHA S	310818106018	ATOS(Syntel)	9.12.2021
15	ASWIN JOY C M	310818106019	ATOS(Syntel)	9.12.2021
16	AZHAR MOHAMED S	310818106020	Harman connected Services	1.02.2022
17	BALAJI R	310818106021	WIPRO	21.01.2022
18	CHARAN KUMAR A	310818106022	Atos	4.09.2022
19	DEEPAK RAJ.R	310818106023	Cognizant	18.02.2022
20	DEEPIKA	310818106024	BOSCH	5.07.2022
21	DEVATHA S	310818106025	Cognizant	19797093
22	DHANALAKSHMI P	310818106026	Tata communication limited	1.10.2022
23	DHANUSHRAJ P	310818106027	Cognizant	17.01.2022
24	DHARSHINI .R	310818106028	Cognizant	18.01.2022
25	DHINESHKUMAR G	310818106029	Syncfusion	16.11.2022
26	DIVAKAR PRABHU B	310818106031	Cognizant	17.01.2022
27	GANESH U	310818106033	Quest Global	QC20211205
28	GNANESHWARAN J	310818106034	WIPRO	21.01.2022
29	GOWTHAMAN R P	310818106035	ATOS(Syntel)	9.12.2021
30	GUNASHREE C	310818106036	Prodapt	1.11.2021
31	HARITHA B	310818106037	Cognizant	17.01.2022
32	HITENDRA K	310818106038	WIPRO	28.01.2022
33	INBARAJ P	310818106039	Cognizant	18.01.2022
34	JAMPURAM SAI PAVAN KALYAN	310818106040	Cognizant	17.01.2022
35	JAYAPRIYA J	310818106041	Harman Connected Services	01.03.2022
36	JEEVA AMIRTHA S K	310818106042	Cognizant	19791136
37	JELSHIYA DINO D	310818106043	Cognizant	19786267
38	JENISHA R	310818106044	Sopra steria india pvt ltd	1.08.2022
39	KALAIVANI K	310818106045	Prodapt	1.11.2021
40	Kaviya S	310818106046	Hcl	12.10.2022
41	KEERTHANA R	310818106048	TCS	TCSL/DT20218323123
42	LAKSHMI PRIYA M	310818106050	Cognizant	18.01.2022
43	KEERTHANA M	310818106047	Petrocil	22.06.2022
44	MARIYA DESONA S	310818106053	REVATURE	21.03.2022
45	MISHAM SOLOMON MILLER	310818106054	Cognizant	17.01.2022
46	MOHAMED ATHAM S	310818106055	Prodapt	1.11.2021

47	MOHAMED SUHAIL J	310818106056	Cognizant	17.01.2022
48	MONIKA D	310818106057	Cognizant	18.01.2022
49	MOZHI ARASI V	310818106058	ATOS(Syntel)	9.12.2021
50	MURALIDHARAN D	310818106059	TCS	TCSL/DT20218116598
51	NAVEEN M	310818106060	Atos global India Pvt Ltd	4.09.2022
52	NAVEEN V M	310818106061	Harman connected Services	7.10.2022
53	NEHA. S	310818106062	Atos Global	08.07.2022
54	NILE SAHANI R V	310818106063	Cognizant	17.01.2022
55	PAUL LIVING X	310818106065	Replus Engitech	23.01.2022
56	PON VIGNESWARAN V	310818106066	WIPRO	21.01.2022
57	POONGKUZHALI G	310818106067	Capgemini	2207076
58	PRAKADISH K S	310818106068	Cognizant	30.01.2022
59	LOGESHWARAN S	310818106051	Orangescape	14.12.2021
60	PRAVEENRAJ	310818106070	Harman connected Services	1.02.2022
61	PREETHI K	310818106071	Prodapt	1.11.2021
62	PRIYADHARSHINI S	310818106072	Harman connected Services	7.02.2022
63	RAJAVENDHAN G	310818106074	Kritilabs Technology	14.11.2022
64	RAKESH KUMAR A	310818106075	Harman connected Services	1.02.2022
65	RANJITH K	310818106077	INFOSYS	28.03.22
66	RISWANTH	310818106078	WIPRO	20.01.2022
67	SAHAYA RAGUL X	310818106079	TCS	TCSL/DT20218323675
68	SANGEETHA V	310818106083	Cognizant	17.01.2022
69	SARAVANAN G	310818106084	WIPRO	21.01.2022
70	SARAVANAN S	310818106085	Harman connected Services	7.10.2022
71	SATHHYAN B S	310818106087	ATOS(Syntel)	9.12.2021
72	SESHADRI D	310818106088	INFOSYS	2021
73	SHARON CANDEDA JONES P	310818106090	Harman connected Services	1.02.2022
74	SHREYA V	310818106091	Cognizant	19938554
75	SIVASANKARAN	310818106092	Harman connected Services	7.10.2022
76	SIVAYOGAN R	310818106093	NGP Websmart	3.01.2022
77	SOUNDHARYA K	310818106094	Prodapt	8981
78	SRIMADHUMITHA K	310818106096	Face Prep	CN20220205
79	SUMATHI N	310818106097	REVATURE	21.03.2022
80	SURYA D	310818106098	ATOS(Syntel)	9.12.2021
81	MACKNUS FEHO V	310818106052	ATOS(Syntel)	9.12.2021
82	SWATHIKA P	310818106101	Vembu technologies	21.06.2022
83	SWETHA PRIYA P	310818106102	Pentagon Space	25.01.2022
84	THRISHNA S	310818106103	Partnersoft technologies private limited	08.07.2022
85	VENKATESWARAN S	310818106104	Cognizant	18.01.2022
86	VIBHISH	310818106106	Prodapt	1.11.2021

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ABARNA N	310817106001	Attra infotech	2021
2	AJAY AMRITH A	310817106006	WIPRO	8.12.2021
3	AKASH VIJAYAN I V	310817106009	Attra infotech	2021
4	ANTO SHELSEA SHINY A	310817106013	Thillais Analytical	02.03.2021
5	ASHWIN JOSHUA N	310817106015	ExcelaCom	16.2.2021
6	ATHIRA R S	310817106016	NTT DATA	1.02.2021
7	DHARSHIGA R	310817106020	Accenture	C9574675
8	DIVINE STARRY V	310817106021	TCS	TCSL/DT20206666281
9	EJOLIN MERCIDES E J	310817106022	WORKSBOT	5.04.2021
10	GIRIJA G	310817106025	Accenture	C9574334
11	GOKUL SUBRAMANIAM R	310817106027	Hexaware Technologies	12.7.2021
12	GOPINATH T	310817106028	WORKSBOT	5.04.2021
13	GOWTHAM B	310817106029	Atos Global	18.02.2021
14	HEMAAVARTHINI M	310817106033	Avasoft	6.02.2021
15	JAISURIYA S	310817106036	Maveric systems	15.7.2021
16	JAMILA L M	310817106038	TCS	TCSL/DT20206786281
17	KAJOL PREETHA B	310817106042	Accenture	C9821446
18	KOSLARAMAN P	310817106045	Cognizant	18754821
19	LOKESH ARAVIND S	310817106047	Accenture	C9821406
20	MAYURI .M	310817106049	Cognizant	15049922
21	MEENA R	310817106050	Cognizant	15049932
22	MEGAVARTHINI .G	310817106051	Renault Nissan Tech	05.01.2021
23	MOHANRAJ C	310817106053	Maitri Tech	15.01.2021
24	MURALI R	310817106055	Infosys	HRD/1002101016/21-22
25	NANDHINI .T	310817106056	Softura Pvt. Ltd	4.3.2021
26	PRABHAKAR .G.S	310817106059	WIPRO	8.9.2021
27	PRAVEEN KUMAR .P	310817106060	TCS	TCSL/DT20196230647
28	RAKESH .S	310817106065	Cognizant	15051858
29	RAM PRAKASH .A	310817106066	TCS	TCSL/DT20207766281
30	RAMYA G	310817106067	Cognizant	15051860
31	SATHISH .T	310817106071	WORKSBOT	5.04.2021
32	SHARON STELLA .R	310817106074	Cognizant	15052239
33	SOUNDARYA V	310817106076	Maveric systems	29.7.2021
34	SOWMYA .B	310817106077	Appsplug software	5.02.2021
35	SRUTHI .S.R	310817106078	BRISTLECNE	25.11.2021
36	STEENA CHRIS S	310817106079	Maveric systems	29.7.2021
37	STEPPY CINDRELLA .J	310817106080	Cognizant	15050032
38	SUBRIYA .S	310817106081	WORKSBOT	5.04.2021
39	SUSHMITHA .U	310817106084	Cognizant	15049878
40	SUVALAKSHMI .E	310817106085	TCS	TCSL/DT20208776281
41	THEJAL .H	310817106088	Cognizant	15050254
42	VAISALI .B	310817106090	TCS	TCSL/DT20207766386
43	VIGNESH M	310817106091	Ilink Digital	3.01.2021
44	VINNY .P	310817106092	TCS	TCSL/DT20207766291
45	VINODHINI .S	310817106093	NMSWorks software Pvt ltd	NMSWorks/HR/Vinodhini S/2021/03
46	VINODH KUMAR	310817106094	Qure.ai	5.02.2021

47	YUVARAJ .S	310817106097	WIPRO	8.12.2021
48	SWETHA.M	310817106701	Wiley Mthree	6.02.2021
49	KIRTHAN.P	310817106702	Byjus	7.9.2021
50	ABILASH CHRISTIN KUMAR C M	310817106002	Cognizant	15049821
51	AJITH KUMAR M	310817106008	Accenture	C9821436
52	AKSHAYA D	310817106010	Byjus	16.02.2021
53	ANGEL OVIYA D	310817106011	ExcelaCom	13.01.2021
54	HARI KRISHNAN N	310817106030	Accenture	C9821426
55	HEMALATHA M	310817106034	TCS	TCSL/DT20207766296
56	JESWIN PAUL P	310817106039	Byjus	16.02.2021
57	JEVINA D	310817106040	Accenture	C9821423
58	KANDHA RAJ M	310817106043	TCS	TCSL/DT20207766294
59	KISHORE G	310817106044	TCS	TCSL/DT20207766271
60	MALAVIKA .R	310817106048	Cognizant	15049845
61	PRIYADHARSHINI R	310817106061	Infosys	HRD/1002101026/21-22
62	PRIYANKA R	310817106062	Byjus	16.02.2021
63	SURAJ KUMAR P	310817106082	WORKSBOT	6.02.2021
64	ABISHEK S	310817106003	ExcelaCom	13.01.2021
65	AISSHWARYA T	310817106005	TCS	TCSL/DT20207766298
66	AJAY KUMAR J	310817106007	Byjus	16.02.2021
67	ANISH N	310817106012	Cognizant	15049826
68	GEERTHY C	310817106024	TCS	TCSL/DT20207766297
69	HERISH KUMAR R	310817106035	ExcelaCom	13.01.2021

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	ABINAYA M	310816106001	Infosys	HRD/1002101076/19-20
2	ADITHYA S	310816106003	EY GLOBAL	22.10.2020
3	ADLIN LEJO G S	310816106004	Infosys	HRD/1002101276/19-20
4	AISHWARYA P	310816106005	Sutherland Global	6.03.2020
5	AKSHAYA S	310816106009	Revature	18.03.2020
6	HEMA KUMAR S	310816106040	TCS (Tata consultancy services)	23.12.2020
7	ANGELIN JULIET A	310816106010	IBM	10.06.2020
8	ANIL KUMAR R	310816106011	Amazon	6.03.2020
9	ANN SHARON J S	310816106012	NSEIT	NSEIT/HR/OL/SD/04681
10	ARAN A	310816106013	NSEIT	NSEIT/HR/OL/SD/04689
11	AVINASH M	310816106017	Six Phrase	16.02.2020
12	AVINASH S	310816106018	Six Phrase	12.02.2020
13	BALAMURALI R	310816106020	Six Phrase	18.02.2020
14	BHAVANANDHAN E	310816106024	Infosys	HRD/1002101291/19-20
15	BHAVITHRA R	310816106025	Infosys	HRD/1002101376/19-20
16	BINDHUJA B	310816106026	Infosys	HRD/1002101391/19-20
17	DEEPIKA R S	310816106029	Infosys	HRD/1002101322/19-20
18	DEVI D	310816106030	TCS	TCSL/DT20195619040
19	DHARANI BABU G	310816106032	TCS	TCSL/DT20195486423
20	DIVYA R	310816106034	MIND TREE	30.10.2019
21	FARITHA BEGAM M	310816106035	FACE	3.01.2020
22	FAZEELA SADIYA	310816106036	CAPE GEMINI	4142701/538139
23	FELCY S	310816106037	Six Phrase	12.02.2020
24	ILAKKIYA S	310816106041	Mphasis	4.2.2020
25	INDHUMATHI S	310816106042	Sutherland Global	6.03.2020
26	DHARANI S	310816106031	TCS	TCSL/DT20195578596
27	KARTHICK RAJA A	310816106050	Sutherland Global	13.03.2020
28	KEERTHANA V	310816106051	Sutherland Global	6.03.2020
29	MADHUMITHA J R	310816106055	TCS	TCSL/DT20195554862
30	MAHALAKSHMI A	310816106057	FACE	3.01.2020
31	MANOJ K	310816106059	TCS	TCSL/DT20195554959
32	MANOJ .S	310816106060	CONGNIZANT	13958794
33	MUKESH G S	310816106064	FACE	9.03.2020
34	INFANTA FERNANDO J	310816106043	Sutherland Global	29.03.2020
35	MUTHAMIL KUMARAN S	310816106066	FACE	5.04.2020
36	MUHAMMAD ARSHAD SHAMSHUDEEN A	310816106063	Johnson Control - ACCENTURE	SSCPL/HR/2020-21
37	NAVEEN KUMAR D	310816106068	TCS	TCSL/DT20195598717
38	NIVEDHAA S K	310816106071	TCS	TCSL/DT20195598868
39	PRAVEEN P	310816106074	NTT DATA	3.10.2019
40	PRAVINA R	310816106075	MINDTREE	30.10.2019
41	PUOJA LAKSHMI M	310816106078	NTT Data	6.02.2020
42	RAHUL D	310816106080	NTT DATA	3.10.2019
43	RAJESHWARI S	310816106082	TCS	TCSL/DT20195598961
44	MUKESHKUMAR R	310816106065	FACE	3.01.2020
45	RANJINI S	310816106086	TCS	TCSL/DT20195598562
46	REKHA M	310816106087	DXC Technologies	23.03.2020

47	RAM KUMAR S	310816106083	TCS	TCSL/DT20195598396
48	ROSELIN J	310816106090	DXC Technologies	02.04.2020
49	SADAM HUSSAIN J	310816106092	Capgemini	5592928/1215847
50	SAM TITUS MOSES S	310816106094	Infosys	HRD/3T/1000515354/20-21
51	SANTHIYA K	310816106096	Wipro	27.01.2020
52	SANTHOSH KUMAR V	310816106097	DXC Technologies	12.06.2020
53	SARAN RAJ K	310816106098	NTT DATA	3.10.2019
54	SNEHA SABU	310816106102	Wipro	27.01.2020
55	SREE JAYA KOWSALYA S	310816106103	DXC Technologies	30.04.2020
56	SRIDHAR C	310816106104	Wipro	27.01.2020
57	SUGANTHI S	310816106107	Cognizant	20.02.2020
58	SURYAKUMAR U	310816106108	FACE	3.01.2020
59	TAMILARIVAN D	310816106110	Wipro	27.01.2020
60	ROHINI B	310816106089	DXC Technologies	16.03.2020
61	SUSAN ALLISON BRAMBLEBY	310816106109	Sutherland Global	3.02.2020
62	VIGNESH KUMAR P	310816106112	Wipro	27.01.2020
63	VIJAY RAJ S	310816106114	NSE IT	NSEIT/HR/OL/SD/04695
64	YAMINI K	310816106115	CGI	20.03.2020
65	THIRUBHAKKIYA VENKATESAN B	310816106111	DXC Technologies	2.07.2020

4.6 Professional Activities (20) Total Marks 20.00

4.6.1 Professional socities/ chapters and organizing engineering events (5)

Institute Marks : 5.00

IEEE Madras Section -- Student Branch Activity

ACADEMIC YEAR - 2022

1.Student Branch Code	: 64691
2. Name of the Institution	: Jeppiaar Engineering College
3. Address of the Institution	: Old Mamallapuram Road, Rajiv Gandhi Salai,
	Semmenchery, Chennai, Tamil Nadu – 600119.
4. City/Town of the Institution	: Semmenchery, Chennai
5. Website of the Institution	: https://jeppiaarcollege.org
6. Website address of the SB	: http://ieeesbjec.epizy.com/
7. Year of SB establishment	: 2005
8. A/C No. of the SB & Bank	: 729143907 (Indian Bank)
9. No. of Student Members	: UG Student Members: 64
	Graduate Student Members: 05
10. SB Counsellor Name	: Dr. J Jebastine
11. SB Counsellor Email ID	: eie@jeppiaarcollege.org
12. SB Counsellor Contact Phone	: +91 9566143828
13. SB Chairperson Name	: Johnsy Jeya Rani F
14. SB Chairperson Email ID	: johnsyjeyaranif@ieee.org
15. SB Chairperson Contact Phone	: +91 9443622674
16. SB Advisor Name	: Binu Siva Singh S K
17. SB Advisor Email ID	: binuece2011@gmail.com
18. SB Advisor Contact Phone	: +91 9884554143
19. Principal Name	: Dr. J. Francis Xavier
20. Principal Email ID	: principal@gmail.com

Society Chairperson

Name of AG / SC	Year of starting	No. of members	Chapter Chairperson Name & Email ID
WIE AG	2005	63	Ms. Jeevitha R (yashikajeevi06@gmail.com)
Computer Society	2005	61	Mr. Madhesh P (madhesh2k3@gmail.com)
Communication Society	2005	58	Ms. Jessy Amal Rani F (jessyamalranif@gmail.com)
PES Society	2005	52	Ms. Nivetha S (nivi04rshankar@gmail.com)
Signal processing society	2020	50	Ms. Renuga S (renugasuresh7184533@gmail.com)
Photonics society	2020	54	Ms. Swarna Latha V (0307swarna@gmail.com)

Congress event

SL. NO.	EVENT DATE/S	EVENT TYPE NATIONAL CONFERENCE / INTL. CONFERENCE	TOPIC OF THE EVENT	RESOURCE PERSONS
1.	01-06/22, 04-06-22, 07-06-22	International Congress	IEEE SSIT Student Leadership and Professional Awareness Congress 2022	Mr. Tom Couglin Mr. Robert A Dent Dr. Heather A Love

Technical Events

SL. NO.	EVENT DATE/S	EVENT TYPE WORKSHOP /SEMINAR/ FDP	TOPIC OF THE EVENT	RESOURCE PERSONS
1.	08-01-22	Webinar	Roadmap to Excel in Cybersecurity	Mr. Deebthik Ravi
2	20-01-22 & 21-02-22	Workshop	Web Designing	Mr. Heyram
3	22-01-22	Seminar	A Talk with the designer	Mr. Rejoe Abraham
4	23-01-22	Webinar	Women of wonder	Ms.Pearlena Bharathkumar
5	23-01-22	Seminar	SignoX - Ten Soft Skills for every Engineer	Mr. Aravindhan Anbazhagan
6	23-01-22	Seminar	SignoX - Path to Innovation with Design Thinking	Mr. Ashvanth
7	08-03-22	Webinar	Mangai - The Raised Her – Make your voice heard: Break the Bias and Fight for Better	Dr. Ramalatha Marimuthu
8	12-03-22	Webinar	Mangai - The Raised Her – Women in Technology	Rajalakshmi Srinivasan
9	13-03-22	Webinar	Mangai - The Raised Her – Getting started with Data Science	Dr.S.Gomathi
10	04-06-22	Webinar	SB League - Smart Grid	Mr. Rupesh Kumar Nirala
11	09-07-22	Webinar	Blockchain Technology and Cryptocurrency	Ms. Eva Kaushik
12	12-08-22	Webinar	Explore the reality of Virtual Space	Mr. Eswar RM
13	14-08-22	Seminar	Secrets to be Successful in Career	Mr. Ashwanth B
14	14-08-22	Seminar	IEEE Young Professionals	Mr. Sreekanth Ramaswamy
15	21-08-22	Webinar	Ethical Hacking	Gnana Aravind
16	07-09-22	Webinar	Role of Women in EngiMsring	Ms. Preethy V Warrior
17	05-11-22	Webinar	5G Mobile Communication and Networks	Mr. Ashok Kumar
18	19-11-22	Webinar	Understanding Cyber Threats	Mr. Arunchaleswaran
19	20-11-22	Webinar	Introduction to Git and Github	Ms. Induja Shankar
20	06-12-22	Webinar	Be an Entrepreneur	Mr. Rupinder Singh
21	07-12-22	Webinar	Will AI rule or ruin our future	Dr. Geetha Raju
22	09-12-22	Webinar	Metaverse	Ms.Kundavai

Competition Events

SL. NO.	EVENT DATE/S	EVENT TYPE AWARENESS PGM /COMPETITION /FIELD VISIT/ QUIZ/ DISCUSSION MEETING	TOPIC OF THE EVENT
1	17-01-22	Quiz	Hack the Reel
2	18-01-22	Competition	Product Marketing
3	23&24th - 01-22	Competition	Crack the Squid
4	23-01-22	Symposium	SignoX
5	26th to31st - 01-22	Quiz	Quizmania 2.O
6	17-03-22	Competition	Mangai - The Raised Her
7	01-05-22	Competition	Project Presentation - Powering a sustainable future
8	14-08-22	Competition	IEEE YESIST'12 Prelims
9	14-08-22	Competition	Code-IT
10	15-08-22	Competition	Chaturanga
11	13 &14-10-22	Symposium	Hack-O-Holics 3.O
12	3&4-12-22	Competition	Mic 1.O

Execom Members of the Madras Section do not visit our SB Physically, but they were resource persons in our Virtual SB Events.

S.NO	DATE	EVENT TYPE	OCCASION / EVENT NAME	CHIEF GUEST FROM IEEE MADRAS SECTION EXECOM
1	23-01-22	Symposium	SignoX	Dr. N. Kumarappan
2	13-10-22	Symposium	Hack-O-Holics 3.0	Dr. K Porkumaran, Priyadharshini S

ACADEMIC YEAR 2021

PART A	
1. Student Branch Code	: 64691
2. Name of the Institution	: Jeppiaar Engineering College
3. Address of the Institution	: Old Mamallapuram Road, Rajiv Gandhi Salai,
	Semmenchery, Chennai, Tamil Nadu – 600119.
4. City/Town of the Institution	: Semmenchery, Chennai
5. Website of the Institution	: https://jeppiaarcollege.org
6. Website address of the SB	: http://ieeesbjec.epizy.com/
7. Year of SB establishment	: 2005
8. A/C No. of the SB & Bank	: 729143907 (Indian Bank)
9. No. of Professional Members	: 10
10. No. of Student Members:	UG Student Members: 30
	Graduate Student Members: 07
11. SB Counsellor Name	: Dr. J Jebastine
12. SB Counsellor Email ID	: enochjeba.ieee@gmail.com
13. SB Counsellor Contact Phone	: +91 9566143828
14. SB Chairperson Name	: Ms.Anusha V
15. SB Chairperson Email ID	: anushaviswanathan55610@ieee.org
16. SB Chairperson Contact Phone	: +91 9962984860
17. SB Advisor Name	: Mr. Binu Siva Singh S K
18.SB Advisor Email ID	: binuece2011@gmail.com
19. SB Advisor Contact Phone	: +91 9884554143

Society Chairperson

Name of AG / SC	Year of starting	No. of members	Chapter Chairperson Name & Email ID
WIE AG	2005	40	Ms. Kavya K (kavyakalaiselvan@ieee.org)
Computer Society	2005	40	Mr. Gokula Krishnan R (gokulakrishnan@ieee.org)
Communication Society	2005	39	Ms. Nandhini L (nandhinilakshmipathy@ieee.org)
PES Society	2005	40	Mr. Jagadeeswaran K (ncjagadeeswaran@gmail.com)
Signal processing society	2020	39	Ms. Shruthi Ravi (shruthiniveda@gmail.com)
Photonics society	2020	40	Ms. Ramya N (ramyarakesh@ieee.org)

Workshops / Seminars / FDPs

Sl. No.	Event Date/s	Event Type Workshop /Seminar/ FDP	Topic of the Event	Resource Persons
1.	11-01-2021	Seminar	Webinar on How To Enhance Your Public Speaking Skills	Mr. Ashvanth B
2	13-01-2021	Seminar	Webinar on Why Python for Machine Learning	Mr. Satwik Muthappa
3	27-01-2021	Workshop	Hands on Workshop on Web Designing	Mr. Abhinav Sharma
4	25-02-2021	Seminar	Webinar on Signal Processing	Mr. Nitesh Pradhan
5	4-4-2021	Seminar	Future of Robotics and Its Impact	Mr. Mohammad Soleimani Amiri
6	22-04-2021	Seminar	Getting Started with GitHub	Mr. Adil Shehzad
7	23-04-2021	Seminar	IEEE CS Awards	Mr. Aravindhan Anbazhagan
8	24-04-2021	Seminar	Starting Career from A Startup	Mr. Karandeep
9	27-04-2021	Seminar	Program your PLC	Mr. Premoth Aniruth
10	3-05-2021	Seminar	Celebrating Women in Technology	Ms. Chaitali Naik, Ms. Annapurna Pradhan, Ms. Ritika Mahajan, Ms. Priyanka Chaurasia, Ms. Asha Gutlapalli , Dr N. Nithyavathy, Dr. RamalathaMarimuthu.
11	16-05-2021	Seminar	Webinar on How to Improve Documentation Skills	Mr. Mukul Aigalikar
12	17-05-2021	Seminar	Roadmap to Python	Ms. Reshma Barvin
13	18-05-2021	Seminar	Introduction to LS-PICs (Large Scale - Photonics Integrated Circuits)	Ms. Uma Kumari
14	20-05-2021 to 22-05-2021	Workshop	Labview	Mr. sivayogan
15	04-06-2021 to 05-06-2021	Workshop	Cyber Threat Intelligence Workshop	Mr. TonnyGidraph
16	14-06-2021 to 15-06-2021	Workshop	Workshop On Chatbot Using Python	Ms. Reshma
17	12-07-2021	Seminar	why you should join IEEE?	Ms. Priyadharshini.S Mr. Gokula Krishnan R Ms. Nasreen M Mr. Muralidharan D Mr. Ganesh U

18	25-07-2021	Seminar	Webinar on Introduction to Data Base Management System	Ms. Hari Priya
19	26-07-2021	Seminar	Webinar on Terahertz Technology: The Challenges, Opportunities, and Progress of Wireless Communication beyond 5G & 6G	Dr. Shyamal Mondal
20	31-07-2021	Seminar	Webinar on Research Fields in IEEE	Dr. Soma Prathibha
21	01-08-2021	Seminar	Webinar On Resume Building	Mr. Kushal Vijay
22	10-08-2021 to 12-08-2021	Workshop	A Practical Approach to Git and GitHub	Mr. Adil Shehzad
23	24-08-2021 to 25-08-2021	Workshop	Workshop on Mental Health, self-care and Wellbeing	Ms. Dorathy Agnes Ms. RajulNirmalkumar
24	28-08-2021	Seminar	How to get placed in product based company	Mr. Mamta Kumari
25	05-09-2021	Workshop	Workshop On Machine Learning	Ms. Nivedya
26	29-09-2021	Seminar	The Path to Become A Data Analyst in The Modern World	Mr. Andrei Gavrilov
27	06-10-2021	Seminar	Skill up with Pycharm	Ms. Vijaya Shree Raja Sekaran
28	09-10-2021	Seminar	Introduction To Back End Development Php	Mr. Mathesh
29	14-10-2021 to 15-10-2021	Workshop	Workshop On PCB Designing Using Easyeda	Mr. Abhinav
30	17-10-2021	Seminar	Webinar on Developing Industrial Internet of Things	Mr. Saravanan Ganesan
31	18-11-2021	Seminar	Level Up Your Career With Optical Communication	Dr. Uma Kumari
32	29-12-2021	Seminar	Webinar On Data Science and Cyber Security in Cyber-Physical System	Mr. Niranjen Swarup
33	30-12-2021	Seminar	Webinar On Node.Js	Mr. Kevin Mathew

Non-Technical Events/ Awareness programs

Sl. No.	Event Date/s	Event Type Awareness Pgm/ Competition/ Field Visit/ Quiz/ Discussion Meeting	Topic of the Event	Resource Persons
1	02 -01-2021	Field Visit	A day in an orphanage	-
2	09 -01-2021	Competition	PREZENTO	-
3	10-01- 2021	Competition	CAP- (Cover a Page)	-

4	12-01-2021	Competition	Tinker CAD	-
5	13-01-2021	Awareness Program	Women Empowerment	Ms. Indhumathi Gunasekaran
6	18-01-2021	Competition	Contenido	-
7	19-01-2021	Competition	Speechifier	-
8	22-01-2021	Competition	Video Autopsy	-
9	24-01-2021	Competition	Flick-A-Clip	-
10	28-01-2021	Competition	Rec-Mo (Just A Minute)	-
11	28-03-2021	Competition	Presentup	-
12	18-04-2021	Competition	Talk Show - TERTULIANO	-
13	21-04-2021	Competition	Content Competition	-
14	21-04-2021	Competition	Word Chase	-
15	21-04-2021	Competition	Think Bots	-
16	20-04-2021	Competition	Art Graphique – Poster Designing Competition	-
17	23-04-2021	Competition	Picturesi	-
18	23-04-2021	Competition	Fix-the-Bug	-
19	26-04-2021	Competition	Perscripta	-
20	24-04-2021	Competition	Sculpt Enhavo	-
21	28-04-2021	Competition	Presentario	-
22	29-04-2021	Competition	Pictue Puzzle	-
23	18-05-2021 to 20-05-2021	Competition	Monochrome Photography	-
24	30-05-2021	Competition	Techbuzz	-
25	14-08-2021	Competition	Memes Madness	-
26	22-08-2021	Competition	Posterry	-
27	08-10-2021	Orientation	IEEE Orientation program	-
28	19-10-2021	Competition	Snake and Ladder	-
29	28-12-2021	Quiz	Logo Quiz	-
30	31-12-2021	Quiz	Quiz On Women Achievers	-
31	5-10-2021 to 31-12-2021	Competition	Hack-O-Holics 2.O (A National Level Hackathon)	-

Execom Members of the Madras Section do not visit our SB Physically, but they were resource persons in our Virtual SB Events.

S.No	Date	Event Type	Occasion / Event Name	Resource Person from IEEE Madras Section Execom
1.	11-01-2021	Seminar	Webinar on How To Enhance Your Public Speaking Skills	Mr. Ashvanth B

IEEE Awards

S.NO	Awards	Students
1	Richard E Merwin Scholarship (Fall 2021)	Bharathi Ramesh, Ganesh U
2	Richard E Merwin Scholarship (Spring 2021)	Priya Dharshini S
3	Richard E Merwin Scholarship (Spring 2020)	Vignesh M A
4	IEEE Student Ethics Competition Winner 2019	Vignesh M A
5	1st Runner Up - IEEE R10 Undergraduate Student Project	Ganesh U, Priya Dharshini S
	Video Contest (2021)	
6	The Darrel Chong Student Activity Award – Silver Category (2021)	For the event - Hack-O-Holics

ACADEMIC YEAR 2020

PART A	
1. Student Branch Code	: 64691
2. Name of the Institution	: Jeppiaar Engineering College
3. Address of the Institution	: Old Mamallapuram Road, Rajiv Gandhi Salai,
	Semmenchery, Chennai, Tamil Nadu – 600119.
4. City/Town of the Institution	: Semmenchery, Chennai
5. Website of the Institution	: https://jeppiaarcollege.org
6. Website address of the SB	: http://ieeesbjec.epizy.com/
7. Year of SB establishment	: 2005
8. A/C No. of the SB & Bank	: 729143907 (Indian Bank)
9. No. of Professional Members	: 10
10. No. of Student Members:	UG Student Members: 30
	Graduate Student Members: 07
11. SB Counsellor Name	: Dr. J Jebastine
12. SB Counsellor Email ID	: enochjeba.ieee@gmail.com
13. SB Counsellor Contact Phone	: +91 9566143828
14. SB Chairperson Name	: Ms. **PriyaDharshini**
15. SB Chairperson Email ID	: Priya.ieee.org@gmail.com
16. SB Chairperson Contact Phone	: 91 91760 24386
17. SB Advisor Name	: Mr. Binu Siva Singh S K
18.SB Advisor Email ID	: binuece2011@gmail.com
19. SB Advisor Contact Phone	: +91 9884554143

YEAR	SL.No	Event details	Month of Event	
JAN - DEC 2020	1	Manoratra (Content Writing Contest)	April 2020	Hybrid mode
	2	Flickerz (Photography Contest)	April 2020	
	3	Plakatas (Poster Designing Contest)	April 2020	
	4	PY-CATECHIZE (Python Quiz)	April 2020	
	5	IEEE- Benefits and Opportunities	April 2020	
	6	IEEE Brand Ambassador: Benefit to Impact Creation	April 2020	
	7	The Best Tips for Writing a Great Resume	April 2020	
	8	Cyber Security: How Hackers Really Hack	April 2020	
	9	Web Development: The Beginner's Guide	April 2020	
	10	Applications of Artificial Neural Networks in Computational Biology	April 2020	Hybrid mode
	11	Professional Communication	April 2020	
	12	Introduction to Deep Learning	April 2020	
	13	Career Opportunities as a Data scientist	May 2020	
	14	Career Opportunities in the Electric Vehicle Domain	May 2020	
	15	Scholarships in IEEE Computer Society	May 2020	
	16	Introduction to Internet of Hacked Things	May 2020	
	17	Cloud Computing	June 2020	
	18	Wireless Power Transmission	June 2020	
	19	Cloud Development	June 2020	Hybrid mode
	20	Ethical Hacking	June 2020	
	21	Career Opportunities in Artificial Intelligence	June 2020	
	22	Quizmania	June 2020	
	23	Content Writing workshop 1.0	July 2020	
	24	Exploring IEEE	July 2020	
	25	Entrepreneurship as a Career	July 2020	
	26	Women in Engineering - Pathway to Success	July 2020	
	27	Membership Benefits of IEEE PES	July 2020	
	28	Research Opportunities in IEEE	July 2020	
	29	Career Guidance	July 2020	
	30	Quizotism	July 2020	
	31	Go Extreme through IEEE Xtreme	July 2020	
	32	How Devops Is Changing Software Engineering	July 2020	
	33	Article Writing - Technology Evolution	August 2020	
	34	Connexion	August 2020	
	35	Historia Imagine		
	36	Treasure Hunt	August 2020	
	37	Clash and Concour	September 2020	
	38	Tech Sequel	September 2020	
	39	Xtreme Chasers	October 2020	
	40	Hack-o-holics	Oct – Nov 2020	

Inauguration Ceremony for the event SIGNOX 23


Students Presenting their idea in SIGNOX 23


Students are participated in a webinar about web development


Workshop conducted on Graphic designing and Content Writing


Mangai 2.0 Program




8th International Conference ON Science, Technology, Engineering and Mathematics (Iconstem-2023)Madras Section & IEEE Power & Energy Society Inaugural Ceremony

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

Institute Marks : 5.00

DETAILS OF TECHNICAL PUBLICATIONS

ACADEMIC YEAR 2022-23

S.NO	ACADEMIC YEAR	TITLE OF THE NEWSLETTER	EDITORIAL MEMBERS	FREQUENCY	MONTH AND YEAR OF PUBLICATION
1.	2022-23	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. C. Anitha AP/ECE Mr. S. Ranjith AP/ECE **Student members** Dhivagar K V- III A Umapathi K-III B Naveen M-II A Aro Barath Chandru B -II A	Every six months	May 2023
2.	2022-23	ELECTROBLITZ2K23	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mr. G.C. Jagan AP/ECE Mr. T R. Chenthil AP/ECE **Student members** Dhivagar K V- III A Menaka P-III A Sathya Priya S -II B Deepika R-II A	Annual	MARCH 23
3.	2022-23	ICONSTEM Proceedings	**Chief Editor** Dr. J.Jebastine **Editorial committee members** Mrs. V. Nanammal AP/ECE Mrs. R. Gracelin Sheeba AP/ECE **Student members** Naveen M-II A Devika A- III A Chareeshma S -III A Sindhu V-III B	Annual	6th APRIL 2023
4.	2022-23	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. C. Anitha AP/ECE Mr. S. Ranjith AP/ECE **Student members** Umapathi K-III B Rohith.P- III A Naveen M-II A Aro Barath Chandru B -II A	Every six months	DEC 2022

ACADEMIC YEAR 2021-22

S.NO	ACADEMIC YEAR	TITLE OF THE NEWSLETTER	EDITORIAL MEMBERS	FREQUENCY	MONTH AND YEAR OF PUBLICATION
1.	2021-22	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. G. Bala Chandran AP/ECE Mr. S. Ranjith AP/ECE **Student members** Dhivya Shri Thendral G-III A Julian Thomas Peniel J-III A Dhivagar K V- II A Umapathi K-II B	Every six months	May 2022
2.	2021-22	BLITKRIEG 2K22	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. R. Gracelin Sheeba AP/ECE Mr. G.C. Jagan AP/ECE **Student members** Madhumitha P-III A Dhivagar K V- II A Menaka P-II A	Annual	MARCH 22
3.	2021-22	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. G. Bala Chandran AP/ECE Mr. S. Ranjith AP/ECE **Student members** Dhivya Shri Thendral G-III A Julian Thomas Peniel J-III A Dhivagar K V- II A Umapathi K-II B	Every six months	DEC 2021

ACADEMIC YEAR 2020-21

S.NO	ACADEMIC YEAR	TITLE OF THE NEWSLETTER	EDITORIAL MEMBERS	FREQUENCY	MONTH AND YEAR OF PUBLICATION
1.	2020-21	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. V. Nanammal AP/ECE Mr. E. Sakthivel AP/ECE **Student members** Anish N- IV A Ejolin Mercides E J-IV A Pramika K-III B Preethi K -III B	Every six months	May 2021
2.	2020-21	ICONSTEM Proceedings	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. R. Gracelin Sheeba AP/ECE Mrs. V. Nanammal AP/ECE **Student members** Steena Chris S-IV B Suvalakshmi. E - IV B Abirami K -III A Divakar Prabhu B-III A	Annual	AUGUST 2020
3.	2020-21	NEWSLETTER	**Chief Editor** Dr. J. Jebastine **Editorial committee members** Mrs. V. Nanammal AP/ECE Mr. E. Sakthivel AP/ECE **Student members** Thejal .H-IV B Surya Kumar .N.K- IV B Rishwanth T -III B Anakha A R -III A	Every six months	DEC 2020

4.6.3 Participationininter-institute events by students of the program of study (10)

Institute Marks : 10.00

Details of student participation in other college

ACADEMIC YEAR (2022-23)

S. NO	NAME OF THE STUDENTS	YEAR	NAME OF THE EVENT	NAME OF THE ORGANIZATION/ INSTITUTE/ UNIVERSITY	DATE(S) OF THE PROGRAM	PRIZE
1	KARTHIKEYAN A	II	IDE QUIZ	IEEE STUDENT BRANCH	03.12.2022	PARTICIPATION
2	ANUSHIYA M	II	IDE QUIZ	IEEE STUDENT BRANCH	03.12.2023	PARTICIPATION
3	KARTHIKEYAN A	II	FIX -IT- FRENZY	PHOTONICS SOCIETY - IEEE STUDENT BRANCH	15.04.2023	PARTICIPATION
4	KANNAN D	II	FIX -IT- FRENZY	PHOTONICS SOCIETY- IEEE STUDENT BRANCH	15.04.2023	PARTICIPATION
5	KARTHIKEYAN A	II	POSTER COMPETITION-ART FOR A COOLER PLANT	PHOTONICS SOCIETY - IEEE STUDENT BRANCH	15.04.2024	PARTICIPATION
6	INDHUMATHI V	II	PAPER PRESETATION	JERUSALEM COLLGE OF ENGG	10.03.2023	PARTICIPATION
7	ANUSHIYA M	II	PAPER PRESETATION	JERUSALEMCOLLGE OF ENGG	10.03.2024	PARTICIPATION
8	AGINAS B	II	PAPER PRESETATION	ESWARI ENGG COLLEGE	15.04.2023	SECOND
9	KARTHIKA S	II	PAPER PRESETATION	ESWARI ENGG COLLEGE	15.04.2024	SECOND
10	INDHUMATHI V	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
11	AGINAS B	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
12	ARO BARATH CHANDRU B	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
13	BEEMA DEWAN T D	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
14	HARENE K	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
15	HARINI R	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2023	PARTICIPATION
16	NAVEEN M	II	PROJECT PANOPLY	ESWARI ENGG COLLEGE	17.03.2024	PARTICIPATION
17	ASHOK SAI G	II	PAPER PRESETATION	ESWARI ENGG COLLEGE	25.03.2023	PARTICIPATION
18	KANNAN D	II	SHARP STAMP-IDEA PRESENTATION	SRI SAI RAM INSTITUTE OF TECHNOLOGY	3.11.2023	PARTICIPATION
19	ASHOK SAI G	II	QUIZ	SIMATS SCHOOLOF ENGG	19.09.2023	PARTICIPATION
20	AGINAS B	II	PAPER PRESETATION	MOHAMED SATHAK A.J COLLEGE OF ENGG	28.10.2022	SECOND
21	AGINAS B	II	CARTOON DRAWING -TECH UNITY 2022	MOHAMED SATHAK A.J COLLEGE OF ENGG	28.10.2022	PARTICIPATION
22	AGINAS B	II	REPUBLIC DAY POSTER DESIGNING COMPETITION	YUVA CLUB	26.01.2023	THIRD
23	AGINAS B	II	INTER INSTITUTE PROJECT COMPETITION RENEW 2023	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	28.02.2023	PARTICIPATION
24	AGINAS B	II	MEDBYTE EVENT	YUVA CLUB	26.01.2023	THIRD
25	BEEMA DEWAN TD	II	PAPER PRESETATION	MOHAMED SATHAK A.J COLLEGE OF ENGG	28.10.2022	SECOND
26	BEEMA DEWAN TD	II	SUDOKU	MOHAMED SATHAK A.J COLLEGE OF ENGG	28.10.2022	SECOND
27	AGINAS B	II	SUDOKU -TECH UNITY 2022	MOHAMED SATHAK A.J COLLEGE OF ENGG	28.10.2022	PARTICIPATION

ACADEMIC YEAR (2021-22)

S. NO	NAME OF THE STUDENTS	YEAR	NAME OF THE EVENT	NAME OF THE ORGANIZATION/ INSTITUTE/ UNIVERSITY	DATE(S) OF THE PROGRAM	PRIZE
1	KARTHIKEYAN A	I	CYBER SQUAD IS INTERNET FRIEND OR FOE?	YUVA CLUB	23.02.2022	PARTICIPATION
2	KARTHIKA S	I	PAPER PRESETATION	RAJALAKSHMI ENGG COLLEGE	29.04.2022	PARTICIPATION
3	AGINAS B	I	COOK WITHOUT FIRE	RAJALAKSHMI ENGG COLLEGE	29.04.2022	PARTICIPATION
4	ABINAYA G	I	BEST OUT OF WASTE	RAJALAKSHMI ENGG COLLEGE	29.04.2023	SECOND
5	AGINAS B	I	PAPER PRESETATION	RAJALAKSHMI ENGG COLLEGE	29.04.2022	PARTICIPATION
6	KUMARAN N T	III	IDEATHON 2022	IIMT GROUP OF COLLEGES, NOIDA	19.04.2022	FIRST
7	BARATH BARAL V	III	IDEATHON 2022	IIMT GROUP OF COLLEGES, NOIDA	19.04.2023	FIRST
8	DEVESH D	III	IDEATHON 2022	IIMT GROUP OF COLLEGES, NOIDA	19.04.2024	FIRST
9	KRISHNA KANTH B	III	IDEATHON 2022	IIMT GROUP OF COLLEGES, NOIDA	19.04.2025	FIRST
10	MOZHIARASI V	IV	QUIZ	SRI KRISHNA ENGG COLLEGE	19.04.2022	PARTICIPATION
11	SUSINDRAN K	IV	QUIZ	SRI KRISHNA ENGG COLLEGE	19.04.2022	PARTICIPATION

ACADEMIC YEAR (2020-21)

S. NO	NAME OF THE STUDENTS	YEAR	NAME OF THE EVENT	NAME OF THE ORGANIZATION/ INSTITUTE/ UNIVERSITY	DATE(S) OF THE PROGRAM	PRIZE
1	S. SUBRIYA	IV	TECKNICAL QUIZ	KPR INSTITUTE OF ENGG AND TECHNOLOGY	22.06.2020-23.06.2020	PARTICIPATION
2	K. VIGNESH	II	ONLINE QUIZ-RAMANUJAN MATH CLUB	NEW PRINCE SRI BHAVANI COLLEGE OF ENGG AND TECHNOLOGY	10..7.2020-17.07.2020	PARTICIPATION
3	M.S. VISHNU PRIYA	II	ART ZOOKA-FREEDOMFEST 2K20	S.A ENGG COLLEGE-NSS	15.08.2020	PARTICIPATION
4	NANDHINI	II	ON LINE QUIZ-MATHEMATICS	QUEEN MARY'S COLLEGE	05.06.2020	PARTICIPATION (64% SCORED)
5	NANDHINI	II	ON LINE QUIZ	PONNAIYAH RAMAJAYAM INSTITUTE OF SCIENCE AND TECHNOLOGY-NSS	05.06.2020	PARTICIPATION
6	N.T. KUMARAN	II	TECH PYTH 20 E-QUIZ	S.A ENGG COLLEGE - DEPARTMENT OF CSE	15.06.2020	PARTICIPATION (70 % SCORED)
7	N.T. KUMARAN	II	ON LINE QUIZ COMPETITIONON ENGG MATHEMATICS	G . NARAYANAMMA INSTITUTE OF TECH NOLOGY AND SCIENCE	JUNE 2020	PARTICIPATION
8	R ARIVUMATHI	II	QUIZ	NANTHA ARTS AND SCIENCE COLLEGE-DEPARTMENT OF TAMIL	20.10.2020	PARTICIPATION (60 % SCORED)
9	B. SANAA FATHIMA	IV	ON LINE QUIZ	PONNAIYAH RAMAJAYAM INSTITUTE OF SCIENCE AND TECHNOLOGY-NSS	05.06.2020	PARTICIPATION
10	R. HERISH KUMAR	IV	ON LINE QUIZ-MATHEMATICS	QUEEN MARY'S COLLEGE	05.06.2020	PARTICIPATION (68% SCORED)

Details of student publications

ACADEMIC YEAR (2022-23)

S. NO	NAME OF THE STUDENTS	TITLE OF THE PAPER	JOURNAL / CONFERENCE NAME	YEAR AND MONTH OF PUBLICATION
1	Kumaran. N Abija Mercy J A KaviyaM Lijitha Aswi A	Gas Leakage Detection for Industries Using IOT	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics (ICONSTEM 2023)	6 April 2023
2	Julian Thomas Saravanan Sanjay Anand L Gospel Mathew	Iot Based Child Safety Monitoring Device	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
3	Arockia Kishore Balajee B Ashik J, Gokul Raj L	Smart Waste Management System forMetropolitan Cities	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
4	Syed Kabeer Vigneshpahty V GopiKrishnan Gokul	Smart farmer- IOT Enabled Smart Farming Application	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
5	Shanmuganathan.S Sri murugan.M Siva varthanan J A Biyorson Abishiek J	Skill/ Job Recommender Application	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
6	Sudharshan.B Sudharshan.S Sushil Kumar.R Vinoth.N	Smart Farming Using Iot	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
7	Ramya N Nandhini. L Sarika.P Sharathkumar R	Plasma Donor Application	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
8	Abdul Razzaq S Akash B Amalan Bosco A Arishraaj K	Gas Leakage Monitoring & Alerting System for Industries	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
9	Praveen Prashanth Praveen Kumar Rohan sri	Inventory Management for Retailers	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
10	Vishnupriya MS Manorangitham T Miruthula Shri P Trisha A	Visualizing And Predicting Heart Diseases withAn Interactive Dashboard	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
11	Dhivya Shri Thendral G	Fertilisers Recommendation System	8 th IEEE International Conference on Science,	6 April 2023

	Arivumathi R Hamlin Anshika A Kavya K	for DiseasePrediction in Plants	Technology, Engineering and Mathematics	
12	Madhumitha P Nithya R Krishnakanth B Kishore A	Analytics For Hospitals Health Care-Data	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
13	Mohana M, Mohanapriya. T Ramya. S Swathi Priya. M	University Admit Eligibility Predictor	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
14	Vignesh.K, Varun.H Shewag.R Sreeraghavendra.R.	Voice Recognized System Using Machine-Learning Framework with FPGA Board	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
15	Nithish J Nishanth C Pavithran. Saisarath.	Smart Fashion Recommender	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
16	Arunkumar S Bharat Baral.V Danielraj.C Devesh D,	Personal Expense Tracker Application	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
17	Dhanush Raj N Immanuel K KishoreKumar A	Inventory Management for Business Operators	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
18	Muthuraj.S Angleena Reji, Anupama.M Divya.L	IOT Based Safety Gadget for Child Safety Monitoring and Notification	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
19	Ganesh A R Harish D Hemanth Raj SN Ignesh Andrews S	Intelligent Vehicle Damage Assessment and CostEstimator for Insurance Companies	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
20	Bharath S Bharath Kumar S Deepak S George J	Signs With Smart Connectivity for Better RoadSafety	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
21	Nandhakumar S Naveen kumar. K Sanjaikumar V Vishnu raaj. V	Gas Leakage Monitoring and Alerting System	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
22	Midun,Meiyarasan Sam Wilson, Venkatesh	Customer Care Registry	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023
23	Infant Ricardo	AI-Powered Nutrition Analyzer for Fitness Enthusiasts	8 th IEEE International Conference on Science, Technology, Engineering and Mathematics	6 April 2023

ACADEMIC YEAR (2021-22)

S. NO	NAME OF THE STUDENTS	TITLE OF THE PAPER	JOURNAL / CONFERENCE NAME	ISBN NO / ISSN NO, VOLUME. ISSUE/ PAGE NUMBER	YEAR AND MONTH OF PUBLICATION
1	Nile Shahani. R.V Poongkuzhali G Priyanka. S	Compact single layer low profile microstrip patch antenna	Journal of Emerging Technologies and Innovative Research	(ISSN-2349-5162), 9,6	2022
2	R. Vibhish S. Saravanan G. Praveenraj	IOT Based Precision Farming Using Machine Learning	International Journal of Innovative Research in Technology	2349-6002, 9,1	2022
3	Azhar Mohamed. S Gnaneshwaran.J	Visible Light Communicati on for Vehicle Monitoring	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2321-9653, 10,6	2022
4	Gowtham.B Jai surya. S Lokesh aravind. S	AI based painting robotic arm	International Journal of Advanced Research in Electronics, Communication & Instrumentation Engineering and Development	2347 - 7210,3,1, 595-603	2021
5	Balaji R Dhanushraj P Inbaraj P	Automatic seat belt	International Journal of Innovative Research in Technology	2349-6002,9,1	2022
6	Abishek P Paul Living X Ranjith K	Searching and Separation of Waste Using Robot	IJRASET	2321-9653, 10,6	2022
7	Anjali.V.R Dharshini.R Kaviya.S	Artificial Vision Using Blind for Alexa	International Journal of Innovative Research in Technology	2349-6002, 9,1	2022
8	K.S. Prakadish D. Surya	Coal Mining Safety System Using WUSN and Lora	International Journal of Innovative Research in Technology	2349-6002, 9,1	2022

ACADEMIC YEAR (2020-21)

S. NO	NAME OF THE STUDENTS	TITLE OF THE PAPER	JOURNAL / CONFERENCE NAME	ISBN NO / ISSN NO, VOLUME. ISSUE/ PAGE NUMBER	YEAR AND MONTH OF PUBLICATION
1	Sharon Stella.R Sushmitha.U, Swetha.D	AD-HOC Chief Spoofing Forestall in Wireless Sensor Networks	International Journal for Research Trends and Innovation	2456-3315,6, 4, 46-49	April-2021
2	S. Sethulekshmi, A. Shanmathy shree S. Vinodhini	Heterogeneous hand gesture recognition using 3D dynamic skeletal data	IJRASET	2321-9653,9, IV, 501-504	April 2021
3	Angel oviya D Ayisha Beevi B Jamila L M	Lung Diseases Identification Using CNN	International Journal for Research and Analytical Reviews(IJRAR)	E-ISSN 2348-1269, P- ISSN 2349-5138,8, 1, 412-419	March 2021
4	R. Meena G. Megavarthini R. Priyadharshini	Third Eye: A Smart Assistant for visually impaired using Deep Learning	International Journal for Research in Applied Science and Engineering Technology(IJRASET)	2321-9653,9, IV, 494-500	April 2021
5	Sruthi S R Subriya S	Smart tracking and monitoring using LoRA	IJRASET	2321-9653,9, IV, 451-456	April 2021
6	Jevina D Geerthy C Jothika B	Cuckoo Search Based Energy Efficient Routing Protocol in WSN	IJRASET International Journal for Research in Applied Science and Engineering Technology.	2321-9653,9, III, 1117-1122	March 2021
7	Siva kumar N Surajkumar P Surya Kumar N. K	OCR based smart parking system	International Science and Research Journals	2347 - 7210,3, 1, 563 - 571	25 April 2021
8	J. Ajay kumar R. Herish kumar S. Jaisuriya	Voting using block chain technology	ISR JOURNALS	2347-7210,3, 1 527-530	2021 and April
9	B.Sanaa Fathima H. Thejal	Design and Analysis of a Linearly Polarized S-band Conical Horn Antenna	IJRTI	2456-3315,6, 3, 208-211	2021 March
10	Malavika.R Steppy Cinderella.J	Smart Band For Women Safety Using Iot	Isr journals and publications	2347-7210,3, 1, 531-540	April, 2021
11	Kishore G, Kosalaraman P Kirthan P	Autonomous Robot based Agriculture Remote Farming	International Journal for Research in Applied Science & Engineering Technology	2321-9653,9, IV, 8	APRIL 2021

12	A. Ramprakash T. Sathish R. Uthandaraman	Network Level Request Blocker	IRJMETS	e-ISSN: 2582-5208, Volume:03, Issue:04, 5676-5682	April-2021
13	Aisshwarya T Kajol Preetha B	Penta Cancer Detection System Using Deep Learning	Journal of Huazhong University of Science and Technology	1671-4512,50, 3, 1-13	March, 2021
14	Abishek.S Anish.N Levin Mac Rosevelte.X	IOT Based Blood Bank Monitoring and Ibeacon Donor Finder	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2321-9653,9, 4, 36-42	April 2021
15	Gopinath Ajay Amrith A Ajith Kumar M	Implement Ai to Reduce Accidents Using Jetson Nano	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2321-9653,9, IV, 483-487	April 2021
16	Girija Harini.S	Rice Leaf Disease Classification Using Deep Learning	International Journal of Innovative Research in Electricals, Electronics and Control Engineering (IJIREEICE)	2321-2004 (online), 2321-5526 (print),9, 5, 25-33	May,2021
17	T. Nandhini, V. Soundarya B. Sowmya	Low latency corrective feedback algorithm for binary compressed sensing	IJRASET	2321-9653,9, IV,	April 2021
18	Praveen Kumar. P Prabhakar.G Raghul Raj.R	Centralized Flood Indication System	ISR JOURNAL	2347 -7210,3, 1, 494-505	April, 2021
19	M Mohammed Fazal B Nithishkumar S Sasi Kumar	Automated Closed Loop Aquaponics	2nd International Conference of Smart Automation (ICSA)2021	-	-
20	A. Ajay Amrith, Gopinath. T, M.Ajith Kumar	Implement AI to Reduce Accidents Using Jetson Nano	IJRASET	10.22214,9, IV,	April 2021
21	C. M. Abilash christin kumar M. Gokulakrishnan R. Gokul Subramaniam	Attention deficit hyper activity disorder detection and prevention	ISR journal	2321-3337,6, 3, 1525-1534	April 2021
22	Vinodh kumar. S Yuvaraj. S	Accident prevention and collision avoidance	International science and research journel	2347-7210,3, 1, 541-552	09/04/2021
23	Akash Vijayan. I.V Ashwin Joshua. N, Harikrishnan. N	Detection and Classification of Alzhemir's disease using Deep Learning	Isr journals	ISSN NO: 2347-7210,3, 1, 515-526	April 2021

24	R.S.Athira, M.Hemaavarthini M. Hemalatha	Enhanced library Management for differently abled people	International conference on latest trends in science, engineering and technology (ICLTSET'21)	9788191074857	2021&MARCH
25	Bavithran.S, Jeswin Paul.P, Kandha Raj.M	Artificial Intelligence Based Mobile Robot	IJRASET	IJRASET33940,9, V, 159-175	2021 May
26	Abarna N, Akshaya D Divine Starry V	Flip Flop Optimisation to Reduce Power and Area Consumption	KIT-ICLTSET'21(International conference on Latest Trends in science, Engineering & Technology)	9788191074857	2021
27	Suvalakshmi E, Swetha M Vinny P	Machine Learning and Edge Iot Based Food Quality Monitoring System	National conference on emerging innovations in information and communication technology (NCEIICT'21)	-	2021
28	Mayuri M, Monica Grace D Steena Chris S	Emotion Recognition Based Self Learning for Autistic Children	ICLTSET'21	ISBN: 9788191074857	2021
29	R.Priyanka B.Vaisali,	Self-Learning Braille Application for Impaired People	7th International E-Conference on Latest Trends in Science, Engineering & Technology (Icltset'21)	9788191074857	2021
30	E. J Ejolin Mercides, R Dharshiga Anto Shelsea Shiny A	Extraction Of Bms Data and Its Acquistion Using Lifi Communication for Facility Management	Published in International Journal of Advanced Research in Electronics, Communication Engineering and Development	2347 -7210,3, 1, 506-514	03 April, 2021

5 FACULTY INFORMATION AND CONTRIBUTIONS (200) Total Marks 185.06

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	Assoc Type
Dr.J. Jebastine	AJQPJ9257P	ME/M. Tech and PhD	27/04/2015	Signal Processing	15	0	0	Professor	01/06/2020	23/06/2003	Regula
Dr.Anita Titus	AIOPA6832A	ME/M. Tech and PhD	03/11/2014	Image Processing	8	0	0	Professor	18/06/2018	18/06/2018	Regula
Dr.CH.Venkata Siva Prasad	BAUPV3961N	ME/M. Tech and PhD	03/12/2019	Electronics and Communication	4	0	0	Associate Professor	01/06/2020	01/06/2020	Regula
Dr.M.P.PRABAKARAN	AYUPP4467G	ME/M. Tech and PhD	05/10/2017	Optical communication	4	0	0	Associate Professor	01/06/2020	01/06/2020	Regula
Dr.V.Geetha	AQKPG9790M	ME/M. Tech and PhD	25/09/2021	Power Electronics & Industrial drives	5	0	0	Associate Professor	06/06/2022	06/06/2022	Regula
Dr.V.Velmurugan	AHFPV6781K	ME/M. Tech and PhD	24/08/2021	Wireless Networks	5	0	0	Associate Professor	06/06/2022	06/06/2022	Regula
Dr.Purushothaman K E	COGPP4977M	ME/M. Tech and PhD	16/07/2021	Wireless Communication	6	0	0	Associate Professor	06/06/2022	06/06/2022	Regula
Mr.G.C.JAGAN	AOCPG1917N	M.E/M.Tech	09/11/2006	Communication Systems	8	0	0	Assistant Professor		01/03/2007	Regula
Mrs. C. Anitha	AJNPC2179A	M.E/M.Tech	01/03/2007	Applied Electronics	8	0	0	Assistant Professor		01/03/2007	Regula
Mr. B. Arun Vijayakumar	ARCPB5988R	M.E/M.Tech	03/12/2007	Communication Systems	6	0	0	Assistant Professor		07/09/2007	Regula
Mr. T.R.Chenthil	AJGPT9599J	M.E/M.Tech	04/12/2008	Applied Electronics	8	0	0	Assistant Professor		28/07/2008	Regula
Dr. Balachandran.G	AMIPG9567G	ME/M. Tech and PhD	20/06/2023	Image Processing	10	0	0	Assistant Professor		25/06/2012	Regula
Dr. V. Nanammal	AIAPN2762N	ME/M. Tech and PhD	13/06/2023	Image Processing	10	0	0	Assistant Professor		25/06/2012	Regula
Mr. M. Sinuvasan	BJMPM2478N	M.E/M.Tech	26/04/2012	VLSI Design	2	0	0	Assistant Professor		25/06/2012	Regula
Mr. S.Benjamin Arul	AVBPB8249G	M.E/M.Tech	30/04/2013	Electronics and Control	4	0	0	Assistant Professor		16/06/2014	Regula
Mr. Ranjith S	AYAPR5577R	M.E/M.Tech	30/04/2013	VLSI Design	10	0	0	Assistant Professor		05/09/2014	Regula
Mr. R.Vivek Krishna	AIEPV1116E	M.E/M.Tech	03/08/2015	Electronics and Control	2	0	0	Assistant Professor		29/06/2015	Regula
Mrs. R Gracelin sheeba	ATIPG1761D	M.E/M.Tech	02/02/2010	Communication Systems	5	0	0	Assistant Professor		05/01/2017	Regula
Ms. Santhiya A	HORPS0663M	M.E/M.Tech	29/07/2016	Wireless communication	5	0	0	Assistant Professor		11/01/2017	Regula
Mr. Sakthivel E	COAPS0971Q	M.E/M.Tech	26/04/2014	Embedded System	5	0	0	Assistant Professor		12/01/2017	Regula
Mrs. Y. Anitha	APUPA3320E	M.E/M.Tech	28/07/2007	Communication Systems	1	0	0	Assistant Professor		03/09/2007	Regula
Mrs. M. Logeswari	APHPL2689E	M.E/M.Tech	03/05/2017	Communication and Network	1	0	0	Assistant Professor		01/06/2020	Regula
Mrs. L. Kanagadurga	BKGPK9538Q	M.E/M.Tech	10/12/2007	Communication Systems	4	0	0	Assistant Professor		11/06/2020	Regula
Mrs.Thillaiyarasi S	AQOPT1973D	M.E/M.Tech	01/06/2018	VLSI Design	4	0	0	Assistant Professor		01/06/2020	Regula
Mrs. S.Saraswathi	FZPPS0756A	M.E/M.Tech	05/04/2014	Applied Electronics	2	0	0	Assistant Professor		01/06/2020	Regula

Mr. S.K. Binu Siva Singh	BTCPB0524Q	M.E/M.Tech	30/04/2013	VLSI Design	5	0	0	Assistant Professor		01/07/2013	Regula
Mr. S.K. Sinu Siva Singh	DSSPS4401J	M.E/M.Tech	12/12/2019	Power Electronics & Drives	2	0	0	Assistant Professor		01/06/2020	Regula

5.1 Student-Faculty Ratio (20)

Total Marks 20.00

Institute Marks : 20.00

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	120	3	120	4	120	2
3rd Year	120	0	120	0	120	1
4th Year	120	0	120	0	120	0
Sub-Total	**360**	**3**	**360**	**4**	**360**	**3**
Total	**363**		**364**		**363**	

Grand Total	363	364	363

PG

No. of PG Programs in the Department 0

Grand Total			

SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 0

Description	**CAY(2022-23)**	**CAYm1 (2021-22)**	**CAYm2 (2020-21)**
Total No. of Students in the Department(S)	363 **Sum total of all (UG+PG) students**	364 **Sum total of all (UG+PG) students**	363 **Sum total of all (UG+PG) students**
No. of Faculty in the Department(F)	27 **F1**	24 **F2**	24 **F3**
Student Faculty Ratio(SFR)	13.44 **SFR1=S1/F1**	15.17 **SFR2=S2/F2**	15.13 **SFR3=S3/F3**
Average SFR	14.58 **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)	27	0
CAYm1(2021-22)	24	0
CAYm2(2020-21)	24	0

Average SFR for three assessment years : 14.58

Assessment SFR : 20

5.2 Faculty Cadre Proportion (25)

Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2022-23)	2.00	2.00	4.00	5.00	12.00	20.00
CAYm1(2021-22)	2.00	2.00	4.00	2.00	12.00	20.00
CAYm2(2020-21)	2.00	2.00	4.00	2.00	12.00	20.00
Average Numbers	2.00	2.00	4.00	3.00	12.00	20.00

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 25.00

5.3 Faculty Qualification (25)

Total Marks 18.06

Institute Marks : 18.06

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2022-23(CAY)	7	20	18.00	20.83
2021-22(CAYm1)	4	20	18.00	16.67
2020-21(CAYm2)	4	20	18.00	16.67

Average Assessment : 18.06

5.4 Faculty Retention (25)

Total Marks 25.00

Institute Marks : 25.00

Description	2021-22	2022-23
No of Faculty Retained	24	24
Total No of Faculty	24	24
% of Faculty Retained	100	100

Average : 100.00

Assessment Marks : 25.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

Total Marks 20.00

Institute Marks : 20.00

Innovations by the Faculty in Teaching and Learning

Figure 5.5.1 shows the innovations by the Faculty in Teaching and learning process.

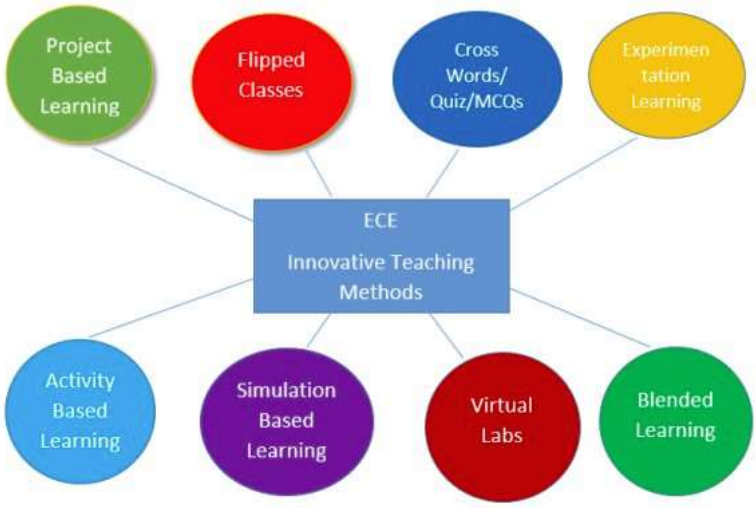


Figure 5.5.1 Innovations by the Faculty in Teaching

1. **Lectures**: Lectures are a traditional but essential teaching method. Instructors can deliver key concepts, theories, and explanations in a structured manner. However, its important to make lectures engaging by using multimedia presentations, real-world examples, and interactive discussions

Teaching in Class Room

2. **Laboratory Work**: Hands-on laboratory experiments are crucial for engineering students to apply theoretical knowledge to practical situations. These experiments help students gain a better understanding of concepts and develop important skills

Teaching in Laboratory

Laboratory Work

3. **Problem-Based Learning (PBL)**: PBL involves presenting students with real-world engineering problems and challenges. They work in small groups to research, analyze, and propose solutions. This method encourages critical thinking, problem-solving skills, and teamwork

Problem-Based Learning

3. **Project-Based Learning (PjBL)**: In PjBL, students work on long-term engineering projects that mimic real-world scenarios. They apply their knowledge to design, build, and test solutions. This approach enhances creativity, project management skills, and application of theoretical concepts

Project-Based Learning

4. **Collaborative Learning**: Group work and peer-to-peer teaching can be effective in engineering education. Students can collaborate on projects, discuss concepts, and teach each other. This promotes teamwork, communication, and the sharing of diverse perspectives.

Collaborative Learning

7. **Simulation and Modeling**: Using computer simulations and modeling tools can help students visualize complex engineering systems and gain practical experience in a controlled environment.

Simulation and Modeling

8. **Guest Lectures and Industry Experts**: Inviting guest speakers from industry can provide valuable insights and real-world context to engineering concepts. It also helps students understand the relevance of what they are learning.

Table 5.5.1 Guest Lecture Details (AY 2020-21)

Sl No	Event Name	Company Name	Speaker Name	Date
1	Overcoming Challenges in Taking Online Classes	Strides Consulting Inc	Dr.StephenChinnaswamy	2.6.2020
2	Auto Code generation for Automotive Embedded Targets through Model Based development (MBD) using MATLAB Simulink	Tata Elxsi	Mr.MathanMuthusamy	13.6.2020
3	Artificial Intelligence with Real Time Dta	ABE Semiconductor Designs	Dr.A.Athifshah	13.6.2020
4	Networking 101	SME, IT Infrastructure	Mr.P.S.Chakravarthy	12.6.2020

5	Ethical Hacking	RJP Infotek	Mr.Sriram	15.6.2020
6	Cloud and Data Center	RJP Infotek	Mr.P.Vijay	17.6.2020

Table 5.5.2 Guest Lecture Details (AY 2021-22)

Sl No	Event Name	Company Name	Speaker Name	Date
1	Innovation In Entrepreneurship	Mind Masters Academy	Dr.KavithaDhamaodharan	31.01.2022
2	Achieving Problem-Solution Fit & Product Market Fit	Econ Systems Chennai	MrsArchanaRajamanickam	10.2.2022
3	Innovation Bridge Between Inculcation And Industry	Fidelity Investments	Mr.A.DominicSavio	18.2.2022
4	Innovations in Navigating IT Carrier Options	Honeywell	Mr.A.K.Madhan	5.3.2022

Table 5.5.3 Guest Lecture Details (AY 2022-23)

Sl No	Event Name	Company Name	Speaker Name	Date
1	Innovation in professional orientation about Engineering	Saveetha School Of Engineering	Dr.M.Ramamoorthy	27.8.2022
2	Healthcare Technology and its Impact on Health Systems	Govt Primray Health Centre, Thindivanam	Dr.S.Kannan	14.9.2022

Guest Lecture - Dr.A.Athifshah

Guest Lecture – Mr.P.S.Chakravarthy

Guest Lecture - Dr.S.Kannan

Industrial Visit

S.NO	YEAR	SECTION	COMPANY NAME
1	III	A&B	FACULTY OF FOOD SCIENCES, COLLEGE OF FOOD AND DAIRY TECHNOLOGY
2	II	A&B	INTEGRAL COACH FACTOR, KONNUR
3	I	A&B	INTEGRAL COACH FACTOR, KONNUR
4	III	A&B	PRE FINIAL YEAR TOUR CHICKMANGALUR-COORG

Industrial Visit-TVS Training Services Ltd

Industrial Visit-Emerson

9. **Online Resources**: Utilize online platforms, forums, and resources for supplementary learning. Many engineering courses benefit from online tutorials, forums for discussion, and access to open educational resources (OERs).

List of Journals in Library

	ECE -National Journals
1	Journal of Electronic Engineering and Communication Engg
2	Advanced Journal in Wireless and Mobile Communication
3	Journal of Micro engineering & Nano electronics
4	Journal of High Performance Communication Systems and Networking
5	Journal of Mathematical Control Science and Applications (JMCSA)
6	Journal of Microengineering&Nanoelectronics
	International Journals

1	International Journal of Electronics, Computing and Engineering Education
2	International Journal of Computer and Electronics Engineering
3	International Journal of Power System and Power Electronics
4	International Journal on Power System Optimization and Control (IJPSOC)
5	International Journal of Unconventional Electromagnetics and Plasmas (UEP)
6	International Journal of VLSI Design

Online learning platforms have transformed education, making it more inclusive and adaptable to the needs of modern learners. They enable lifelong learning and the exploration of various fields, contributing to the development of a diverse and well-rounded knowledge base. This approach aligns with the demands of an increasingly interconnected and rapidly changing world.

Encouraging the pursuit of online courses, students are actively supported in their engineering education through platforms like NPTEL, Coursera, and various others, enhancing their knowledge and skills for a successful future in the field

NPTEL courses done by Students

10. **Assessment and Feedback**: Continuous assessment through quizzes, assignments, and exams is essential for tracking students progress. Provide timely and constructive feedback to help students improve.

Quality of Internal semester Question papers, Assignments and Evaluation

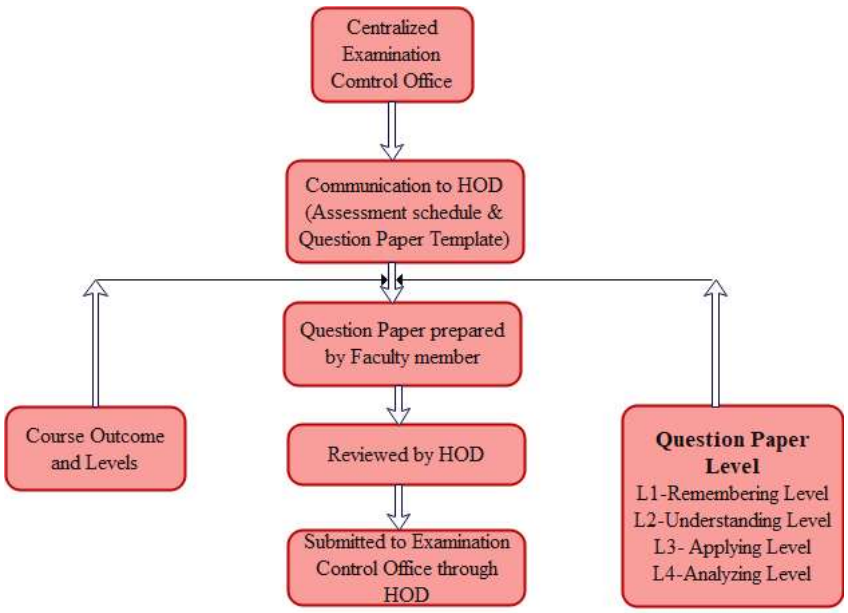


Figure 5.5.2 Quality of Internal semester Question papers, Assignments and Evaluation

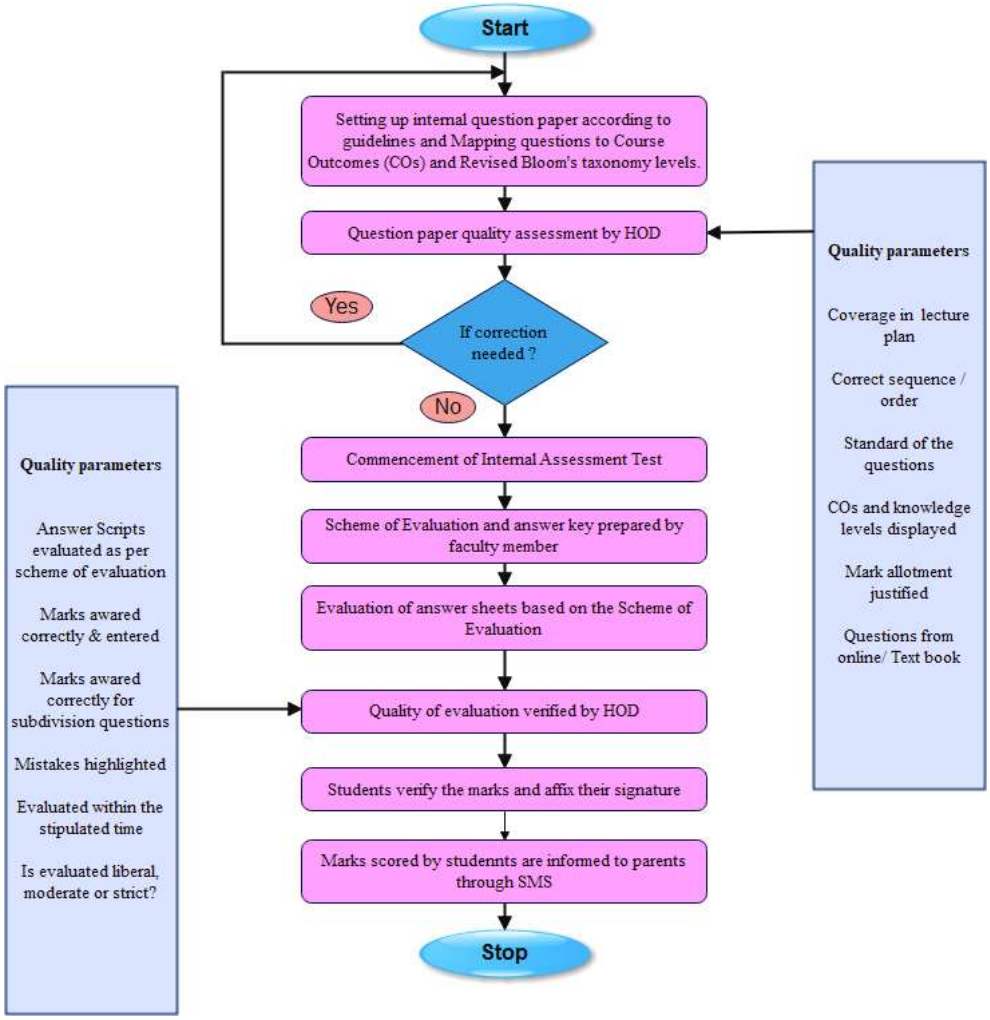
- All internal exams are organized and centralized by examination cell. The examination schedule will be prepared and it will be intimated to the students, departments, etc. For every semesterfour internal assessment tests like Assessment I, Assessment II,Assessment III and Model examination were conducted.

- The internal examination question paper format is framed / updated by Controller of Examination (COE) in discussion with Principal based on affiliated University model. The tests are conducted for a maximum of 60 marks for Assessment TestI, II&III and 100 marks for Model Exam Figure 5.5.2 shows the Quality of Internal semester Question papers, Assignments and Evaluation process.

Table: 5.5.6 Internal assessment Marks & Portions Coveres

Assessment name	Portion Covered	Time duration	Marks
Assessment I	Unit 1 & Unit 2(0.5)	2 hours	60
Assessment II	Unit 2 (0.5)& Unit 3	2 hours	60
Model Examination	All 5 Units	3 hours	100

- All questions follow Revised Blooms taxonomy action verbs and mapped with CO and PO. The question paper will be validated by Programassessment and evaluation committee andHOD, to ensure the quality and the instructions, adhering the learning levels of COs and POs.
- Examination cell allot the cross department invigilation duty for the faculty members. Disciplinary action will be taken, in case of malpractices if any.
- The two sets of question paper for each subject have to be submitted by the department to the examination cell. The examination cell will select the question paper and issue during the examination. The answer sheets are evaluated through central valuation system.
- After the evaluation, the answer sheets are handed over to the students for verification. The Program assessment and evaluation committee conducts the result analysis meeting with course handling faculty to improve the teaching learning process. After evaluation the learning levels are analyzed to measure the CO attainment. Action plans are proposed if target level of CO attainment is not met with PO's .Figure 5.5.3 shows the setting of Assessment Question papers and Evaluation process.



Setting of Assessment Question papers and Evaluation

10. **Mentorship and Advising**: Pairing students with faculty mentors or industry professionals can offer valuable guidance and support throughout their academic journey.

Class Advisor Dissemination In Laboratory Class

11. **Interdisciplinary Learning**: Encourage students to explore related fields and interdisciplinary topics to develop a holistic understanding of engineering and its applications.

Students Participating in Project Expo

13. **Ethical and Social Considerations**: Incorporate discussions on ethical dilemmas and the social impact of engineering projects to develop a sense of responsibility among students.
14. **Professional Development**: Offer workshops, seminars, and courses that focus on soft skills, such as communication, leadership, and project management, which are essential for engineering professionals.

Professional Development Activities

Project Pano ply

15. **Continuous Improvement**: Regularly assess the effectiveness of teaching methods through feedback from students and adapt your teaching strategies accordingly.

Student feedback of teaching learning process and actions taken

Figure 5.5.4 shows the students feedback process and Table 5.5.7 shows thee List of Feedback Methods

- Feedbacks were taken from the students regarding subjects, faculties, etc. regularly in-order to solve their problems. As per their expectation, the teaching aids will be modified by the faculty and make them to understand efficiently.
- Provide text books and reference books for all the students for effective teaching learning process. The feedback will be collected for all the courses.
- Based on the feedback received from the student head of the department will suggest the respective staff to attend the FDP related to that subject in order to improve their teaching.

Table 5.5.7 List of Feedback Methods

S.No.	Feedback Mechanism	No. of times/semester
1	Class Committee Meeting	Thrice in a semester
2	Program end survey	Once in a Year
3	Course end survey	Once in a semester
4	Faculty Feed back	Once in a semester
5	HOD's Feed back	Once in a semester
6	Semester end students feedback	Once in a semester

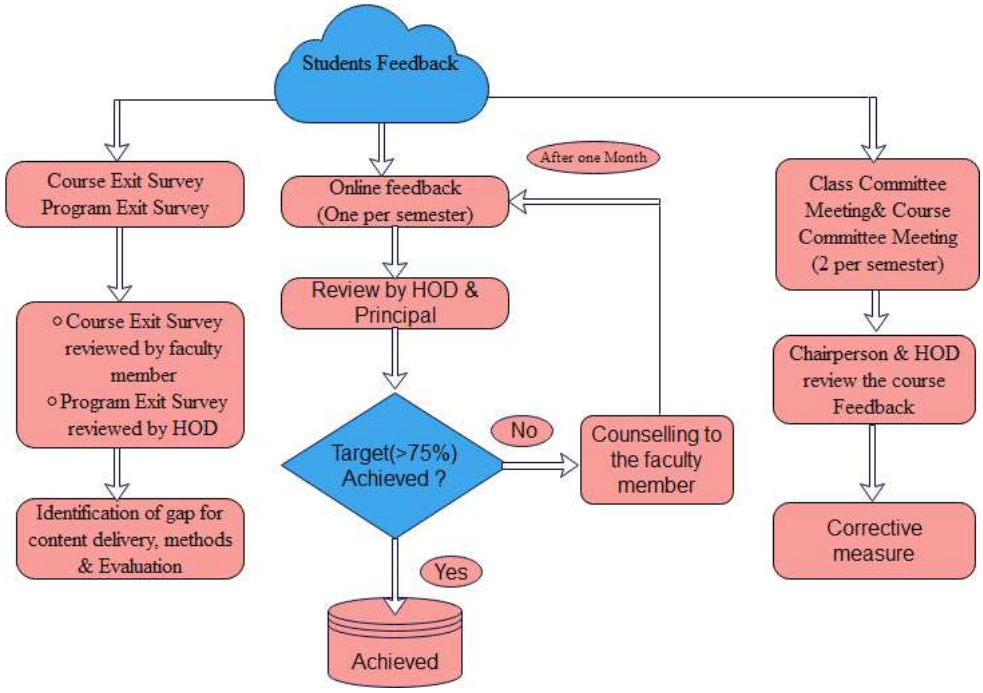


Figure 5.5.4 Students Feedback Process

Feedback collection process :

A class committee meeting is organized by the Program coordinator, subject handing faculty members and four students as representatives from a class thrice in a semester to discuss about the syllabus completion, subject understanding level and content delivery of faculty members.

- The faculty members themselves collect feedback on their own from the students to improve their teaching.
- Head of the Department interacts with the students to know the views and thoughts on the method of teaching of faculty members.
- At the end of the semester the faculty members collect course end survey for their courses to improve their method of content delivery. Online feedback is taken at the end of the semester for all the courses.
- Based on the feedbacks obtained the necessary corrective measures are taken at various levels to improve the teaching and learning process.

Feedback analysis process:

- The feedback collected from students are first analyzed at the level of HOD and then at the level of faculty appraisal committee, headed by the HOI. The contents of the feedback will be shared with each faculty member individually.
- Best faculty award is given based on students feedback, HOD's evaluation, the faculty's self-appraisal report and the marks given by Faculty appraisal committee, headed by HOI.
- The increments and promotions are also bearing some effect on these scores.

5.6 Faculty as participants in Faculty development/training activities/STTPs (15) Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2021-22 (CAYm1)	2020-21 (CAYm2)	2019-20 (CAYm3)
Dr.J. Jebastine	5.00	5.00	5.00
Dr.Anita Titus	5.00	5.00	5.00
Dr.CH.Venkata Siva Prasad	5.00	5.00	5.00
Dr.M.P.Prabakaran	5.00	5.00	5.00
Dr.V.Geetha	5.00	0.00	0.00
Dr.V.Velmurugan	5.00	0.00	0.00
Dr.Purushothaman K E	5.00	0.00	0.00
Mr.G.C.Jagan	5.00	5.00	5.00
Ms.C. Anitha	5.00	5.00	5.00
Mr.B.Arun Vijayakumar	5.00	5.00	5.00
Mr.T.R.Chenthil	5.00	5.00	5.00
Dr.Balachandran.G	5.00	5.00	5.00
Dr.V.Nanammal	5.00	5.00	5.00
Mr.M. Sinuvasan	5.00	5.00	5.00
Mr.S.Benjamin Arul	5.00	5.00	5.00
Mr.Ranjith S	5.00	5.00	5.00
Mr.R.Vivek Krishna	5.00	5.00	5.00
Ms.R Gracelin sheeba	5.00	5.00	5.00
Ms.Santhiya A	5.00	5.00	5.00
Mr.Sakthivel E	5.00	5.00	5.00
Ms.Y. Anitha	5.00	5.00	5.00
Ms.M. Logeswari	5.00	5.00	5.00
Ms.L. Kanagadurga	5.00	5.00	5.00
Ms.Thillaiyarasi S	5.00	5.00	5.00
Ms.S.Saraswathi	5.00	5.00	5.00
Mr.S.K. Binu Siva Singh	5.00	5.00	5.00
Mr.S.K. Sinu Siva Singh	5.00	5.00	5.00
Sum	135.00	120.00	120.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	18.15	18.20	18.15
Assessment [3*(Sum / 0.5RF)]	44.63	39.56	39.67

Average assessment over 3 years: 41.29

5.7 Research and Development (30) Total Marks 22.00

5.7.1 Academic Research (10)

Institute Marks : 10.00

Academic Research

The faculty members have been participating /presenting papers in national/international conferences and publish their articles in national/international journals to enrich their knowledge.

JOURNALS PUBLICATION DETAILS 2022-2023

S. No.	Name of the Authors	Title of the Paper	Name of the Journal	ISSN No of the Journal
1	Dr.J.Jebastine et al	Fetal ECG Extraction and QRS Detection Using Advanced Adaptive Filtering-Based Signal Decomposition and Peak Threshold Technique from Abdominal ECG Signals	Circuits, Systems, and Signal Processing	ISSN : 1531-5878
2	Dr.G.Balachandran et al	Moving scene-based video segmentation using fast convolutional neural network integration of VGG-16 net deep learning architecture	International Journal of Modeling, Simulation, and Scientific Computing	1341014
3	Ms.A. Santhiya et al	Sustainable IoT Solution for Freshwater Aquaculture Using FPGA	International Journal of Research Publication and Reviews	2582-7421
4	Mrs.C.Anitha et al	Coal Mining Safety System Using WUSN and Lora	IJIRT	ISSN: 2349-6002
5	Mrs.R. Gracelin Sheeba et al	“compact single layer low profile microstrip patch antenna,” ,	JETIR	(ISSN-2349-5162)
6	Mr.G. C. Jagan et al	A Novel Machine Language-Driven Data Aggregation Approach to Predict Data Redundancy in IoT-Connected Wireless Sensor Networks	Wireless Communications and Mobile Computing	ISSN:530-8677
7	Mr.G. C. Jagan et al	Wireless Sensor Network Cluster Head Selection and Short Routing Using Energy Efficient ElectroStatic Discharge Algorithm	Journal of Engineering	ISSN:2314-4912
8	Dr.V.Nanammal et al	Performance enhancement of building energy through the combination of dynamic insulation panels and phase changing materials	Energy Reports	ISSN: 2352-4847
9	Dr.V.Nanammal et al	NNLGBM: Medical Image Classification through Secure Collaboration in Pneumonia Detection by Blending NN and LGBM	International Journal of Intelligent Systems and Applications in Engineering	ISSN: 2147-6799
10	Dr.V.Nanammal et al	Detection of Ag+ by Synthesizing Fluorescent Copper Nanoparticles through Ultrasensitive Free Label Approach	Journals of Nanomaterials	ISSN:1687-4110
11	Dr.V.Nanammal et al	A secured biomedical image processing scheme to detect pneumonia disease using dynamic learning principles	Concurrent Engineering: Research and Applications	ISSN: 1063-293X
12	Dr.V.Nanammal et al	Design of Power and Area Efficient Approximate Multipliers for Edge Detection Algorithm	International Journal for Research in Applied Science &Engineering Technology	ISSN: 2321-9653
13	Dr.V.Nanammal et al	Image Cryptography Design Based on Nano AES Security Algorithm	International Journal for Research in Applied Science &Engineering Technology	ISSN: 2321-9654
14	Dr.V.Nanammal et al	FPGA Implementation of Digital Modulation Schemes Using Verilog HDL	International Journal for Research in Applied Science &Engineering Technology	ISSN: 2321-9655
15	Mr.Sakthivel E et al	Artificial Vision Using Blind for Alexa	IJIRT	ISSN: 2349-6002
16	Mr.Sakthivel E et al	Crop Yield Optimization And Prediction By Machine Learning Algorithms	International Journal of Scientific Research in Engineering and Management (IJSREM)	ISSN: 2582-3930
17	Mr.B.Arun Vijayakumar et al.	Automatic seat belt	IJIRT	ISSN: 2349-6002
18	Mr.B.Arun Vijayakumar et al.	Searching and Separation of Waste Using Robot	IJRASET	2321-9653
19	S Ranjith et al	Multi-fusion integrated end-to-end deep kernel CNN based channel estimation for hybrid range UM-MIMO 6G communication systems	Applied Acoustics	1872-910X

FACULTY CONFERENCE PUBLICATION DETAILS 2022-2023

Sl. No.	Name of the Authors	Title of the Paper	Name of the Conference	ISBN of the Conference

1	Mrs.C.Anitha et al	Remodeling Arrangement of Embedded Benzene Structure Using OBAP & QBAP Algorithm to Design Mesh for Medical Application	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
2	Ms.A. Santhiya et al	Security Based Object Detector Using YOLO Algorithm in Neural Networks	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
3	Mr.G. C. Jagan et al	An Approach of Image Feature Extraction Using Obtuse-Angled Triangle Segmentation Using Mathematical Analysis for Enhanced Video Stabilization	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
4	Dr.V.Nanammal, Dr.J.Jebastine	Voting Machine for Blind and Amyotrophic Lateral Sclerosis People	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
5	Dr.J.Jebastine, Dr.V.Nanammal	Reversible - SAL Based Energy Efficient Design of CLA for DSP Application	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
6	Mr.Sakthivel E	A Credit Card Fraud Identification Technique Using Support Vector Machine	2023 International Conference on Applied Intelligence and Sustainable Computing (ICAISC)	979-8-3503-2379-5
7	Dr.G.Balachandran et al	An Approach of Image Feature Extraction Using Obtuse-Angled Triangle Segmentation Using Mathematical Analysis for Enhanced Video Stabilization	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
8	Dr.G.Balachandran et al	Labeled Image Segmentation and Retrieval for Fast Images Processing Using K-NN Algorithm	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
9	Mr.B.Arun Vijayakumar et al.	Labled image segmentation retrieval for fast image using K-NN Algorithm	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
10	S Ranjith et al	Remodeling Arrangement of Embedded Benzene Structure Using OBAP & QBAP Algorithm to Design Mesh for Medical Application	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
11	S Ranjith et al	An Approach of Image Feature Extraction Using Obtuse-Angled Triangle Segmentation Using Mathematical Analysis for Enhanced Video Stabilization	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1
12	S Ranjith et al	Labeled Image Segmentation and Retrieval for Fast Images Processing Using K-NN Algorithm	8th International Conference on Science Technology Engineering and Management (ICONSTEM)	979-8-3503-4779-1

FACULTY JOURNALS PUBLICATION DETAILS 2021-2022

S.No	AUTHORS	TITLE OF THE PAPER	JOURNAL DETAILS	ISSN NO

1	Dr.J.Jebastine et al	Exploration on Mechanical Behaviours of Hyacinth Fibre Particles Reinforced Polymer Matrix-Based Hybrid Composites for ElectronicApplications	Advances in Materials Science and Engineering	1687-8434
2	Mrs.C.Anitha et al	AI based painting robotic arm	International Journal of Advanced Research in Electronics, Communication & Instrumentation Engineering and Development,	2347 -7210
3	Mrs.C.Anitha et al	Heterogeneous Hand Gesture Recognition using 3D Dynamic Skeletal Data	International Journal for Research in Applied Science & Engineering Technology,	2321-9653
4	Mr.G.C.Jagan et al	Smart band for women safety using IoT	International Journal of Advanced Research in Electronics, Communication & Instrumentation Engineering and Development,	2347 -7210
5	Mr.G.C.Jagan et al	AD-HOC Chief Spoofing Forestall In Wireless Sensor Networks	International Journal for Research Trends and Innovation(IJRTI),	2456-3315
6	Mr.G.C.Jagan et al	Attention deficit hyper activity disorder detection andPrevention	International Journal of Advanced Research in Electronics, Communication & Instrumentation Engineering and Development,	2321-3337
7	Mr.T.R.Chenthil et al	Third Eye: A Smart Assistant for Visually Impaired using Deep Learning	International Journal for Research in Applied Science & Engineering Technology,	2321-9653
8	Mr.T.R.Chenthil et al	IoT Based Blood Bank Monitoring and Ibeacon Donor Finder	International Journal for Research in Applied Science & Engineering Technology,	2321-9653
9	Mr.B.ArunVijayakumar et al	Design and Analysis of a Linearly Polarized S-band Conical Horn Antenna	International Journal for Research Trends and Innovation(IJRTI),	2456-3315
10	Mr.B.ArunVijayakumar et al	Rice Leaf Disease Classification using Deep Learning	International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering.	2321-2004
11	Ms.A.Santhiya et al	Low Latency Corrective Feedback Algorithm for Binary Compressed Sensing	International Journal for Research in Applied Science and Engineering Technology ,	2395-5252
12	Ms.A.Santhiya et al	Cuckoo Search Based Energy Efficient Routing Protocol WSN	International Journal for Research in Applied Science & Engineering Technology,	2321-9653
13	Mr.E.Sakthivel et al	Machine Learning and Edge IoT Based Food Quality Monitoring System	International Scientific Journal of Contemporary Research in Engineering Science and Management,	2456-1134
14	Mr.E.Sakthivel et al	Autonomous Robot based Agriculture Remote Farming	International Journal for Research in Applied Science and Engineering Technology ,	2321-9653
15	S Ranjith et al	A Novel Material Fabrication to detect Breast cancer using Deep Novel classification mechanism.	AIP PROCEEDING	2405- 050014

FACULTY CONFERENCE PUBLICATION DETAILS 2021-2022

Sl. No.	Name of the Authors	Title of the Paper	Name of the Conference	ISBN of the Conference
1	Mr.G. C. Jagan et al	Heptagonal Fractal Antenna with Slit for Improved Efficiency	ICPECTS-2022	9781665462761
2	Mr.G. C. Jagan et al	Modern Resource Conservation Strategies to Develop Multifaceted Applications of Wireless Sensor Networks: A Review	IC3IoT 2022	9781665479967
3	Mr.G. C. Jagan et al	Analysis on Positioning of Base Station and CHs for Improving Energy Efficiency in WSNs	ICDCS 2022	978-1-6654-7177-0
4	Dr.J.Jebastine et al	Empirical Analysis of Hybrid Machine Learning based Earlier Stage Covid Disease Prediction using Lung CT Images	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems	978-1-6654-7413-9

5	Mr.Sakthivel E et al	Empirical Analysis of Hybrid Machine Learning based Earlier Stage Covid Disease Prediction using Lung CT Images	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems	978-1-6654-7413-9
6	Dr.G.Balachandran et al	A Review of Video Stabilization Algorithms	Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems	978-1-6654-8962-1
7	Dr.G.Balachandran et al	An efficient object segmentation system based on U-Net for real-time satellite image	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)	978-1-6654-7413-9
8	Dr.G.Balachandran et al	Several Adaptable Robot engagements planning with blending Conflict and plan resolution	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems (ICSES)	978-1-6654-7413-9
9	S Ranjith et al	Improved Localization Algorithm Using Hybrid Firefly Genetic Algorithm in Wireless Sensor Network	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022, 2022	978-1-6654-7413-9
10	S Ranjith et al	An intelligent IoT Enabled Traffic queue handling System Using Machine Learning Algorithm	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022, 2022	978-1-6654-7413-9
11	S Ranjith et al	A multidimensional time series data on wireless network to improve the detection performance of unsupervised learning algorithms	2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022, 2022	978-1-6654-7413-9

FACULTY JOURNALS PUBLICATION DETAILS 2020-2021

S.No	AUTHORS	TITLE OF THE PAPER	JOURNAL DETAILS	ISSN NO
1	Dr. Anita Titus et al	Datapath Optimization in AES using Pipelined Architecture	International Journal for Research in Applied Science & Engineering Technology ,Vol.8 ,No. VIII, Page no: 940-944 (2020)	2321-9653
2.	Dr. Anita Titus et al	FPGA implementation of a Decision Tree Classifier using Deep Learning Algorithm	International Research Journal of Engineering and Technology, Vol. 7, No. 09, Page No:1091-1095(2020)	2395-0072
3.	Dr. Anita Titus et al	Smart Aider for Impaired Vision	International Journal for Research in Applied Science & Engineering Technology,Vol.8 ,No. VIII, Page no: 1084-1089 (2020)	2321-9653
4.	Mr. S. K. Binu Siva Singh et al	Implementation of Time Efficient VLSI Design using Kogge Stone Adder	International Journal for Research in Applied Science & EngineeringTechnology,Vol.8,No.IX, Page No:59-59 (2020)	2321-9653

5..	Mr. S. Ranjith et al	Robust architecture for Low light Image enhancement through iRCNN	Journal of Applied Science and Computations, Vol.7, No. IX, Page no:9-12 (2020)	1076-5131	

FACULTY CONFERENCE PUBLICATION DETAILS 2020-2021

S.No	AUTHORS	TITLE OF THE PAPER	CONFERENCE DETAILS	ISBN NO
1	Dr. Anita Titus et al	Data path Optimization in AES using Pipelined Architecture	ICONSTEM 2020	978-93-89817-32-4
2.	Mr. S. K. Binu Siva Singh et al	Implementation of Time Efficient VLSI Design using Kogge Stone Adder	ICONSTEM 2020	978-93-89817-32-4
3.	Mr. S. Ranjith et al	Robust architecture for Low light Image enhancement through Ircnn	ICONSTEM 2020	978-93-89817-32-4
4.	Mr. G. Balachandran et al	FPGA – Based Electrocardiography Signal Analysis System using (FIR) Filter	ICONSTEM 2020	978-93-89817-32-4
5.	Mrs. V. Nanammal et al	NOC based Router Architecture to Reduce Power using Round Robin Algorithm	ICONSTEM 2020	978-93-89817-32-4
6.	Dr. Anita Titus et al	EEG Based Rocker Bokie Mechanism for Differently Abled	ICONSTEM 2020	978-93-89817-32-4
7.	Dr. Anita Titus et al	Smart Aider for Impaired Vision	ICONSTEM 2020	978-93-89817-32-4
8.	Mrs. C. Anitha et al	Underwater Wiretrack Communication using Li-Fi Technology	ICONSTEM 2020	978-93-89817-32-4
9.	Mrs. C. Anitha, et al	Scrutinization of Lung Tumour and Analysis of Respiration Rate	ICONSTEM 2020	978-93-89817-32-4
10.	Mrs. C. Anitha et al	An Improved Color Texture based Face Spoofing Detection	ICONSTEM 2020	978-93-89817-32-4
11.	Mr. G. C. Jagan et al	Image Transmission through Wireless Underground Sensor Network(WUSN)	ICONSTEM 2020	978-93-89817-32-4
12.	Mr. G. C. Jagan et al	Image Processing Based Diagnosis of Sickle Cell Animea using Microscopic Images	ICONSTEM 2020	978-93-89817-32-4
13.	Mr. G. C. Jagan et al	Pro-Pap Non Invasive Ventilation for COPD	ICONSTEM 2020	978-93-89817-32-4
14	Mr. B. Arun Vijayakumar et al	Optical Recognition for Visually Impaired People using Smart Grid Technology	ICONSTEM 2020	978-93-89817-32-4
15	Mr. B. Arun Vijayakumar et al	Reconfigurable Multiband Frequency Antenna Based on DGS for Wireless Application	ICONSTEM 2020	978-93-89817-32-4
16	Mr. B. Arun Vijayakumar et al	Design and Development of Dual Axis Controlled Robot for Medical Prescription Writing	ICONSTEM 2020	978-93-89817-32-4
17.	Mr. T .R Chenthil, et al	Smart Banking with Multilevel Security Authentication in ATM	ICONSTEM 2020	978-93-89817-32-4
18.	Mr. T .R Chenthil et al	LPG Monitor for Home Safety	ICONSTEM 2020	978-93-89817-32-4
19.	Mr. T .R Chenthil et al	Highway Electric Bus Driver Health Safety with Patrol Authentication	ICONSTEM 2020	978-93-89817-32-4
20.	Mr. G. Balachandran et al	Design and Development of Safe Guiding Footwear	ICONSTEM 2020	978-93-89817-32-4
21.	Mr. G. Balachandran et al	Intelligent Dumb Assistance System using Gestures Enhanced With Fpga	ICONSTEM 2020	978-93-89817-32-4
22.	Mr. G. Balachandran et al	Evaluation and Risk Identification of Diabetic Foot Ulcers	ICONSTEM 2020	978-93-89817-32-4
23.	Mrs. V. Nanammal et al	Voting Machine for Blind And Amyotrophic Lateral Sclerosis People	ICONSTEM 2020	978-93-89817-32-4

24.	Mrs. V. Nanammal et al	Advanced Encryption Standard by using Modified S-Box Algorithm	ICONSTEM 2020	978-93-89817-32-4
25.	Mrs. V. Nanammal et al	User Face Authentication and Auto Attendance Mailing System using Raspberry Pi	ICONSTEM 2020	978-93-89817-32-4
26.	Mrs. V. Nanammal et al	Automatic Light Fence Circuit with Alarm	ICONSTEM 2020	978-93-89817-32-4
27.	Mr. S. Ranjith et al	Gesture Aided Surgical Movement of Robotic Arm using Augmented Reality	ICONSTEM 2020	978-93-89817-32-4
28.	Mr. S. Ranjith et al	Accident Avoidance using Eyelid Movement Detection System	ICONSTEM 2020	978-93-89817-32-4
29.	Mr. E. Sakthivel et al	Quadraped Home Surveillance Bot using Voice Recognition and Andriod Application	ICONSTEM 2020	978-93-89817-32-4
30.	Mr. E. Sakthivel et al	Traffic Signal Detection and Recognition For Colourblind Individuals	ICONSTEM 2020	978-93-89817-32-4
31.	Mr. E. Sakthivel et al	Health Monitoring System using IOT and Raspberry Pi 3	ICONSTEM 2020	978-93-89817-32-4
32.	Mrs. R. Gracelin Sheeba et al	Lora Based Environmental Monitoring and Hill Fire Detection	ICONSTEM 2020	978-93-89817-32-4
33.	Ms. A. Santhiya et al	Extraction of Oil Spilled Regions using SAR Images	ICONSTEM 2020	978-93-89817-32-4
34.	Ms. A. Santhiya et al	Smart Safety System for Sewage Workers Two Way Communication	ICONSTEM 2020	978-93-89817-32-4
35.	A. Santhiya et al	A Complete Monitoring Tool for Prisoner Tracking With GPS using RF Technology	ICONSTEM 2020	978-93-89817-32-4

Faculty Citation Index

Name of the Faculty	Google Scholar		
	Citations	H-Index	i10-Index
Dr.J. Jebastine	39	4	2
Dr.Anita Titus	55	4	2
Mr.G.C.Jagan	19	2	1
Dr.Balachandran.G	7	2	0
Dr.V.Nanammal	33	4	0
Ranjith S	36	3	1
Dr.V.Velmurugan	28	2	1
Mr. S.Benjamin Arul	43	2	2
Dr.Purushothaman K E	28	2	1

NPTEL courses by faculty for AY 2021-22

S.No	Faculty Name	Course Name
1	Dr.J.Jebastine	Outcome Based Pedagogic Principles for Effective Teaching
2	Mrs.C.Anitha	Deep Learning
3	Mr.G.C.Jagan	Fundamentals to MIMO Wireless Communication
4	Mrs.V.Nanammal	Introduction to Machine Learning
5	Mr.G.Balachandran	Introduction to Machine Learning
6	Mr.S.Ranjith	Introduction to Machine Learning
7	Dr.Anita Titus	Principles of Management

NPTEL courses by faculty for AY 2022-23

Sl No	Faculty Name	Course Name
1	Mr.G.C.Jagan	Introduction to Machine Learning
2	Mrs.C.Anitha	Deep Learning
3	Mr.B.ArunVijayakumar	Introduction to Industrial IoT 4.0
4	Dr.G.Balachandran	Introduction to Machine Learning
		Deep Learning
5	Dr.V.Nanammal	Deep learning
		Digital Image Processing
6	Mr.S.Ranjith	Introduction to Machine Learning
		Deep Learning
		Programming Algorithm and data structure for python
7	Mrs.R.GracelinSheeba	Deep learning
		Introduction to Machine learning
		Python for Data Science
8	Mr.E.Sakthivel	Embedded System Design With ARM

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL22CS22S24534602

To
C ANITHA
22 AMBEDKAR ST, KAMARAJAPURAM
MARUTHI TOWER
KANCHIPURAM
TAMIL NADU - 600073
PH. NO :9444441582

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

C ANITHA

for successfully completing the course

Deep Learning

with a consolidated score of **64** %

Online Assignments	17.72/25	Proctored Exam	46.5/75

Total number of candidates certified in this course: **691**

Prof. Jayanta Mukhopadhyay
Dean Outreach
IIT Kharagpur

Jan-Apr 2022
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No:NPTEL22CS22S24534602 To validate and check scores: https://nptel.ac.in/noc

Ph.D. awarded during the assessment period while working in the Institute

S.No	Name of the Faculty Member	Reg. Number	Title	University	Status	Assessment Year
1	Dr.V.Nanammal	2015792107	Authenticating Biomedical Images Using Water Marking Technique In Machine Learning	Sathyabama Institute of Science and Technology	Completed	2022-23
2	Dr.G.Balachandran	2015792108	Moving scene based video segmentation Using classification by augmented deep Learning technique	Sathyabama Institute of Science and Technology	Completed	2022-23

Faculty members pursuing Ph.D.

S.No.	Name of the Faculty Member	Research Area	University	Name of the Supervisor	Date of registration	Status
1	Mr.G.C.Jagan	Wireless Sensor Networks	Sathyabama Institute of Science and Technology	Dr.P.Jesu Jayarin	Jul-15	Thesis Submitted
2	Mr.T.R.Chenthil	Wireless Sensor Networks	Sathyabama Institute of Science and Technology	Dr.P.Jesu Jayarin	Jul-15	Thesis Submitted
3	Mrs.C. Anitha	Cognitive Radio	Anna University	Dr. Job in Christ	Jul-22	Course work completed
4	Mrs.R Gracelin Sheeba	Vanet	Anna University	Dr. N. Edna Elizabeth	Jul-21	Course work completed
5	Mr.S Ranjith	Wireless Communication	Anna University	Dr P Jesu Jayarin	Jan-18	Synopsis Completed
6	Mr.E.Sakthivel	Wireless Sensor Networks	Anna University	Dr.J.Jayamuthunagai	Jul-23	Course Work Going On
7	Mr.B.Arunvijayakumar	Optical communication Networks	Anna University	Dr.A.Swarnalatha	Jul-11	Confirmation completed

5.7.2 Sponsored Research (5) Institute Marks : 0.00

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount
AUTOMATIC SEAT BELT	1 Year	Non Government	75000.00
			Total Amount(X): 75000.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount
SEARCHING AND SEPERATION OF WASTE USING ROBOT	1 Yeaar	Non Government	80000.00
			Total Amount(Y): 80000.00

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount
SPECTRUM SENSING TECHNIQUE IN CRN	1 Year	Non Government	75000.00
			Total Amount(Z): 75000.00

Cumulative Amount(X + Y + Z) = 230000.00

5.7.3 Development Activities (10) Institute Marks : 10.00

(a) Product Development

S.No	Resources Used	Details	Duration
1.	R & D LAB	Auto Bell	6 Months
2.	R & D LAB	Department News Feeder	6 Months
3.	R & D LAB	Basket ball scroll board	6 Months
4.	R & D LAB	Auto capturing robot	1 Year
5.	R & D LAB	Scrolling Display	6 Months
6	R & D LAB	Electric Car	3 Months
7	R & D LAB	Grass Cutter	3 Months

Auto Capturing Project

Electric Car

Patent Details for AY 2021-22

S.No	Name of the Faculty	Title of the Patent	Application No	Published Date
1	Dr.J.Jebastine	Empirical Analysis of Hybrid Machine Learning Based Earlier Stage COVID Disease Prediction using Lung CT Images	202141030321	16.07.2021
2	Mrs.C.Anitha	A Novel Material Fabrication to Detect Breast Cancer Using Deep Novel Classification Mechanism	202141022983	11.06.2021
3	Mr.G.Balachandran	Data Traffic Free Secured Multi cast Interfacing in Smart IOT Devices Favoured Using Wide band Li -Fi Technology	202141008665	12.03.2021
4	Mr.G.Balachandran	IOT Cloud Based Stroke Disease Classification and Prediction Using Machine Learning Algorithms	202211002463	04.02.2022
5	Mr.G.Balachandran	Artificial Intelligence and Machine Learning Based Intelligent System to Improve the Quality of Video	202241001299	06.04.2022
6	Mrs.V.Nanammal	VLSI based Wireless Communication System Using Turbo Decoder For Effective Information Transfer	202241006140	11.02.2022
7	Mr.S.Ranjith	A Novel Material Fabrication to Detect Breast Cancer Using Deep Novel Classification Mechanism	202141022983	11.06.2021
8	Mr.S.Ranjith	Data Traffic Free Secured Multi cast Interfacing in Smart IOT Devices Favoured Using Wide band Li -Fi Technology	202141008665	12.03.2021

9	Mr.S.Ranjith	IOT Cloud Based Stroke Disease Classification and Prediction Using Machine Learning Algorithms	202211002463	04.02.2022
10	Mr.S.Ranjith	Recommendations and Organization System of Breast Cancer Detection Using Machine Learning Technique	202241001296	04.02.2022
11	Mr.E.Sakthivel	Empirical Analysis of Hybrid Machine Learning Based Earlier Stage COVID Disease Prediction using Lung CT Images	202141030321	16.07.2021
12	Dr.Anita Titus	Empirical Analysis of Hybrid Machine Learning Based Earlier Stage COVID Disease Prediction using Lung CT Images	202141030321	16.07.2021
13	Dr.Anita Titus	A Novel Material Fabrication to Detect Breast Cancer Using Deep Novel Classification Mechanism	202141022983	11.06.2021

Patent Details for AY 2022-23

Sl No	Faculty Name	Patent Title	Application Number	Published Date
1	Dr.J.Jebastine	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
2.	Mrs.C.Anitha	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
3	Mr.G.C.Jagan	Automatic Oil Filling Device For Temple Diyas	202341026490 A	05.05.2023
4	Mr.T.R.Chenthil	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
5	Mr.T.R.Chenthil	Water Management & Leakage Detection Problems Solutions Using IOT	202241070565 A	30.12.2022
6	Mr.T.R.Chenthil	Detect & Prevent Malware in Cyber Security using AI and DL	202241075333 A	30.12.2022
7.	Dr.G.Balachandran	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
8.	Dr.G.Balachandran	IOT Enabled Devices For Monitoring Oxygen And Blood Pressure In Human Body	364971-001	05.01.2023
9.	Mr.S.Ranjith	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
10	Mr.S.Ranjith	IOT Enabled Devices For Monitoring Oxygen And Blood Pressure In Human Body	364971-001	05.01.2023
11.	Mr.E.Sakthivel	'H Shaped Microstrip Patch Antenna For Circular Polarization	379358-001	16-05-2023
12.	Mr.E.Sakthivel	Automatic Oil Filling Device For Temple Diyas	202341026490 A	05.05.2023

(b) Research Laboratory

List of Software/Hardware in Research Lab

S.No	Name of the Lab	Facility available in lab for project
1.	Research & Development Laboratory	Computers, Electronic Components
2.	Project Laboratory	Computers, Electronic Components, Keil Micro Vision, Proteus, LPC2148 ARM Processor, Raspberry Pi, Arduino
3	VLSI/DSP Laboratory	PCs with Xilinx, Tanner EDA Tool, Matlab
4	Embedded Systems Laboratory	KeilMicroVision3 free version Software tool and Microcontroller 8051, MSP430 kits
5	Communication Systems Laboratory	MATLAB Software (licensedversion) and DSP kits – 15 users

(c) Instructional materials

To foster a culture of learning and encourage the pursuit of knowledge, the administration has placed a strong emphasis on the quality of instructional materials provided to the students.

- Question bank, course outcomes, university questions, study materials, laboratory instruction manuals, and other essential study materials are meticulously crafted or updated, as required, by the faculty and technical staff at the commencement of each semester. These resources are subsequently made readily accessible to the students.
- Additionally, a comprehensive collection of textbooks and reference materials, aligned with the prescribed syllabus, as well as GATE materials, can be found in the Departmental Library, and students have easy access to these valuable resources.
- Furthermore, the Central Library provides students with the opportunity to further bolster their understanding through video courses and e-learning materials, thereby enhancing the overall suite of instructional resources available.

List of Instructional Materials

S.No	Name of the Faculty	Instructional Material
1	Ms.Santhiya	Engineering Practices Laboratory / Circuits and Devices Laboratory
2	Dr.Anita Titus	Digital Electronics lab
3	Mr.T.R.Chenthil	Analog and Digital circuits laboratory
4	Dr.V.Nanammal	Circuits and Simulation Integrated laboratory
5	Mr.G.C.Jagan	Linear Integrated circuits laboratory
6	Dr.J.Jebastine	Digital Signal Processing laboratory
7	Mrs.C.Anitha	Communication Systems laboratory
8	Ms.A.Santhiya	Microprocessor and Microcontroller laboratory
9	Mr.Arun Vijaya Kumar	Computer Networks laboratory
10	Dr.G.Balachandran	VLSI Design laboratory
11	Mr.E.Sakthivel	Embedded laboratory
12	Mrs.R.Gracelin Sheeba	Optical and Microwave laboratory

(d) Workingmodels/charts/monogramsetc.

Functional models are present in all laboratories, facilitating a practical comprehension of fundamental engineering principles. Each lab is equipped with instructional charts, equipment part diagrams, and conversion factor charts, which aid in elucidating the operational principles of the equipment.

Furthermore, to showcase our students ingenuity and expertise, a summary of sample working models developed by them is displayed at various competitions, both within and outside the college campus. This serves to highlight their accomplishments and contributions in the field of engineering.

List of Working Models

S.No	Materials	Details
1.	Laboratory Charts	All Laboratory
2.	Working Models – Project Lab	Models available for Embedded, VLSI & Communications systems Lab
3.	Aurdino KIT	Evaluation and Programmable Board

List of Charts

Various charts with visual presentation to improve the learning skills of the students are prepared and displayed in laboratory

5.7.4 Consultancy(from Industry) (5) Institute Marks : 2.00

2021-22 (CAYm1)

Project Title	Duration	Funding Agency	Amount
colorimetry	4 Months	Non Government	65000.00
Painting Robot	3 Months	Non Government	80000.00
			Total Amount(X): 145000.00

2020-21 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Health Monitoring System	3 Months	Non Government	60000.00
Image Transmission through Medium	4 Months	Non Government	45000.00
			Total Amount(Y): 105000.00

2019-20 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Automatic hand sanitizer	3 Months	Non Government	85000.00
GAS LEAKAGE INSPECTION ROVER	3 Months	Non Government	70000.00
			Total Amount(Z): 155000.00

Cumulative Amount(X + Y + Z) = 405000.00

5.8 Faculty Performance Appraisal and Development System (FPADS) (30) Total Marks 30.00

Institute Marks : 30.00

Faculty Performance Appraisal and Development System

The Faculty Performance Appraisal and Development System (FPADS) is a crucial framework designed for assessing, enhancing, and monitoring the performance of faculty members in higher educational institutions. Figure 5.8.1 shows the processing of Faculty Appraisal System This system recognizes the multifaceted roles that faculty members play and aims to optimize their contribution to institutional success. Heres a breakdown of its key components and objectives:

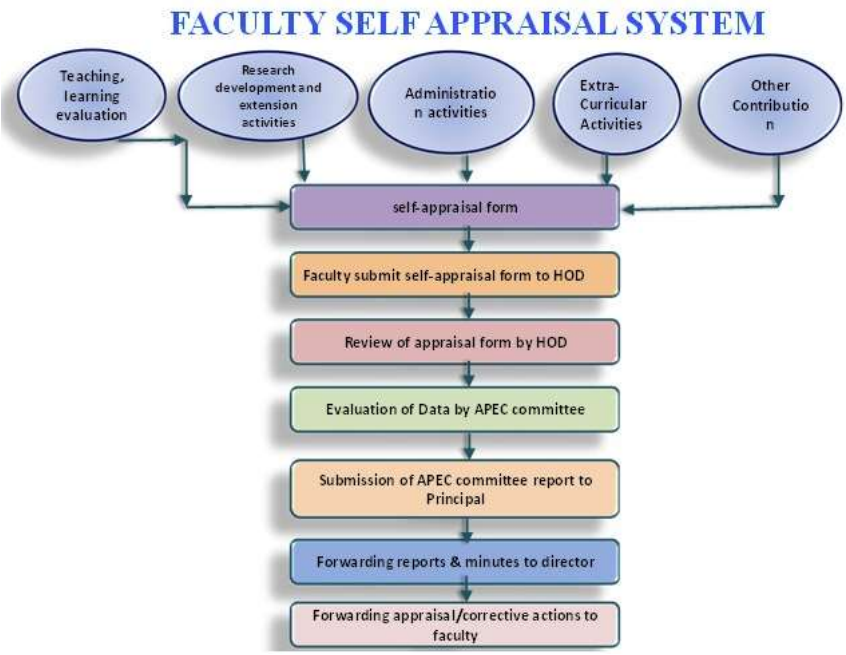


Figure 5.8.1 Processing of Faculty Appraisal System

1. **Diverse Faculty Roles:** Faculty members in higher education institutions are expected to perform a wide range of responsibilities, including teaching, research, staying current with technological advancements, curriculum development, community engagement, and administrative duties.
2. **Self-Renewal:** Faculty are encouraged to engage in self-renewal, which includes innovations in teaching methods and conducting research to stay current and provide high-quality education to students.
3. **Professional Development:** Faculty members are expected to continuously develop their expertise to effectively implement curricula and deliver quality education.
4. **Industry and Community Engagement:** Faculty are required to provide services to the industry and community, contributing to solving real-world problems and establishing collaborative relationships outside of the academic setting.
5. **Administrative Responsibilities:** Faculty may also have administrative responsibilities, which require effective time management and cooperation with other faculty members and department heads.
6. **Performance Appraisal System:** The FPADS aims to establish a well-defined performance appraisal system for faculty, which is applied consistently for all assessment years.
7. **Implementation and Effectiveness:** It evaluates the implementation and effectiveness of the appraisal system to ensure that it serves its intended purpose.
8. **Performance Analysis:** The system periodically assesses individual faculty members based on various criteria, which may include:
   - **Quality of Lectures:** The effectiveness of their teaching methods, clarity of content delivery, and student engagement.
   - **Mode of Teaching:** The approach and techniques employed for instruction.
   - **Student Interaction:** The degree of individual attention given to students and the support provided to enhance their academic achievements.
   - **Research and Innovation:** Assessing the facultys contributions to research, publications, and innovations in their field.
   - **Community and Industry Contributions:** Measuring the impact of their work in real-world contexts, such as industry collaborations and community outreach.
   - **Administrative Competence:** Evaluating their performance in administrative roles and their ability to work collaboratively with colleagues and department heads.
9. **Review, Appraisal, and Monitoring:** The system ensures that faculty members performance is consistently reviewed, appraised, and monitored in all of these academic activities to identify areas of strength and improvement.

Faculty Secured 100% Results

Sl No	Faculty Name	Subject Name	Class	Result
1	Mrs.C.Anitha	MG8591-Principles Of Management	IV EEE	100%
2	Mr.T.R.Chenthil	GE8076-Professional Ethics in Engineering	IV IT-A	100%
3	Mr.B.ArunVijayakumar	GE8076-Professional Ethics in Engineering	IV IT-B	100%
4	Mr.E.Sakthivel	MG8591-Principles Of Management	III ECE-A	100%
5.	Mrs.R.GracelinSheeba	EC8094-Satellite Communication	IV ECE-A	100 %
6.	Mrs.C.Anitha	EC3552-Digital System Design	III ECE-B	100%

7.	Dr.V.Nanammal	EC8751 Optical Communication	IV ECE-B	100%

Faculty Performance Appraisal List

Sl No	Faculty Name	No Of 100 %Results	No Of Publication	Number of Patents	No of NPTEL Courses
1.	Dr.J.Jebastine	-	4	1	-
2.	Mrs.C.Anitha	2	1	1	1
3.	Mr.G.C.Jagan	-	3	1	2
4.	Mr.B.Arun Vijayakumar	1	1	-	1
5.	Mr.T.R.Chenthil	1	2	3	-
6.	Dr.G.Balachandran	-	7	2	2
7.	Dr.V.Nanammal	1	4	-	2
8.	Mr.S.Ranjith	-	8	2	3
9.	Mrs.R.Gracelin Sheeba	1	2	-	3
10.	Mr.E.Sakthivel	1	3	2	1
11.	Ms.A.Santhiya	-	1	-	-

Career improvement:

- Organizing and participating in Faculty development training programs and other training programs.
- Organizing and participating in various National / International level workshops.
- Organizing and participating in Seminars / Conferences

List of FDP, Conference & Workshop Training Program Organized

Academic Year	FDP Organized	Workshop Organized	Conference Organized
CAY(2022-23)	**1**	2	1
CAYm1(2021-22)	**1**	1	1
CAYm2(2020-21)	**1**	1	1

To measure the contributions of faculty member and to motivate the under performers, the college adopts well-tuned _Faculty performance Appraisal and Development System'.

Process of performance appraisal system:

Each semester, a Questionnaire feedback is being given to every student which contains a list of parameters to evaluate the teaching skills and contribution of the faculty member in the subject. The following evaluation process is being followed in every academic year.

- Head of the Department
- Class monitoring committee
- A team consists of Senior faculty members from other departments
- Academic council members

Corrective Actions:

- The consolidated feedback reports are analyzed and forwarded to the respective department heads for the follow up and corrective actions.
- Further, the Academic council makes periodical visits and ensures the implementation of the corrective measures taken by the faculty members to overcome the shortcomings in their performance.
- Apart from this, each faculty member is evaluated by their peers in the department with whom they have regular day to day working interactions. This determines the ability of faculty to work in a team and create congenial atmosphere in the department.

Overall Performance Evaluation:

In addition, an overall performance evaluation for each faculty is carried out at end of every academic year by critically analyzing the following parameters:

- Results (% pass in Internal assessment examinations in Odd and Even semesters)
- Results (% pass in University examinations in Odd and Even semesters)
- Special attention given to improve results
- Comprehensive Appraisal (HOD, CMC and Academic counsel)
- Peer appraisal report
- Successful completion of assigned work (error and time)
- Participation in Student activities/Value added courses/ MOU activities
- Paper publications in indexed journals with impact factors
- Funded project

- CTS/ grants/consultancy – applied/received
- FDP / workshops – organized / participated
- Quality of Projects guided and awards received for the projects
- Awards and Patents – applied/ received
- Contributions at Department level
- Contributions at College level

Faculty Appraisal Implementation & Effectiveness:

Once the appraisal process is completed, faculties who meet the criteria are eligible for a salary increment. However, if a faculty member doesnt meet the required standards for the increment, they are advised to participate in pedagogical training programs to enhance their teaching skills. After the training, their performance is re-assessed in the following academic year. This approach ensures that faculties have an opportunity for professional growth and improvement if needed.

Faculty Rewarded based on Faculty Appraisal system on Teachers Day Celebration

ECE Faculty Rewarded based on Faculty Appraisal systems

JEPPIAAR ENGINEERING COLLEGE

ACADEMIC APPRAISAL

ACADEMIC YEAR 2022 – 2023 (ODD SEM & EVEN SEM)

Name of the Faculty	G.Balachandran	Emp.ID:	10253
Date of Joining	25.6.2012	Exp.	11YEARS
Designation	ASSISTANT PROFESSOR	Dept.	ECE

SUBJECTS HANDLED (THEORY ONLY)

Sl.No.	Year	Sem	Sub Code	Sub Name	External Assessment Anna University (Pass %)
1	IV	VII	EC8791	Embedded System Design	84.44
2	III	V	ORO551	Renewable Energy Sources	94.44
3	II	III	EC3452	Digital principles and Design	94.64
4	III	VI	EC8095	VLSI Design	Awaiting for Result
5	II	IV	CS3591	Computer Network	Awaiting for Result

SUBJECTS HANDLED (Theory only)

Sl.No.	Year	Sem.	Sub Code	Sub Name	IAT-I (Pass %)	IAT-II (Pass %)	Model (Pass %)
1.	IV	VII	EC8791	Embedded System Design	72.22	94.49	61.76
2.	III	V	ORO551	Renewable Energy Sources			
3.	II	III	EC3452	Digital principles and Design			
4.	III	VI	EC8095	VLSI Design			
5.	II	IV	CS3591	Computer Network			

NPTEL COURSES COMPLETED

Sl.No.	COURSE Name	Year of completion	GRADE
1.	Introduction to Machine Learning	SEPT -2022	COMPLETED
2.	Deep Learning	APRIL- 2023	COMPLETED

Publications (Attach manuscript)

Sl.No.	Manuscript name, Journal, Vol, Issue, year	AU Annex / WoS / Scopus
1.	Moving scene-based video segmentation using fast convolutional neural network integration of VGG-16 net deep learning architecture International Journal of Modeling, Simulation, and Scientific Computing2023, 14(1), 2341014	Scopus Index
2.	An Approach of Image Feature Extraction Using Obtuse-Angled Triangle Segmentation Using Mathematical Analysis for Enhanced Video Stabilization(ICONSTEM)	Scopus
3.	Labeled Image Segmentation and Retrieval for Fast Images Processing Using K-NN Algorithm(ICONSTEM)	Scopus
4.	Remodeling Arrangement of Embedded Benzene Structure Using OHAP & QHAP Algorithm to Design Mesh for Medical Application(ICONSTEM)	Scopus
5.	A Review of Video Stabilization Algorithms, Proceedings - International Conference on Augmented Intelligence and Sustainable Systems, ICAISS 2022,	Scopus
6.	Several Adaptable Robot engagements planning with blending Conflict and plan resolution Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022	Scopus
7.	An efficient object segmentation system based on U-Net for real-time satellite image Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022	Scopus

Projects Obtained / Applied (Keep Proof)

Sl.No.	Proposal Title, Funding agency details, Amount, Year
	Nil

Patents Obtained / Applied (Keep Proof)

Sl.No.	Patent Title, Year (Status)
1	"H" shaped Microstrip patch antenna for circular polarization-379358-001 ,filling Date-15/02/2023
2	IOT Enabled Devices For Monitoring Oxygen And Blood Pressure In Human Body-Patent Grant On 05/01/2023

Counselor Assignment Status
Year / Section / Register No.'s (From – To): IV Girls and Two Boys-28 students

Sl.No.	Particulars	Remarks (Yes / No) If No, explain
1	Fee collection status	Completed, Yes
2	Academic wise counseling done individually	Yes

Faculty Assignments in Department

Sl.No.	Job allocated	Status (Submitted to HoD/ Not submitted)	HoD Verification and signature
1	Log Books (Odd sem) for theory and lab	Submitted	
2	Log Books (Even sem) for theory and lab	Submitted	
3	Course Files (Odd sem) for theory and lab	Submitted	
4	Course Files (Even sem) for theory and lab	Submitted	
5	NAAC / IQAC Criteria files		
	Assessment Result Analysis	Submitted	

FDP's Attended (submit proof)

Sl.No.	FDP Name	Period	Internal / External
1.	Bio Signal Processing Using AI(ATAL)	02/02/2023-07/02/2023 to 17/2/23-21/02/2023	Agni College of Tech
2.	Innovation in Mentoring pedagogy and incorporation of ICT techniques in education	30/01/2023-04/02/2023	Paavai Engg College
3.	Research Advancements in Intelligent Computing Technologies	19.12.2022 to 23.12.2022	Sri Krishna College of Engineering & Technology

FDP's Organized (submit proof)

Sl.No.	FDP Name	Period	Internal / External
	-	-	-

Conferences Attended (submit proof)

Sl.No.	Conference Name	Period	Internal / External
1.	An Approach of Image Feature Extraction Using Obtuse-Angled Triangle Segmentation Using Mathematical Analysis for Enhanced Video Stabilization(ICONSTEM)	April 2023	Internal
2.	Labeled Image Segmentation and Retrieval for Fast Images Processing Using K-NN Algorithm(ICONSTEM)	April 2023	Internal
3.	Remodeling Arrangement of Embedded Benzene Structure Using OBAP & QBAP Algorithm to Design Mesh for Medical Application(ICONSTEM)	April 2023	Internal
4.	A Review of Video Stabilization Algorithms, Proceedings - International Conference on Augmented Intelligence and Sustainable Systems, ICAISS 2022	Sep- 2022	External
5.	Several Adaptable Robot engagements planning with blending Conflict and plan resolution Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022	July 2022	External
6.	An efficient object segmentation system based on U-Net for real-time satellite image Proceedings of the 2022 International Conference on Innovative Computing, Intelligent Communication and Smart Electrical Systems, ICSES 2022	July 2022	External

Conferences Organized (submit proof)

Sl.No.	FDP Name	Period	Internal / External
	-	-	-

Any other contributions made by you to the Dept / College / University / Management (Feel free to mention)

Sl.No.	Particulars	Period (specify)
1.	Ph.D Completed	June 2023
2.	Two Books Published	
	1.Hands On Artificial Intelligence For Beginners	SEP-2022
	2.Digital Principles and Computer Architecture	DEC-2022
3	IEEE Sponsored International Conference	April 2023
4	Organized Project Panoply	March 2023
5	Technical Symposium - Electro blitz 2k23	March 2023
6	Refreshment Events for Hostel Students	Feb 2023
7	Youth Red Cross Events	-
	1.Blood Donation camp, 2.Eye camp	
8	Admission Team	-

I affirm that all the afore said information is true.

G. Babu
20/6/23

Signature with Date of the Faculty

Verified

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE

Signature & Seal with Date of the HoD

Office Use	
Recommended for Promotion / Increment	Pay Band (Rs.)
Not Recommended	

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)

Total Marks 10.00

Institute Marks : 10.00

5.9Visiting/Adjunct/Emeritus Faculty etc.(10)

Table 5.9.1 Details of Visiting Faculty and Mode of Interaction

S.No	Name of the Faculty	Designation	Course Name	Company Name	Mode of Interaction	Interaction Hours Per Year
1	Mr.C.Shessanth	General Manager	Robotics	Prg Robotics	Value Added course	60

Figure 5.9.1 Value Added Course

6 FACILITIES AND TECHNICAL SUPPORT (80)

Total Marks 80.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)

Total Marks 30.00

Institute Marks : 30.00

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	R-2021 1.GE3271-Engineering Practices Laboratory(sem II) (27 hours / week) 2. EC3271-Circuits Analysis Laboratory(II sem) (8 hours / week) R-2017 3.GE8261-Engineering practices lab (Sem-II) 4.EC8261 Circuits and Devices Laboratory(II Sem) (8 hours / week)	4	1. Dual Regulated Power Supply 2. Soldering Iron 3. Function Generator 4.CRO	35 Hours/ Week	Mrs.Anbuselvi	Lab Instructor	Diploma in ECE
2	R-2021 1. EC3361-Electronic Devices and Circuits Laboratory (sem-III) (16 hours / week) R-2017 2. EC8361- Analog and Digital Circuits Laboratory (Sem-III)	4	1.Digital Trainer Kit 2.RPS 3.Function Generator 4. Cathode Ray Oscilloscope 5.Xilinx (HDL) 6.Digital IC Tester Trainer Kit 7.Digital Multimeter 8.Fixed Power Supply 9.Personal Computers 10. Xilinx	16 Hours/ Week	Mrs.Anbuselvi	Lab Instructor	Diploma in ECE
3	R-2021 1.EC3462 Linear Integrated Circuits Laboratory (Sem-IV) (16 hours / week) R-2017 2.EC8461- Circuits Design and Simulation Laboratory (Sem - IV) (16 hours / week) 3.EC8462 Linear Integrated Circuits Laboratory (Sem-IV) (16 hours / week)	4	1. Function Generator 2. Cathode Ray Oscilloscope 3. Digital Storage Oscilloscope 4. Dual Power supply	16 Hours/ Week	Ms.M.Shamini	Lab Instructor	B.E(ECE)
4	R-2021 1. EC3461-Communication Systems Laboratory (sem -IV) (16 hours / week) R-2017 2. EC8561 Communication Systems Laboratory (Sem-V) 3.EC8461- Circuits Design and Simulation Laboratory (Sem - IV)	4	1. Cathode Ray Oscilloscope 2. Function Generator 3. Regulated Power supply 4. Personal Computer 5. Digital Storage Oscilloscope 6. AM Modulation & Demodulation Kit 7. FM Modulation & Demodulation Kit 8. Pulse Code Modulation & Demodulation Kit 9. Delta Modulation & Demodulation Kit 10. Analog Sampling & Reconstruction Kit 11. Line Coding Kit 12. Digital Modulation Techniques Kit	16 hours / week	Ms.P.Vallinayagi	Lab Instructor	B.E(ECE)
5	R-2017 1.EC8563 Communication Networks Laboratory (Sem-V) (18 hours / week) 2.EC8562-Digital Signal Processing Laboratory (Sem-V) (18 hours / week)	1	1. Cathode Ray Oscilloscope 2.Function Generator 3.Personal Computers 4.Digital Signal Processing Trainer kit 5. Floating Point DSP processor Kit 6.MATLAB & Simulink with Tool Boxes (15 users)	36 hours / week	Mr.S.Magesh	Lab Instructor	B.E(ECE)
6	R-2017 1.EC8681 Microprocessors and Microcontrollers Laboratory (Sem-VI) (16 hours / week)	4	1.Microprocessor 8086 Kit 2.Microcontroller 8051 Kit (micro 51 LCD) 3.DAC 2 Channel Interface kit 4.ADC Interface kit 5.Keyboard & Display kit 6.8251,8253,8255,8259 Interface Kit & 8254 Timer-Counter 7.Stepper Motor Kit with Motor 8.DC Motor Interface Kit 9.Traffic Light Controller Kit 10.Dual Trace Oscilloscope 11.Personal Computers	16 hours / week	Ms.P.Vallinayagi	Lab Instructor	B.E(ECE)

7	R-2021 1. EC3561- VLSI Laboratory (Sem-V) (16 hours / week) R-2017 2,EC8661-VLSI Design Laboratory (Sem-VI) 3. EC8711 Embedded Laboratory (Sem-VII) (15 hours / week)	1	1.Xilinx Software 2.Tanner EDA Tool 3.FPGA Kits and Interface kits 4.Personal Computers 5.ARM-7 LPC2148 Kit 6.ARM Cortex M4 Kit 7.Zigbee Wireless module 8.FPGA Daughter Card 9.Stepper Motor 10.ARM Development Board (LPC2148) 11.ARM Development Board -LPC 2148	31 hours / week	Mr.S.Magesh	Lab Instructor	B.E(ECE)
8	R-2017 1.EC8761 Advanced Communication Laboratory (Sem-VII) (16 hours / week) 2.EC8811 Project Work (Sem VIII) (16 hours / week	4	CRO 2.Function Generator 3 .X-BAND Microwave Bench 4 .Fiber Optic Commun cation trainer kit	16 hours / week	Ms.M.Shamini	Lab Instructor	B.E(ECE)

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25) Total Marks 25.00

Institute Marks : 25.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	VLSI Design Laboratory-Tanner EDA,Xilinx	Tanner Designer is a management application for analog verification that keeps track of every simulation for a project. The solution enables the team to immediately see which blocks pass or fail standards and to track verification progress by displaying simulation results in a practical dashboard	• Students shall have enhanced learning in the field of VLSI chip design • The facility provides the flexibility to replace the chip	• EC 8611 – Academic project work and mini projects can be carried by utilizing the facility • Workshops and Value added Courses can be conducted using the facility	• Students now know how to program an efficient application with fewer instructions. • Ideas about designing spartan and virtex which are used in a number of products.	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 &PSO1, PSO2
2	Embedded System Laboratory -ARM 7 LPC2148 Development Kit	The ARM Trainer Kit is designed to speed up the process of creating and debugging a variety of designs, including those involving fast 32-bit microcontrollers. This platform makes it simple for users to develop on it or to utilize it as a resource when developing applications.	• ARM is one of the best alternatives obtainable for embedded system designers. • System-on-Chip products can be easily developed by using ARM boards	• EC 8811 – Academic project work and mini projects can be carried by utilizing the facility • Workshops and Value added Courses can be conducted using the facility	• Students have gained exposure in using reduced instruction set to program an optimized application • Ideas about designing ARM cores which are used in a number of products, particularly PDAs and smartphone can be gathered	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 &PSO1, PSO2
3	Digital Signal Processing Laboratory - Arduino UNO	Arduino Uno is a microcontroller board based on the ATmega. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz quartz crystal, a USB connection	• Students' knowledge in designing microcontroller-based systems will be improved. • The facility provides the flexibility to replace the chip	• To demonstrate the various facilities to communicate with computer, another Arduino UNO board, or other microcontrollers • Using the facility allows for the completion of mini projects and academic projects - EC8811 • Utilized for Workshops and Value added courses	• The Integrated Development Environment (IDE) for the Arduino software aided students in learning programming. • Students create cutting-edge systems for immediate use in robotics, IOT, and other fields.	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 & PSO1, PSO2
4	Digital Signal Processing Laboratory-Arduino Mega	The Arduino MEGA is a microcontroller board based on the ATmega (series). The MEGA ADK is based on the Mega 2560 converter	• Students will gain better knowledge about creating systems with microcontrollers. • The gadget features a built-in oscillator, regulator, and other components that make it ready to use.	• Flexible coding due to its automatic unit conversion capability • Overcome of side or interface problems easily • EC 8811 – Academic project work and mini projects can be carried by utilizing the facility • Utilized for Workshops and Value added course	• The Arduino Software Integrated Development Environment (IDE) has been used to teach students how to program. • Students have also designed complex systems for real-time applications including robotics, IOT, and other technologies.	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 &PSO1, PSO2
5	Digital Signal Processing Laboratory - Arduino Node MCU	The first device in a revolutionary new range of Wi-Fi products that combines the flexibility of Arduino with the power of Linux is the Arduino Node MCU.	• Students will learn more about designing microcontroller-based systems.	• Description of serial communication four hardware UARTs for TTL (EC 6811) • • The capability can be used for academic project work and small projects.	• Programming with the Arduino Software Integrated Development Environment (IDE)	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 &PSO1, PSO2
6	Digital Signal Processing Laboratory-Raspberry Pi 3	The Raspberry Pi 3 Model B is the device's third version. It replaces the Raspberry Pi Model B+ and Raspberry Pi 2 Model B and is useful for a wide range of applications. This sturdy single board computer is the size of a credit card.	• The facility is affordable because it is available in a less expensive version and has a simple, compact design.	• The facility is designed to teach automation concepts, and its applications can be utilized to construct a variety of software. • •The facility can be used for academic project work and small projects. • •It is also used for workshops and value-added courses (EC 8811).	• Students may also create industrial monitoring systems as projects if they have experience with designing applications for home automation.	Yes. Relevant to PO1, PO2, PO3, PO4, PO5,PO6,PO8, PO9,PO10,PO11,PO12 &PSO1, PSO2

7	Digital Signal Processing Laboratory-Sensors & Accessories	GPS Module, GSM module, Zigbee module, Bluetooth module, Voice module, Motor Driver Module (L293D), Metal sensor, Pressure sensor, Eye blink sensor, Pulse sensor	• Numerous applications require precise measurements and tracking, including those related to biology, geology, materials research in laboratories, medicinal applications, and investigations of electronic or electrical components.	• EC 8811 - The facility can be used for academic project work and small tasks. • • Used to carry out sponsored project work (if any); • • Used to carry out a variety of Value Added Courses and Workshops.	• Students learned how to interpret sensor data so that it is compatible with the receiver. • • Students gained exposure to how data is transferred and received between peripherals utilizing various processors.	Yes. Relevant to PO1, PO2, PO3, PO5, PO6,PO8, PO9, PO10,PO11,PO12 & PSO1, PSO2
8	Digital Signal Processing Laboratory-Sensors & Accessories	IR Sensor, Humidity Sensor, Colour sensor PIR Motion Sensor, Fire Sensor, Ultrasonic Sensor, CO2/Gas/LPG Sensor, Capacitive Proximity sensor, Sound Detection sensor, Accelerometers, Gyros and Vibration Sensor, Level Sensors	• Requirements for converting a measured physical quantity into an electrical signal include requirements for detecting and collecting data such as humidity, fire, sound, gas, vibration, etc. using the sensors.	• EC 8811 – Academic project work and mini projects can be carried by utilizing the facility • Utilized for carrying out funded project work (if any) • Utilized to conduct various Value Added Courses and Workshops	• Students should learn how output voltages change in relation to the intensity of IR light received.With the use of this sensor, students may detect impediments.	Yes. Relevant to PO1, PO2, PO3, PO5, PO6,PO8, PO9, PO10,PO11,PO12 & PSO1, PSO2
9	Communication Systems Laboratory -MSO - Mixed Signal Oscilloscope	The term "MSO" (mixed signal oscilloscope) refers to a hybrid instrument that combines some of the measurement capabilities found in a logic analyzer with those present in a DSO (digital storage oscilloscope).On a single display, an MSO enables users to see several time-aligned digital and analog waveforms.	• Students will be able to learn sophisticated measurement techniques for a variety of functions. • Students will be able to analyze the properties of various time-domain digital and analog waveforms for use in the right applications.	• Demonstration of experiments and theory concepts in Communication Systems Laboratory	• Learning about hybrid data measurement analysis; • Recognizing the nature of various time domain signals in analog and digital formats.	Yes. Relevant to PO1, PO2, PO3, PO5, PO8, PO9, PO10, PO11,PO12 & PSO1,PSO3
10	Communication Systems Laboratory - Tool Boxes	Image processing Tool box	• To provide a set of benchmark methods for image processing • To provide information on workflow applications for algorithm development, visualization, and analysis.	• EC 8811 – Academic project work can be carried by utilizing the facility • Value Added Course on MATLAB • Workshop on MATLAB	• Students learn how to divide a digital image into several segments and gain knowledge of image segmentation. • • Image enhancement - To learn how to enhance the accuracy and informational value of the original data before processing	Yes. Relevant to PO1, PO2, PO3, PO5, PO8, PO9, PO10, PO11,PO12 & PSO1,PSO3
11	Communication Systems Laboratory	RF Tool box	• To build networks of RF components such as filters, transmission lines, amplifiers, and mixers	• Value Added Course on MATLAB • Workshop on MATLAB • To explain the pattern of RF circuits in EC8761 Advanced communication Engineering	• The design, modeling, analysis, and visualization of radio frequency (RF) component networks are skills that students will learn. • • Students will learn how to get an antenna's radiation pattern.	Yes. Relevant to PO1, PO2,PO3, PO4, PO5,PO6,PO8, PO9, PO10,PO11, PO12 & PSO3
12	ABE Semiconductor design	It is designed for AI and Embedded Real-Time Systems lab.	• The facility's outstanding transposable architecture enables us to easily manage it using a variety of processors, including the arudino, raspberry pi and others.	• The facility can be utilized to conduct Value Added Courses & Workshops related to various Embedded Systems applications and AI Application	• Students will gain more knowledge and skills in the fields of Embedded and artificial intelligence. • • Students will also gain practical experience with embedded systems' control systems and IOT.	Yes. Relevant to PO1, PO2, PO3, PO4,PO5,PO8, PO12 & PSO2
13	PRAG Robotics	CoppeliaSim which provides an excellent environment for experimentation, algorithm development and testing. • It is designed for Robotics and AI lab.	• The facility's outstanding robotics architecture and applying AI to incorporate human interactions.	• The facility can be utilized to conduct Value Added Courses & Workshops related to various Robotics applications	• Students will gain more knowledge and skills in the fields of robotics and artificial intelligence. • Students will also gain practical experience with sensors, motors ,computer vision ,natural language processing(NLP).	Yes. Relevant to PO1, PO2, PO3, PO4,PO5,PO8, PO12 & PSO2

6.3 Laboratories: Maintenance and overall ambiance (10) Total Marks 10.00

Institute Marks : 10.00

Digital Signal Processing / VLSI Laboratory/Embedded Laboratory/communication network lab:

1. Safety precautions and Do's and Don'ts are posted in each laboratory.
2. Well experienced Technical Staff are available for maintenance of equipment and software.
3. Laboratory Technicians update their knowledge by attending various training programmes and Workshops.
4. Adequate stock level and consumables are maintained.
5. Equipment are properly cleaned to prevent from rusting.
6. Calibration of equipment is done internally and externally in the laboratories.
7. After completion of every semester, working conditions of the equipment verified, and serviced if required.
8. In case of any issues, the components are repaired immediately with the support of technicians or external service providers.
9. All necessary system updates like Operating System, Microsoft Office and respective Laboratory softwares are updated and maintained.
10. Vision, Mission, PEO's, PSO's, PO's signboard are displayed for better understanding of basic criterion terms.
11. Display boards are provided for the course syllabus needed for the appropriate laboratory course.
12. The details such as list of equipment, list of experiments, Display charts with fundamental concepts are available in the laboratories.
13. Display boards containing each and every instruments details and its construction and working principle are provided for easy understanding of the students.
14. The laboratories are equipped with Air conditioner and fans for good ventilation and ambiance
15. The laboratories are also provided with lights for better luminance .
16. Adequate computer systems and printers are provided to students and faculties for using software's and simulations.
17. LCD projectors are provided in the laboratories for ICT.
18. Proper routings are provided for internet access and separate domain to the students.
19. The laboratories have adequate number of Furniture, Ergonomics Benches/Chairs to accommodate the students with comfort.
20. Provided False Ceiling to create better ambiance of air conditioning laboratories.
21. The laboratories are provided with white board to provide conceptual explanations during laboratory s
22. The laboratory consists of tool rooms for storage and maintenance of recurring and non-recurring items safely.
23. Edibles are strictly prohibited in the computer centre for maintaining sanitation.

Optical and Microwave Laboratory/Communication Systems Laboratory/Microprocessor and Microcontroller Laboratory:

1. Safety precautions and Do's and Don'ts are posted in each laboratory.
2. Well experienced Technical Staff are available for maintenance of equipment and software.
3. Laboratory Technicians update their knowledge by attending various training programmes and Workshops.
4. Adequate stock level and consumables are maintained.
5. Equipment is properly cleaned to prevent from rusting.
6. Calibration of equipment is done internally and externally in the laboratories.
7. After completion of every semester, working conditions of the equipment verified, and serviced if required.
8. In case of any issues, the components are repaired immediately with the support of technicians or external service providers.
9. Vision, Mission, PEO's, PSO's, PO's signboards are displayed for better understanding of basic criterion terms.
10. Display boards are provided for the course syllabus needed for the appropriate laboratory course.
11. The details such as list of equipment, list of experiments, Display charts with fundamental concepts are available in the laboratories.
12. Display boards containing each and every instrument details and its construction and working principle are provided for easy understanding of the students.
13. The laboratories are equipped with Air conditioner and fans for good ventilation and ambiance
14. The laboratories are also provided with lights for better luminance .
15. The laboratories have adequate number of Furniture, Ergonomics Benches/Chairs to accommodate the students with comfort.
16. Enough workbenches, tables are arranged to accommodate the students conveniently.
17. Provided False Ceiling to create better ambiance of air conditioning laboratories.
18. The laboratories are provided with white board to provide conceptual explanations during laboratory sessions.
19. The laboratory consists of tool rooms for storage and maintenance of recurring and non-recurring items safely.
20. Edibles are strictly prohibited in the computer centre for maintaining sanitation.

Circuits and Devices Laboratory/ Electronics circuits Laboratory/Electronic devices and circuits lab:

1. Safety precautions and Do's and Don'ts are posted in each laboratory.
2. Well experienced Technical Staff are available for maintenance of equipment and software.
3. Laboratory Technicians update their knowledge by attending various training programmes and Workshops.
4. Adequate stock level and consumables are maintained.
5. Equipment are properly cleaned to prevent from rusting.
6. Calibration of equipment is done internally and externally in the laboratories.
7. After completion of every semester, working conditions of the equipment verified, and serviced if required.
8. In case of any issues, the components are repaired immediately with the support of technicians or external service providers.
9. Vision, Mission, PEO's, PSO's, PO's signboard are displayed for better understanding of basic criterion terms.
10. Display boards are provided for the course syllabus needed for the appropriate laboratory course.
11. The details such as list of equipment, list of experiments, Display charts with fundamental concepts are available in the laboratories.
12. Display boards containing each and every instruments details and its construction and working principle are provided for easy understanding of the students.
13. The laboratories have adequate number of Furniture, Ergonomics Benches/Chairs to accommodate the students with comfort.
14. Enough workbenches, tables are arranged to accommodate the students conveniently.
15. Good quality window glasses with curtains are provided to avoid direct exposure of sunlight inside the laboratory and to avoid bad climatic conditions.
16. The laboratories are provided with white board to provide conceptual explanations during laboratory sessions.
17. The laboratory consists of tool rooms for storage and maintenance of recurring and non-recurring items safely.
18. Edibles are strictly prohibited in the computer center for maintaining sanitation.

Linear Integrated Circuits Laboratory/Analog and Digital system Design Lab/Digital System Design lab:

1. Safety precautions and Do's and Don'ts are posted in each laboratory.
2. Well experienced Technical Staff are available for maintenance of equipment and software.
3. Laboratory Technicians update their knowledge by attending various training programmes and Workshops.
4. Adequate stock level and consumables are maintained.
5. Equipment are properly cleaned to prevent from rusting.
6. Calibration of equipment is done internally and externally in the laboratories.
7. After completion of every semester, working conditions of the equipment verified, and serviced if required.
8. In case of any issues, the components are repaired immediately with the support of technicians or external service providers.
9. All necessary system updates like Operating System, Microsoft Office and respective Laboratory softwares are updated and maintained.
10. Vision, Mission, PEO's, PSO's, PO's signboard are displayed for better understanding of basic criterion terms.
11. Display boards are provided for the course syllabus needed for the appropriate laboratory course.
12. The details such as list of equipment, list of experiments, Display charts with fundamental concepts are available in the laboratories.
13. Display boards containing each and every instruments details and its construction and working principle are provided for easy understanding of the students.
14. Adequate computer systems and printers are provided to students and faculties for using software and simulations.
15. The laboratories have adequate number of Furniture, stools and Chairs to accommodate the students with comfort.
16. The laboratories are provided with white board to provide conceptual explanations during laboratory sessions.
17. The laboratory consists of tool rooms for storage and maintenance of recurring and non-recurring items safely.
18. Edibles are strictly prohibited in the computer centre for maintaining sanitation.

6.4 Project laboratories (5) Total Marks 5.00

Institute Marks : 5.00

Project laboratory:

The Project Laboratory is equipped with a variety of software and hardware to give instructors and students a useful and creative workspace. The Project Laboratory provides instructors and students with the chance to obtain invaluable hands-on experience in a cutting-edge setting while developing the physical and creative abilities required in the field of Electronics and Communication Engineering. The facilities that are available in Project lab are listed in the table below.

Table 6.4.1 Project Laboratories and utilization:

Sl. No.	Venue	Name of the Facilities	Utilization
1.	VLSI Design Laboratory	i)VLSI -Tanner EDA Tool ii) PCs with Xilinx	UG students utilize for Project Work (VIII semester), Mini projects (2 months) and Faculty members utilize for their Research activities.
2.	Embedded Systems Laboratory	Keil Micro Vision 4 - free version Software tool and Microcontroller 8051, LPC2148 with add on cards kits	UG students utilize for Project Work (VIII semester), Mini projects (2 months) and Faculty members utilize for their Research activities.
3.	Communication Systems Laboratory	MATLAB Software (licensed version) and DSP kits- 15 users	UG students utilize for Project Work (VIII semester), Mini projects (2 months) and Faculty members utilize for their Research activities.
4.	ABE Semiconductor design	Anaconda, Spider , Co-lab (Open Source)	The facility can be utilized to conduct Value Added Courses & Workshops related to various AI applications.
5.	Prag Robotics	CoppeliaSim – open source software	The facility can be utilized to conduct Value Added Courses & Workshops related to various Robotics and AI applications.

Table 6.4.2 Details of Projects done using additional facilities in the Laboratory:

Sl. No.	Name of the Project Laboratory	Academic Year	Number of Projects	Outcome
1.	Communication Systems Laboratory	2021-2022	03	i. The initiatives were presented at national and international conferences after being made into technical papers. ii. They were additionally registered for the AICTE Smart India Hackathon competition.
		2020-2021	02	
		2019-2020	02	
2.	Embedded Systems Laboratory	2021-2022	01	The projects were published as technical papers and presented at regional and global conferences.
		2020-2021	01	
		2019-2020	02	

3.	Digital Signal Processing Laboratory & VLSI Design Laboratory	2021-2022	09	The projects were published as technical papers and presented at regional and global conferences.
		2020-2021	10	
		2019-2020	08	
		2017-2018	-	
		2016-2017	01	

The snaps of Prag Robotics ,ABE Semiconductor design Laboratory and Project Panoply 2023 Inauguration, availability of hardware, projects done using the facilities are shown in the table 6.4.3

Project Panoply -2023

Prag Robotics Value Added Courses

Academic Projects

6.5 Safety measures in laboratories (10)

Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Common Safety Measures are used in all the Labs	□ 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 each laboratory. □ Students are supposed to wear Lab coat. □ Well trained technical supporting staff monitor the labs at all times. □ Damaged equipment's are identified and serviced at the earliest. □ Periodical calibrations of the lab equipment's are regularly done. □ Clean and organized laboratories are maintained. □ The use of cell phones is prohibited. □ Appropriate storage areas are available. □ No one is allowed in the lab while another class is in progress or at other than posted lab hours without permission of the instructor(s) involved. □ Working alone in the lab will not be permitted where exposed voltages exceeding 25 volts are present. □ Remove all loose conductive jewelry and trinkets, including rings, which may come in contact with exposed circuits □ Report any damages to equipment, hazards, and potential hazards to the laboratory instructor
2	Engineering Practices Laboratory / Circuits and Devices Laboratory	Wearing Lab Coat. Avoid wearing loose garments, watches, bangles. Don't touch Power supply components. Always use appropriate stand for holding Soldering Iron. Turn off soldering iron if it is unlikely to be used for more than 10 minutes. Never leave a hot soldering iron unattended. Always make sure all capacitors are discharged before touching.
3	Digital Electronics lab	Wearing Lab Coat Avoid wearing loose garments, watches, bangles. Don't touch on board IC components. Never strip insulation from a wire with your teeth or a knife, always use an appropriate wire stripping tool. Power supply should be given to appropriate pin numbers of IC.
4	Analog and Digital circuits laboratory	Wearing Lab Coat. Avoid wearing loose garments, watches, bangles. Don't touch Power supply and on board IC components. Power supply should be given to appropriate pin numbers of IC.
5	Circuits and Simulation Integrated laboratory	Wearing Lab Coat. Avoid wearing loose garments, watches, bangles. Don't touch Power supply components. Never strip insulation from a wire with your teeth or a knife, always use an appropriate wire stripping tool.
6	Linear Integrated circuits laboratory	Wearing Lab Coat. Avoid wearing loose garments, watches, bangles Don't touch Power supply components. Power supply should be given to appropriate pin numbers of IC
7	Digital Signal Processing laboratory	Switch off the system in case of short circuit. Wear anti-static shoes to work with the computer. Switch off the system when not in use.
8	Communication Systems laboratory	Switch off the system in case of short circuit. Wear anti-static shoes to work with the computer. Switch off the system when not in use
9	Microprocessor and Microcontroller laboratory	Wearing Lab Coat Avoid wearing loose garments, watches, bangles Don't touch on board IC and Motor components.
10	Computer Networks laboratory/VLSI Design laboratory/Embedded laboratory	Wearing Lab Coat Avoid wearing loose garments, watches, bangles Don't touch Power supply components Switch off the system if any short circuit. Wear anti-static shoes to work with the computer.
11	Optical and Microwave Laboratory	Wearing Lab Coat Don't touch Power supply components. Do not touch Klystron oscillators set up when it is switched on. Repelled Knob must be maximum before switching power supply. The Optical Fiber must be handled with care while inserting in to the connectors

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 50.00

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Total Marks 20.00

Institute Marks : 20.00

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

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.7	2.48	Target not Attained.Most of the courses attained target level by direct attainment.
Action 1: More Tutorials are planned and given to the students for solving complex problems Action 2: Assignments were given with application oriented questions for more practice			
PO 2 : Problem Analysis			
PO 2	2.3	2.21	Target not Attained.Problem analysis to complex engineering problems is limited in curriculam.
Action 1: Additional contents will be taught apart from the syllabus to analyse complex problems. Action 2: Concepts in theory course will be correlated with the working principles of related Laboratory courses			
PO 3 : Design/development of Solutions			
PO 3	2.5	2.35	Target not Attained. Weightage for design of practical systems is given less priority in the curriculum.
Action 1: Industrial visits are arranged to expose the students to real world requirements in design for electronic equipment with considerations for cultural and public health. Action 2: Students of final year are guided during their monthly project reviews to consider the potential health and safety and environmental hazards while designing their projects to develop more eco friendly engineering solutions.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.0	2.06	Students find it difficult to interpret data from research work.
Action 1: Students are involved in searching and understanding the past literature and encouraged in making formal seminars, submitting/publishing paper presentations, etc to understand the importance of research methods in arriving at valid solutions. Action 2: Students are encouraged to do mini projects in second and third year to improve their designing skills			
PO 5 : Modern Tool Usage			
PO 5	2.2	2.23	Target Attained
Action 1: Value Added Courses were planned to expose the students to different simulation tools which helps to use them in their project work.			
PO 6 : The Engineer and Society			
PO 6	1.6	1.8	Target Attained. But most of the courses are weakly mapped with PO6, except Environmental science and Engineering ,Professional Ethics
Action 1: To Understand the safety concerns and social aspects, students visited industry to expand their practical knowledge with the effect of improved practices in engineering Action 2: Involving the students in activities pertaining to societal, health and safety issues like tree plantation, blood donations, NSS and club activities.			
PO 7 : Environment and Sustainability			
PO 7	1.9	1.91	In spite of attaining the target, project related to professional ethics and Environmental science and engineering is not included in the curriculum.
Action 1: Awareness programs like tree plantation, waste water treatment are being organized. Action 2: Students are encouraged to indulge in projects in which global and environmental issues are improved with respect of energy and utilization of renewable energy sources.			
PO 8 : Ethics			
PO 8	2.2	2.31	In spite of attaining the target,most of the courses are weakly mapped with PO8
Action 1: Engineering ethics which is an elective in the curriculum is regularly being offered to the final year students Action 2: Motivational talks are arranged to overcome the above observation.			
PO 9 : Individual and Team Work			
PO 9	2.4	2.27	Target not Attained.Students are lagging to perform as an individual due to language proficiency.
Action 1: The intra department and inter college student symposium arranged and organized regularly inculcate in our students the spirit of individual responsibility and also to make the realize the importance of team work. Action 2: Team work is also inculcated through the mini project and project work which they take up as a team and complete.			
PO 10 : Communication			
PO 10	2.3	2.33	Target Attained.Good ratios of students are from rural areas. Thus language proficiency is less
Action 1: A seminar hour is allotted every week, where – in every student is given the arena to tone up their communication skills by presenting on any topic of their own choice.			
PO 11 : Project Management and Finance			

PO 11	1.7	1.86	Only subjects like Principles Of Management, Total Quality Management of curriculum give knowledge of Management principle and applying managerial principles to his/her work including financial implications and to manage the project in multidisciplinary environments
Action 1: During the project reviews the following are being advised to students: Knowledge about project life cycle ie; project budgeting, project initiation,Planning,Execution & Monitoring, project closure aspects. Concepts about Funded project, basics about project budget and financing through private and government sources etc			
PO 12 : Life-long Learning			
PO 12	2.1	2.16	Target Attained.
Action 1: Students are encouraged to register in professional bodies to continue their life long learning. Action 2: Alumni are invited to give talks and interact with the juniors to inculcate this important attribute.			

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

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.			
PSO 1	2.6	2.62	It is observed that Up-gradations of tools and resources are necessary to meet the industry standards and research.
Action 1: Value added course have been conducted to enhance the knowledge in engineering tools. Action 2:. Modern labs are continuously revamped with a focus to adequately demonstrate the use of Modern tools like MATLAB,, NS2 ,Arm Cortex, etc. to specify fulfillment of requirement in engineering applications in new industrial requirement			
PSO 2 : Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.			
PSO 2	2.2	2.37	Target attained.
Action 1:Model-based learning, including real-time applications, was emphasized to enhance students' life-long learning skills			
PSO 3 : Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.			
PSO 3	2.1	2.16	Only few courses like environmental science and professional ethics are strongly mapped to this PSO
Action 1: Students are involved in co curricular activities to know the environmental issues and ethical responsibility.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (10) Total Marks 10.00

Institute Marks : 10.00

Academic Audit Process

The college has an Academic Council headed by the Principal and constituted with senior faculty members. Academic Audit is being carried out periodically to monitor and regulate all the academic activities of the college to ensure adequate quality aimed at continuous improvement. Academic council conducts review meeting twice a year with various committee members from all departments in order to evaluate department performance.

Internal Academic Audit is based on the following process

Planning Process

- Subject Preference from faculty
- Allocating subjects according to individual preferences
- Academic Schedule Preparation in line with Anna University Schedule
- Timetable preparation
- Course file Preparation
    - Course Objectives and Course Outcomes,
    - Bridge Course Plan (if required),
    - Lecture Plan,
    - Tutorial Plan,
    - Assignment Plan,
    - Content Beyond Syllabus Plan,
    - Question bank, Innovative teaching methods plan (if required),
    - Other required material for course handling.

Do Process

· Implementing planned course delivery through the utilization of ICT tools and innovative teaching methodologies

· Transparent Assessment Methods through Direct and Indirect Assessment are used to know the leaning levels of the students.

- Direct Assessments- Internal Assessment Test, Tutorials, Online Quiz, Assignments etc
- Indirect Assessments - Program Exit Survey, Course Exit Survey etc

Check Process

- The conduct of classes is monitored using Class register
- Performance in Internal Assessment test is monitored periodically and analyzed in Class Committee Meeting and Department Review Meeting
- Quality of Question paper and evaluation is reviewed by HODs, Senior Faculty members and External Experts etc.
- The regular Activities are reviewed by the HODs with the support of IQAC

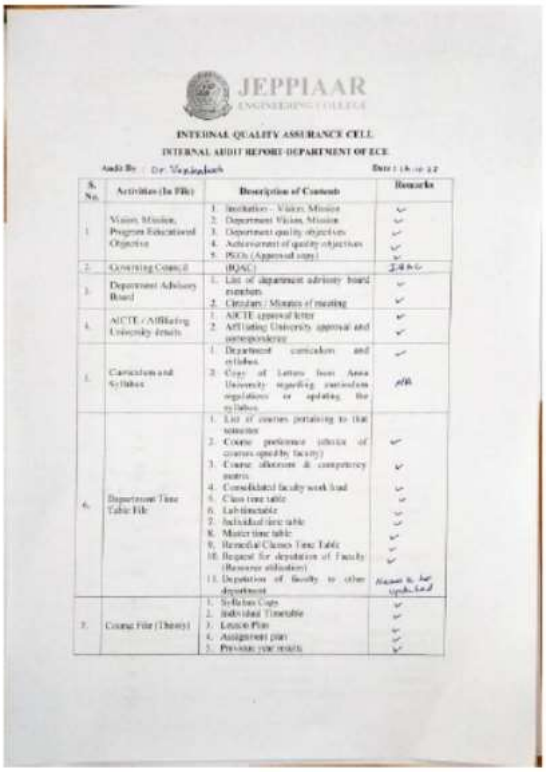
Act Process

- Preventive and corrective actions will be Planned and executed
- The reforms in the system if required will be incorporated.

Implementation of academic audit process

Internal Audit:

- An internal audit will be conducted, preferably after Internal Assessment Test I, with a second audit during the vacation period
- The Management representative will prepare a comprehensive Audit Schedule, distributing it to process owners and internal auditors at least 15 days prior to the commencement of the audit
- The Academic audit Process schedule for each department will span at least half a day or a full day, and auditors from other departments will conduct a comprehensive audit of the entire academic process.
- Each auditor will document their observations and findings in the Audit Notes document, as illustrated in the figure 7.2.1
- During the academic audit, all academic processes listed on the audit checklist will be thoroughly examined and audited
    - Verification of Plan and Execution of activities
    - Previous Audit finding and closing of NCs (if any)
    - Status of Quality objectives
    - Identification of any risk factors related to academics
    - The performance will be compared with previous year and university exam results.
- Each auditor is required to submit a comprehensive internal audit report within one week, including the following key points
    - Good practices followed
    - Observations or Non-Conformance if any
    - Improvement Potential
- The management representative will compile a comprehensive consolidated report.



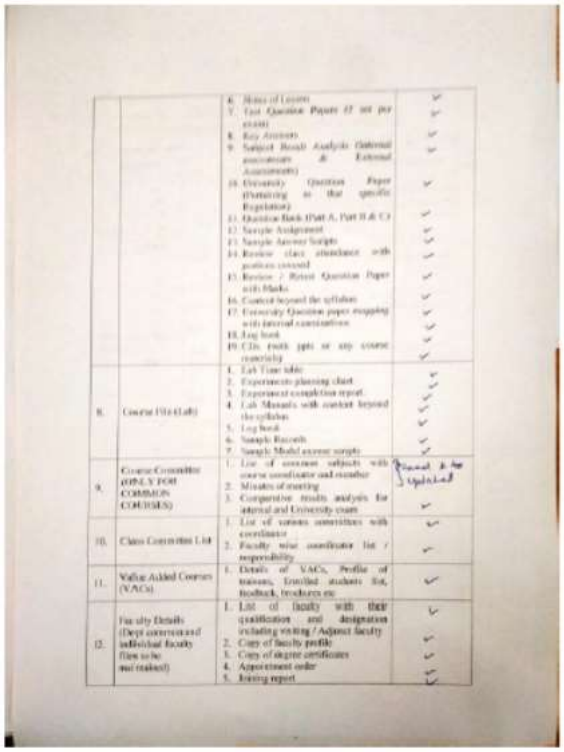
JEPPIAAR
ENGINEERING COLLEGE

INTERNAL QUALITY ASSURANCE CELL

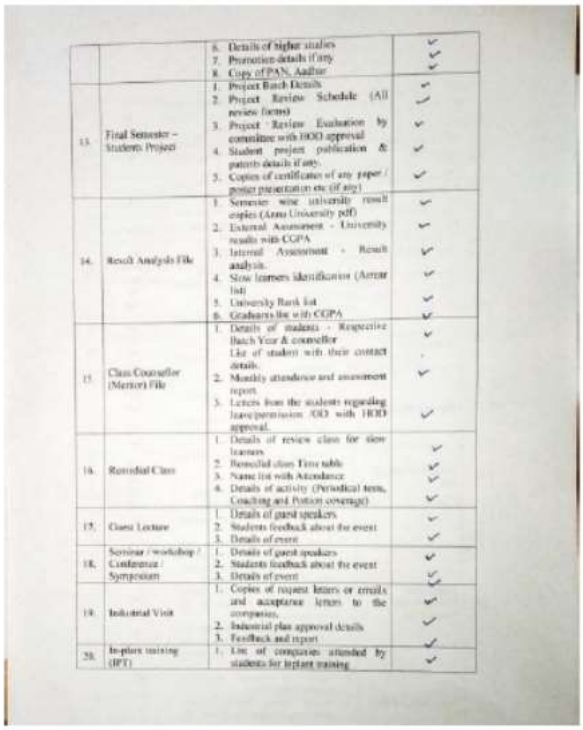
INTERNAL AUDIT REPORT-DEPARTMENT OF ECE

Audit By : Dr. Vijayakarthi Date : 18.10.22

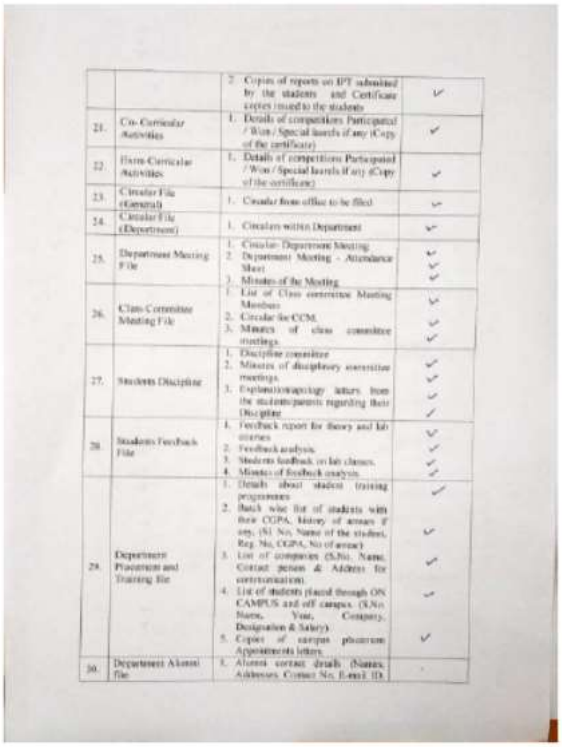
S. No.	Activities (In File)	Description of Contents	Remarks
1.	Vision, Mission, Program Educational Objective	1. Institution - Vision, Mission 2. Department Vision, Mission 3. Department quality objectives 4. Achievement of quality objectives 5. PEOs (Approved copy)	✓ ✓ ✓ ✓ ✓
2.	Governing Council	(BOAC)	24.6.22
3.	Department Advisory Board	1. List of department advisory board members 2. Circulars / Minutes of meeting	✓ ✓
4.	AICTE / Affiliating University details	1. AICTE approval letter 2. Affiliating University approval and correspondence	✓ ✓
5.	Curriculum and Syllabus	1. Department curriculum and syllabus. 2. Copy of Letters from Anna University regarding curriculum regulations or updating the syllabus.	✓ NA
6.	Department Time Table File	1. List of courses pertaining to that semester 2. Course preference (choice of courses opted by faculty) 3. Course allocation & competency matrix 4. Consolidated faculty work load 5. Class time table 6. Lab timetable 7. Individual time table 8. Master time table 9. Remedial Classes Time Table 10. Request for deputation of Faculty (Resource utilization) 11. Deputation of faculty to other department	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ Planned & Not updated
7.	Course File (Theory)	1. Syllabus Copy 2. Individual Timetable 3. Lesson Plan 4. Assignment plan 5. Previous year results	✓ ✓ ✓ ✓ ✓



		6. Notes of Lessons 7. Test Question Papers (3 set per exam) 8. Key Answers 9. Subject Result Analysis (Internal assessment & External Assessment) 10. University Question Paper (Pertaining to that specific Regulation) 11. Question Bank (Part A, Part B & C) 12. Sample Assignment 13. Sample Answer Scripts 14. Review class attendance with portion covered 15. Review / Revise Question Paper with Marks 16. Content beyond the syllabus 17. University Question paper mapping with internal examination 18. Log book 19. Clin. math. ppts or any course materials	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓
8.	Course File (Lab)	1. Lab Time table 2. Experiments planning chart 3. Experiment completion report 4. Lab Manuals with content beyond the syllabus 5. Log book 6. Sample Records 7. Sample Model answer scripts	✓ ✓ ✓ ✓ ✓ ✓ ✓
9.	Course Committee (ONLY FOR COMMON COURSES)	1. List of common subjects with course coordinator and member 2. Minutes of meeting 3. Comparative results analysis for internal and University exam	Planned & Not Updated ✓
10.	Class Committee List	1. List of various committees with coordinator 2. Faculty wise coordinator list / responsibility	✓ ✓
11.	Value Added Courses (VACs)	1. Details of VACs, Profile of trainers, Enrolled students list, feedback, brochures etc	✓
12.	Faculty Details (Dept conversant individual faculty files to be maintained)	1. List of faculty with their qualification and designation including visiting / Adjunct faculty 2. Copy of faculty profile 3. Copy of degree certificates 4. Appointment order 5. Joining report	✓ ✓ ✓ ✓ ✓



		6. Details of higher studies 7. Promotion details if any 8. Copy of PAN, Aadhar	✓ ✓ ✓
13.	Final Semester – Students Project	1. Project Batch Details 2. Project Review Schedule (All review forms) 3. Project Review Evaluation by committee with HOD approval 4. Student project publication & patents details if any. 5. Copies of certificates of any paper / poster presentation etc (if any)	✓ ✓ ✓ ✓ ✓
14.	Result Analysis File	1. Semester wise university result copies (Anna University pdf) 2. External Assessment - University results with CGPA 3. Internal Assessment - Result analysis. 4. Slow learners identification (Arrear list) 5. University Rank list 6. Graduates list with CGPA	✓ ✓ ✓ ✓ ✓ ✓
15.	Class Counsellor (Mentor) File	1. Details of students - Respective Batch Year & counsellor List of student with their contact details. 2. Monthly attendance and assessment report. 3. Letters from the students regarding leave/permission /OD with HOD approval.	✓ ✓ ✓
16.	Remedial Class	1. Details of review class for slow learners 2. Remedial class Time table 3. Name list with Attendance 4. Details of activity (Periodical tests, Coaching and Portion coverage)	✓ ✓ ✓ ✓
17.	Guest Lecture	1. Details of guest speakers 2. Students feedback about the event 3. Details of event	✓ ✓
18.	Seminar / workshop / Conference / Symposium	1. Details of guest speakers 2. Students feedback about the event 3. Details of event	✓ ✓ ✓
19.	Industrial Visit	1. Copies of request letters or emails and acceptance letters to the companies. 2. Industrial plan approval details 3. Feedback and report	✓ ✓ ✓
20.	In-plant training (IPT)	1. List of companies attended by students for in-plant training	✓



		2. Copies of reports on IPT submitted by the students and Certificate copies issued to the students	✓
21.	Co-Curricular Activities	1. Details of competitions Participated / Won / Special laurels if any (Copy of the certificate)	✓
22.	Extra-Curricular Activities	1. Details of competitions Participated / Won / Special laurels if any (Copy of the certificate)	✓
23.	Circular File (General)	1. Circular from office to be filed	✓
24.	Circular File (Department)	1. Circulars within Department	✓
25.	Department Meeting File	1. Circular- Department Meeting 2. Department Meeting - Attendance Sheet 3. Minutes of the Meeting	✓ ✓ ✓
26.	Class Committee Meeting File	1. List of Class committee Meeting Members 2. Circular for CCM. 3. Minutes of class committee meetings.	✓ ✓ ✓
27.	Students Discipline	1. Discipline committee 2. Minutes of disciplinary committee meetings. 3. Explanation/apology letters from the students/parents regarding their Discipline	✓ ✓ ✓ ✓
28.	Students Feedback File	1. Feedback report for theory and lab courses 2. Feedback analysis. 3. Students feedback on lab classes. 4. Minutes of feedback analysis.	✓ ✓ ✓ ✓
29.	Department Placement and Training file	1. Details about student training programmes 2. Batch wise list of students with their CGPA, history of arrears if any, (Sl. No, Name of the student, Reg. No, CGPA, No of arrear) 3. List of companies (S.No, Name, Contact person & Address for communication). 4. List of students placed through ON CAMPUS and off campus. (S.No, Name, Year, Company, Designation & Salary). 5. Copies of campus placement Appointments letters	✓ ✓ ✓ ✓
30.	Department Alumni file	1. Alumni contact details (Names, Addresses, Contact No, E-mail ID).	

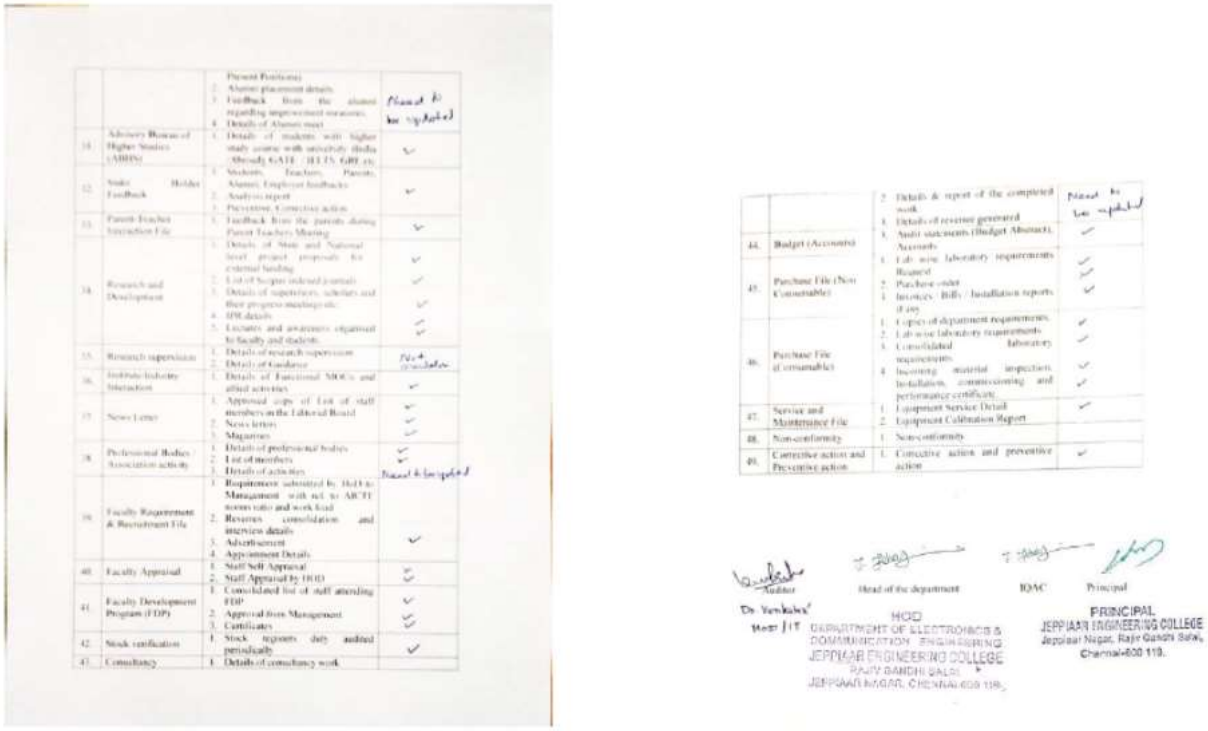


Figure 7.2.1 Internal Audit Format

Internal Quality Assurance Cell meeting (IQAC)

- A meeting circular and agenda will be distributed to all IQAC members, and the meeting will be held twice a semester
- An IQAC meeting headed by Head of the institution in the presence of following members
  - HOD and senior faculty members from each department
  - Management representative
  - Senior administrative officers from institution
  - Nominees from Local society, Students and Alumni
  - Nominee from Employers/Industrialist/ Stake holders
- During IQAC meetings, internal members will provide updates on institute activities from the previous semester, including academic, research and development, training and placements, and industry-institute interactions
- The recommendations received from IQAC members are used as a basis for enhancing the quality of academics and activities within the institute and its departments in the upcoming semester

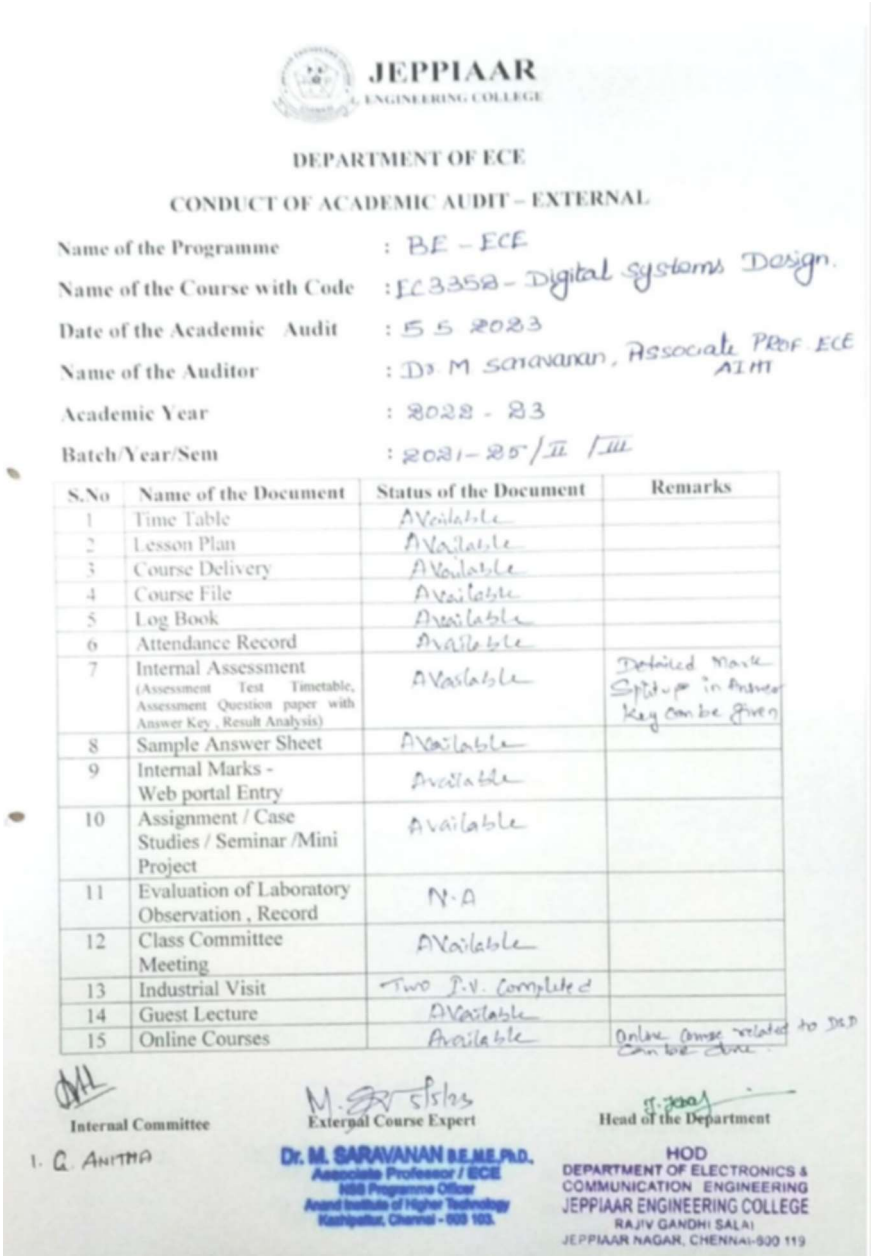
Action Plan Based On Audit:

- Based on the Audit Report, the corrective actions and preventive measures are taken for Observation, Findings and Non-Conformance (if any).
- In case of any Risk Identified during the Audit will be analyzed and Preventive actions will be taken.
- The outcomes of Internal Audits and External Surveillance Audits will be reviewed in CAC Meeting, Department Review Meeting, Management Review Meeting

External Academic Audit

An external academic audit, led by an academic expert from a nearby institution, will be conducted once every semester.

The external auditor will visit the department and conducts through audit and record their finding as per the format shown in figure 7.2.2. The department reviews the audit report and formulates an action plan to address identified deficiencies or areas for improvement



JEPPIAAR
ENGINEERING COLLEGE

DEPARTMENT OF ECE

CONDUCT OF ACADEMIC AUDIT – EXTERNAL

Name of the Programme : BE – ECE

Name of the Course with Code : EC3358 – Digital systems Design.

Date of the Academic Audit : 5 5 2023

Name of the Auditor : Dr. M. Saravanan, Associate Prof. ECE AIHT

Academic Year : 2022 - 23

Batch/Year/Sem : 2021-25 / II / III

S.No	Name of the Document	Status of the Document	Remarks
1	Time Table	Available	
2	Lesson Plan	Available	
3	Course Delivery	Available	
4	Course File	Available	
5	Log Book	Available	
6	Attendance Record	Available	
7	Internal Assessment (Assessment Test Timetable, Assessment Question paper with Answer Key , Result Analysis)	Available	Detailed Mark Split up in Answer Key can be given
8	Sample Answer Sheet	Available	
9	Internal Marks - Web portal Entry	Available	
10	Assignment / Case Studies / Seminar /Mini Project	Available	
11	Evaluation of Laboratory Observation , Record	N.A	
12	Class Committee Meeting	Available	
13	Industrial Visit	Two I.V. completed	
14	Guest Lecture	Available	
15	Online Courses	Available	Online courses related to DSD can be given.

Internal Committee
1. G. Anitha

External Course Expert
5/5/23
Dr. M. SARAVANAN B.E. M.E. Ph.D.
Associate Professor / ECE
NBA Programme Officer
Anand Institute of Higher Technology
Kathipattur, Chennai - 600 103.

Head of the Department
HOD
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
JEPPIAAR ENGINEERING COLLEGE
RAJIV GANDHI SALAI
JEPPIAAR NAGAR, CHENNAI-600 119

Figure 7.2.2 External audit report format

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10) Total Marks 10.00

Institute Marks : 10.00

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

- Placement training is offered to students either at the end or the beginning of each semester
- The AMCAT test is administered to final-year students to enhance their problem-solving and programming skills.
- External training providers such as FACE are invited to conduct sessions for students, focusing on Quantitative Aptitude, Verbal & Non-Verbal Reasoning, and Logical Reasoning
- Company specific training and product based training are offered to the students
- Group Discussions and Mock Interviews are conducted to provide students with exposure to real interview scenarios

The number of students place in last three academic year is illustrated in figure 7.3.1

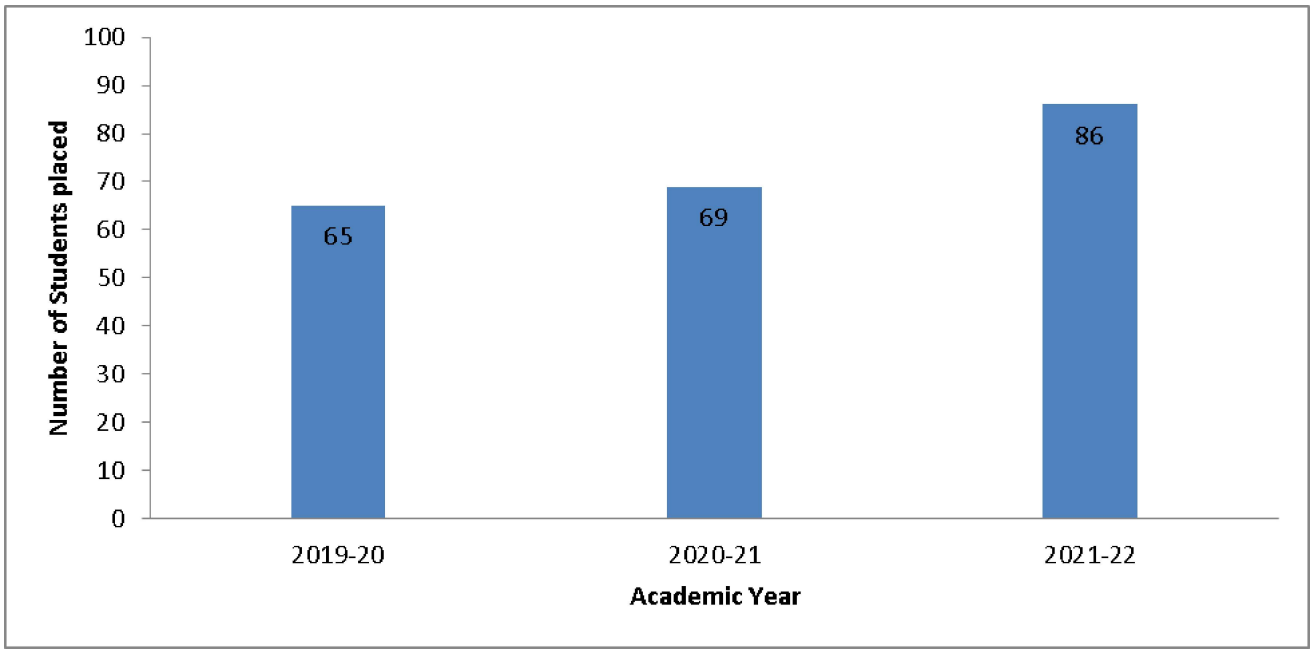


Figure7.3.1 Number of Students Placed

On comparing the salary package for the placed students, there is considerable increase every year. The Figure 7.3.2 illustrates the improvement in highest salary and average salary

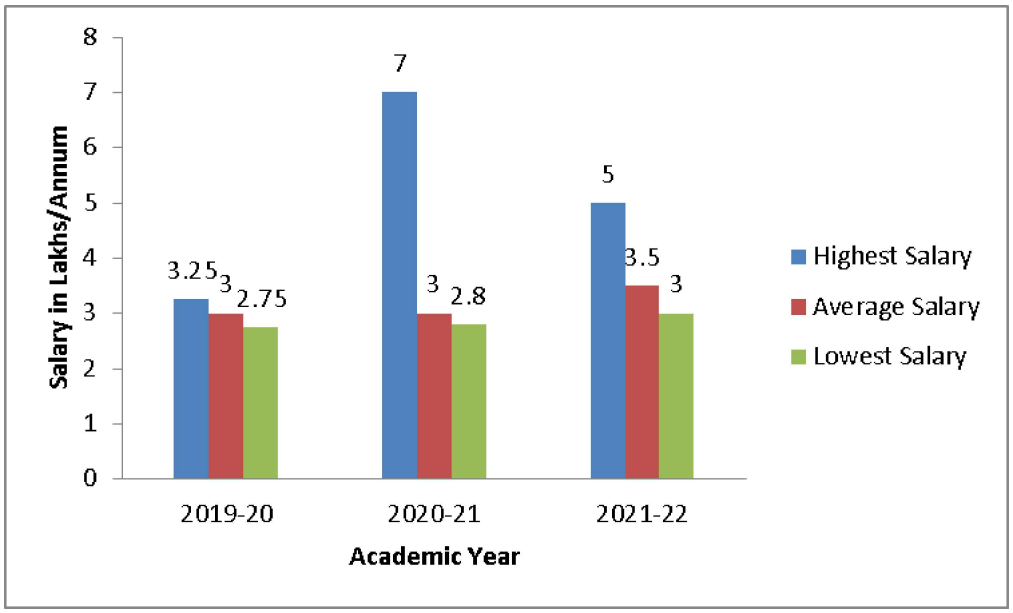


Figure7.3.2 Salary Comparison

B. Improvement in Higher Studies admissions in premier institutions

The Advisory Bureau for Higher Education at Jeppiaar Engineering College was established to assist students interested in pursuing further education, including masters and other advanced degree programs. The Bureau collaborates with a team of consultants, both from the private and government sectors in India and abroad. These consultants serve as direct advisors and guide students through various means, including regular awareness seminars, engagement with professional agencies, and consultations with

educational advisors at embassies.The Bureau is equipped with a number of latest books, magazines and CD-ROMs for competitive examinations like GMAT, GATE, GRE CAT, IELTS and TOEFL.

The number of students who have joined in various higher studies are shown in the figure 7.3.3.

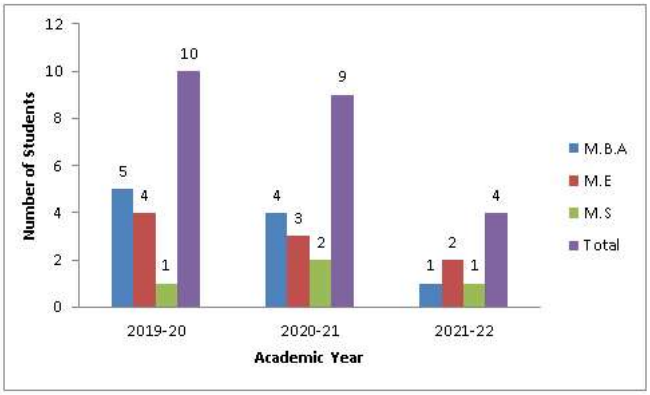


Figure7.3.3 Higher Studies

The admission of students in premier institution is shown in Table 7.3.1

Table 7.3.1 Admission of students in premier institution

Batch	Name of Student	University/Institution Joined	Name of Program Admitted to
2018-22	Susindharan K	University of Madras	MBA
	Priyanka. S	College of Engineering, Anna University	M.E-Communication Systems
	Anakha AR	Nottingham Trent University	Master of Engineering
	Abraham.i	SRM University	M.E-VLSI Design
2017-21	Angel Oviya D	Anna University	M.E.Communication Systems
	Pooja M	Symbiosis Institute of D€igital and Telecom Management	MBA
	Swetha D	University of windsor	Master Of Engineering
	Ajith Kumar M	Carinthiya University of Applied Science	MBA
	Herish Kumar P	Sri Sairam Engineering college	MBA
	Nithishkumar B	VIT	M.Tech Mechatronix
	Levin Mac Rosevlet	Gitam Institute of technology	M.Tech Computer science
	Ejolin Mercides E J	Anna University	MBA
	Gokulakrishnan M	University of York	M.Sc in Embedded wireless system
2016-20	Shanmugapriya R	SRM institute of Science and Technology	MBA
	Balamurali R	St.Josephs College of Engineering	MBA
	Navamani N	SRM Valliammai Engineering College	MBA
	Muhammed Arshad	ISEP,Paris	Master Of engineering
	Praveen Kumar P	Birla Institute of Technology & Science, Pilani	MBA
	Balaji	SRM Valliammai Engineering College	MBA
	Ajay	Sri Sairam Engineering college	M.EVLSI Design
	Archana	Anna University	M.E.Communication Systems
	Dharani S	VIT	M.E Embedded system
	Divya R	SRM University	M.E-VLSI Design

C. Improvement in number of Entrepreneurs:

Entrepreneurship development Cell (EDC) was commenced in the year 2005 to create awareness about entrepreneurship among young minds. Entrepreneurship awareness programs are conducted through EDC regularly. Figure 7.3.4 illustrates the number of Entrepreneurs in various batches.

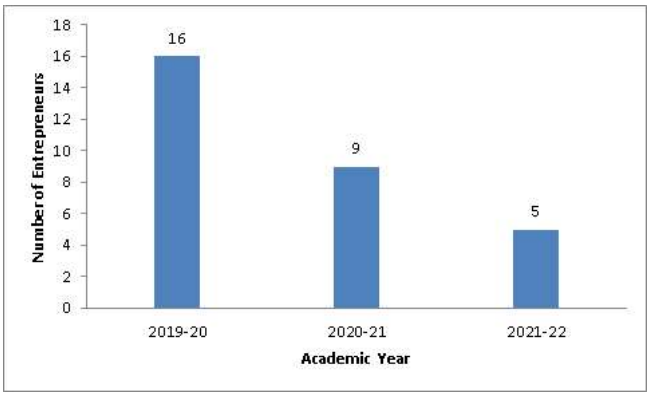


Figure7.3.3 Entrepreneurship

7.4 Improvement in the quality of students admitted to the program (10)

Total Marks 10.00

Institute Marks : 10.00

Item		2022-23	2021-22	2020-21
National Level Entrance Examination	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others	No of students admitted	116	108	71
Tamil Nadu Engineering Adı	Opening Score/Rank	182	185	174
	Closing Score/Rank	86	99	81
Name of the Entrance Examination for Lateral Entry or lateral entry details	No of students admitted	1	4	2
Tamil Nadu Engineering Adı	Opening Score/Rank	77	86	89
	Closing Score/Rank	77	62	72
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		78	80	70

8 FIRST YEAR ACADEMICS (50)

Total Marks 46.19

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

Total Mark

Institute Marks

Please provide First year faculty information considering load for the particular program

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 O leaving case Curren Associ is 'No')
							CAY	CAYm1	CAYm2			
Dr.M.Merlin	AHAPM3117F	M.Sc. and PhD	23/03/2005	CHEMISTRY	Professor	23/07/2001	100	100	100	Yes	Regular	
Dr.S.Titus	AITPT1930F	M.Sc. and PhD	28/02/2020	CHEMISTRY	Associate Professor	23/07/2001	100	100	100	Yes	Regular	
Dr.U.Anto Mari	BNYPA8510P	M.Sc. and PhD	24/04/2023	CHEMISTRY	Assistant Professor	04/09/2023	100	100	100	Yes	Regular	
Mrs.G.Vetha	APPPV4185F	M.Phil	20/08/2008	CHEMISTRY	Assistant Professor	26/08/2009	100	100	100	Yes	Regular	
Mr.A.Lawrence	AIQPL6387F	M.Phil	15/04/2010	CHEMISTRY	Assistant Professor	20/08/2014	100	100	100	Yes	Regular	
Dr.S.Srinivasar	EYFPS4804D	M.Sc. and PhD	04/08/2021	CHEMISTRY	Assistant Professor	20/07/2022	100	100	100	Yes	Regular	
Dr.F.Regan Ma	ALNPR9462R	M.Sc. and PhD	29/09/2020	PHYSICS	Associate Professor	05/07/2007	100	100	100	Yes	Regular	
Dr.G.Jagadees	AJXPJ3542J	M.Sc. and PhD	16/07/2016	PHYSICS	Professor	16/07/2014	100	100	100	Yes	Regular	
Dr.S.R.Thilaga	AJQPT5917J	M.Sc. and PhD	26/08/2015	PHYSICS	Professor	24/06/2015	100	100	100	Yes	Regular	
Mrs.R.Sharon	GRPPS4957C	M.Phil	01/08/2018	PHYSICS	Assistant Professor	24/07/2019	100	100	100	Yes	Regular	
Mrs.K.Subashi	BODPS3996D	M.Phil	02/04/2001	MATHEMATICS	Assistant Professor	26/06/2002	100	100	100	Yes	Regular	
Dr.P.Sivagami	CKAPS7343L	M.Sc. and PhD	13/04/2018	MATHEMATICS	Professor	25/08/2008	100	100	100	Yes	Regular	
Dr.A.Thiripuran	AJPPT6773K	MS and PhD	05/06/2017	MATHEMATICS	Professor	26/08/2009	100	100	100	Yes	Regular	
Dr.C.Kannadas	DWGPK5244D	MS and PhD	05/07/2023	MATHEMATICS	Assistant Professor	14/06/2021	100	100	100	Yes	Regular	
Dr.P.Jagadees	AWXPJ0118K	MS and PhD	21/01/2021	MATHEMATICS	Assistant Professor	14/06/2021	100	100	100	Yes	Regular	
Mr.P.Duraisam	ELLPD0569P	M.Phil	18/08/2018	MATHEMATICS	Assistant Professor	24/07/2019	100	100	100	Yes	Regular	
Dr.J.Arthy	BHLPA8553R	M.Sc. and PhD	20/01/2021	MATHEMATICS	Assistant Professor	25/07/2019	100	100	100	Yes	Regular	
Ms.S.KathirViz	DEPPS9944D	M.Phil	14/08/2006	MATHEMATICS	Assistant Professor	24/07/2019	100	100	100	Yes	Regular	
Ms.J. Rashmi I	ARNPR7443Q	M.Phil	14/05/2007	MATHEMATICS	Assistant Professor	21/08/2020	100	100	100	Yes	Regular	
Mrs.L.Sowmiya	DZQPS9585E	M.Phil	10/08/2012	ENGLISH	Assistant Professor	21/06/2017	100	100	100	Yes	Regular	
Mr.R.Balamuru	CJDPB2878K	M.Phil	05/03/2018	ENGLISH	Assistant Professor	17/07/2019	100	100	100	Yes	Regular	
Ms.J.Priyanka	DVJPP1494N	MA	09/05/2019	ENGLISH	Assistant Professor	16/06/2021	100	100	100	Yes	Regular	
Mr.P.Balagane	CNDPB9276R	MA	11/07/2019	ENGLISH	Assistant Professor	14/07/2021	100	100	100	Yes	Regular	
Mr.I.Samuel Da	GNIPS4216R	M.Phil	01/08/2018	ENGLISH	Assistant Professor	12/06/2019	100	100	100	Yes	Regular	
Dr.J.Paul Chan	AJBPJ7510J	ME/M. Tech and PhD	27/07/2022	GENERAL ENGGINEERING	Associate Professor	04/07/2007	100	100	100	Yes	Regular	

Dr.D.Damodha	BNSPD4252R	ME/M. Tech and PhD	29/06/2018	GENERAL ENGINEERING	Associate Professor	04/01/2012	100	100	100	Yes	Regular	
Mr.P.Jegan Dh	AQAPJ0261G	M.E/M.Tech	03/06/2019	GENERAL ENGINEERING	Assistant Professor	29/06/2015	100	100	100	Yes	Regular	
Mr.P.Manikand	GTLPM8869P	M.A and Ph.D	10/01/2023	TAMIL	Assistant Professor	19/07/2022	100	100	100	Yes	Regular	
Ms.F.Dalphin M	ACXPF3201D	M.E/M.Tech	08/06/2016	GENERAL ENGINEERING	Assistant Professor	06/06/2018	100	100	100	Yes	Regular	
Ms.T.Subha Ra	DOIPS9241Q	M.E/M.Tech	06/10/2013	GENERAL ENGINEERRING	Assistant Professor	06/07/2018	100	100	100	Yes	Regular	
Ms.P.Rajalaksh	AXVPR2940L	M.E/M.Tech	10/04/2010	GENERAL ENGINEERING	Assistant Professor	22/06/2016	100	100	100	Yes	Regular	
Dr.Ganesh visv	AEZPV0868G	ME/M. Tech and PhD	18/10/2022	GENERAL ENGINEERING	Assistant Professor	04/09/2023	100	100	100	Yes	Regular	
Dr.A.MUTHUL/	AWEPM1955E	ME/M. Tech and PhD	18/09/2023	BIOTECHNOLOGY	Assistant Professor	12/06/2008	100	100	100	Yes	Regular	
Mr.V.Jeyamani	ATLPJ8638D	M.E/M.Tech	21/04/2011	BIOTECHNOLOGY	Assistant Professor	02/01/2012	100	100	100	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(Limited to Max.5)
2020-21(CAYm2)	570	34	17	5.00
2021-22(CAYm1)	540	34	16	5.00
2022-23(CAY)	540	34	16	5.00
Average	0	0	0	0

8.2 Qualification of Faculty Teaching First Year Common Courses (5) Total Marks 3.00

Institute Marks : 3.00

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	15	28	2.00
2021-22	10	17	27	3.00
2022-23	12	17	27	4.00

Average Assessment: 3.00

8.3 First Year Academic Performance (10) Total Marks 8.19

Institute Marks : 8.19

Academic Performance	2022-23	2021-22	2020-21
Mean of CGPA or mean percentage of all successful students(X)	7.97	8.33	8.26
Total Number of successful students(Y)	107.00	69.00	89.00
Total Number of students appeared in the examination(Z)	107.00	69.00	89.00
API [X*(Y/Z)]	7.97	8.33	8.26

Average API[(AP1+AP2+AP3)/3] : 8.19

Assessment [1.5 * Average API] : 8.19

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

8.1Attainment of Course Outcomes of first year courses (10)

1. **Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)**

The Course Outcome (CO) Assessment and Data Acquisition process is prescribed in the following paragraphs.

Course Outcome Assessment Process

The CO assessment tools are used to measure the attainment levels of 1st year courses includes-

1. Student's performance in internal assessments such as class test, assignments, continuous evaluation in laboratory through rubrics etc. and
2. Student's performance in semester examination conducted by university.

All the 1st year courses prescribed by the university for the Program under consideration may be divided into two broad categories i) theory courses and ii) laboratory, for the evaluation. The overall percentage distribution of marks for direct assessment methods as per examination scheme prescribed by university is shown in Table 8.4.1.1.

***Table 8.4.1.1*: Course Outcome (CO) Assessment Evaluation Process**

Course Type	Assessment Type	Evaluation Through	Marks Distribution
Direct Assessment			
Theory	Internal	Class Test	40 %
		Assignment	
	External	University Examination	60 %
Laboratory	Internal	Continuous Evaluation	60 %
	External	University Examination	40 %

Data Acquisition Process for CO Assessment

The data required for the assessment of attainment level of each CO is indicated in above table. The data acquisition frequency and process is presented in ***Table 8.4.1.2***.

Table 8.4.1.2.

	ASSESSMENT PROCESS		
S.No	**Methods**	**Description of the Methods**	
1.	End Semester Examination conducted by Anna University	Semester examination (theory or practical) are the metric to assess whether all the course outcomes are attained or not framed by the course owner. Semester Examination is more focused on attainment of course outcomes and uses a descriptive exam. Anna University conducts the examination at the end of the semester covering all the course outcomes. 60% weightage is given to University Examinations in the evaluation process of course outcome. **Semester End Assessment in Theory** Part A • 10 numbers of two marks questions — 10X2 =20 Marks Part B • Five sixteen marks questions • All the five questions will be EITHER / OR pattern. — 5X16 =80 Marks **Total** — **100 Marks**	

<table>
<tr><td>2.</td><td>Internal Assessment Test</td><td>The Internal Assessment marks in a theory paper shall be based on three tests generally conducted after completion of 20 days, 40 days and 60 days of each semester.40% weightage for Internal Assessments in the evaluation process of course outcome.

<table><tr><th>Test</th><th>Portion Coverage</th><th>Marks</th><th>Duration</th></tr><tr><td>Assessment test – 1</td><td>Unit 1, 2(0.5)</td><td>60</td><td>2 hours</td></tr><tr><td>Assessment test – 2</td><td>Unit 3, 4(0.5)</td><td>60</td><td>2 hours</td></tr><tr><td>Model Exam</td><td>Unit 1,2,3,4,5</td><td>100</td><td>3 Hours</td></tr></table>
Retest is also conducted for every test failures and absentees for the hoping for students to give an opportunity to such students to improve their Internal Assessment Marks. It is a metric to continuously assess the attainment of course outcomes. Marks are considered as basic for the Internal Assessment of the relevant subject.</td><td></td></tr>
<tr><td>3.</td><td>Tutorial</td><td>Tutorial hours are scheduled in the regular Time Table for the analytical courses to practice problems under the guidance of the respective faculty member. These sessions help the students to enhance their analytical skills and knowledge.</td><td></td></tr>
<tr><td>4.</td><td>Assignments</td><td>Assignments are given based on the syllabus and the topics beyond the syllabus to enrich their knowledge by referring books and internet for finding the solutions. Students are encouraged to refer research papers from reputed journals to enhance innovation and learning abilities. Case studies are also given to apply their technical knowledge for specific application.</td><td></td></tr>
<tr><td colspan="3">Laboratory/ Practical Subjects</td><td></td></tr>
<tr><td>S.No</td><td>Direct Assessment</td><td>Description of the Methods</td><td></td></tr>
<tr><td>5.</td><td>Lab Assessment</td><td>In case of practical, the Internal assessment marks shall be based on the laboratory records and one practical test.</td><td></td></tr>
<tr><td>6.</td><td>Viva-voce</td><td>External examination inclusive of practical and viva voce will be conducted by external examiner nominated by Anna University.</td><td></td></tr>
</table>

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

The attainment of each course outcome is measured through percentage students getting

marks above target level for each assessment tool as indicated in (as indicated in *Table 8.4.1.1*). The attainment level for CO assessment is adopted as in *Table 8.4.2*.1.

FOR THE ACADEMIC YEAR 2021-2022

Table *8.4.2*.1. Attainment level of Course Outcome through various assessment tools	
Attainment Level (AL)	Criteria
1	50% of students scoring between 50-59 marks
2	50% of students scoring between 60-69 marks
3	50% of students scoring greater than or equal to 70 marks

FOR THE ACADEMIC YEAR 2020-2021

Table *8.4.2*.1. Attainment level of Course Outcome through various assessment tools	
Attainment Level (AL)	Criteria
1	60% of students scoring between 50-59 marks
2	60% of students scoring between 60-69 marks
3	60% of students scoring greater than or equal to 70 marks

FOR THE ACADEMIC YEAR 2019-2020

Table *8.4.2*.1. Attainment level of Course Outcome through various assessment tools	
Attainment Level (AL)	Criteria
1	50% of students scoring between 50-59 marks
2	50% of students scoring between 60-69 marks
3	50% of students scoring greater than or equal to 70 marks

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

8.5.1 Indicate results of evaluation of ezch relevant PO and/ or PSO, if applicable (15) Institute Marks : 15.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
HS3151	1.6	2.2	1.8	2.2	1.5	3	3	3	1.6	3	3	3
MA3151	3	3	1	1	0	0	0	0	2	0	2	3
PH3151	3	3	1.6	1.2	1.8	1	0	0	0	0	0	1
CY3151	2.8	1.3	1.6	1	0	1.5	1.8	0	0	0	0	1.5
GE3151	2	3	3	3	2	0	0	0	0	0	2	2
GE3171	2	3	3	3	2	0	0	0	0	0	2	2
BS3171	3	2.4	2.6	1	1	0	0	0	0	0	0	0
BS3171	2.6	1.3	1.6	1	1	1.4	1.8	0	0	0	0	1.3
GE3172	3	3	3	3	1	3	3	3	3	3	3	3
HS3252	3	3	3	3	2.75	3	3	3	2.2	3	3	3
MA3251	3	3	1	1	1	0	0	0	2	0	2	3
PH3254	3	2	1.4	1.5	2.5	2	3	0	0	0	0	1
BE3254	2	1	1	0	0	0	0	1	0	0	0	0
GE3251	3	1	2	0	2	0	0	0	0	3	0	2
EC3251	3	3	3	2	0	0	0	1	0	1	0	0
GE3271	3	2	0	0	1	1	1	0	0	0	0	2
EC3271	3	3	3	2	0	0	0	1	0	1	0	0
GE3272	2.4	2.8	3	3	1.8	3	3	3	3	3	3	3

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.69	2.39	2.15	1.93	1.64	2.1	2.45	2.14	2.3	2.43	2.5	2.2
CO Attainment	2.69	2.39	2.15	1.93	1.64	2.1	2.45	2.14	2.3	2.43	2.5	2.2

PSOs Attainment:

Course	PSO1	PSO2	PSO3
HS3152	0	0	0
MA3151	0	0	0
PH3151	0	0	0
CY3151	0	0	0
GE3151	3	3	0
GE3171	3	3	0
BS3171	0	0	0
BS3171	0	0	0
GE3172	0	0	0
HS3252	0	0	0
MA3251	0	0	0
PH3254	0	0	0
BE3254	0	0	0
GE3251	2	2	0
EC3251	0	0	0
GE3271	2	1	1
EC3271	0	0	0
GE3272	0	0	0

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	2.5	2.25	1
CO Attainment	2.5	2.25	1

8.5.2 Actions taken based on the results of evaluation of relevant POs (5) Institute Marks : 5.00

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

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.36	2.69	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 2 : Problem Analysis			
PO 2	2.08	2.39	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 3 : Design/development of Solutions			
PO 3	2.11	2.15	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	1.97	1.93	Target not achieved.
Students are guided to participate in various online certification courses			
PO 5 : Modern Tool Usage			
PO 5	1.61	1.64	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 6 : The Engineer and Society			
PO 6	2.08	2.11	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 7 : Environment and Sustainability			
PO 7	2.43	2.45	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 8 : Ethics			
PO 8	2.11	2.14	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 9 : Individual and Team Work			
PO 9	2.5	2.3	Target not achieved.
Students are guided to participate in various online certification courses			
PO 10 : Communication			
PO 10	2.41	2.43	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 11 : Project Management and Finance			
PO 11	2.2	2.5	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PO 12 : Life-long Learning			
PO 12	1.90	2.2	Target achieved.
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			

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

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.			
PSO 1	2.25	2.5	Target achieved
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PSO 2 : Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.			
PSO 2	2.10	2.25	Target achieved
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			
PSO 3 : Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.			
PSO 3	0.85	1	Target achieved
Target achieved. Hence the attainment for the current academic year is fixed as Target for the next academic year.			

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

Details of Students Mentoring System

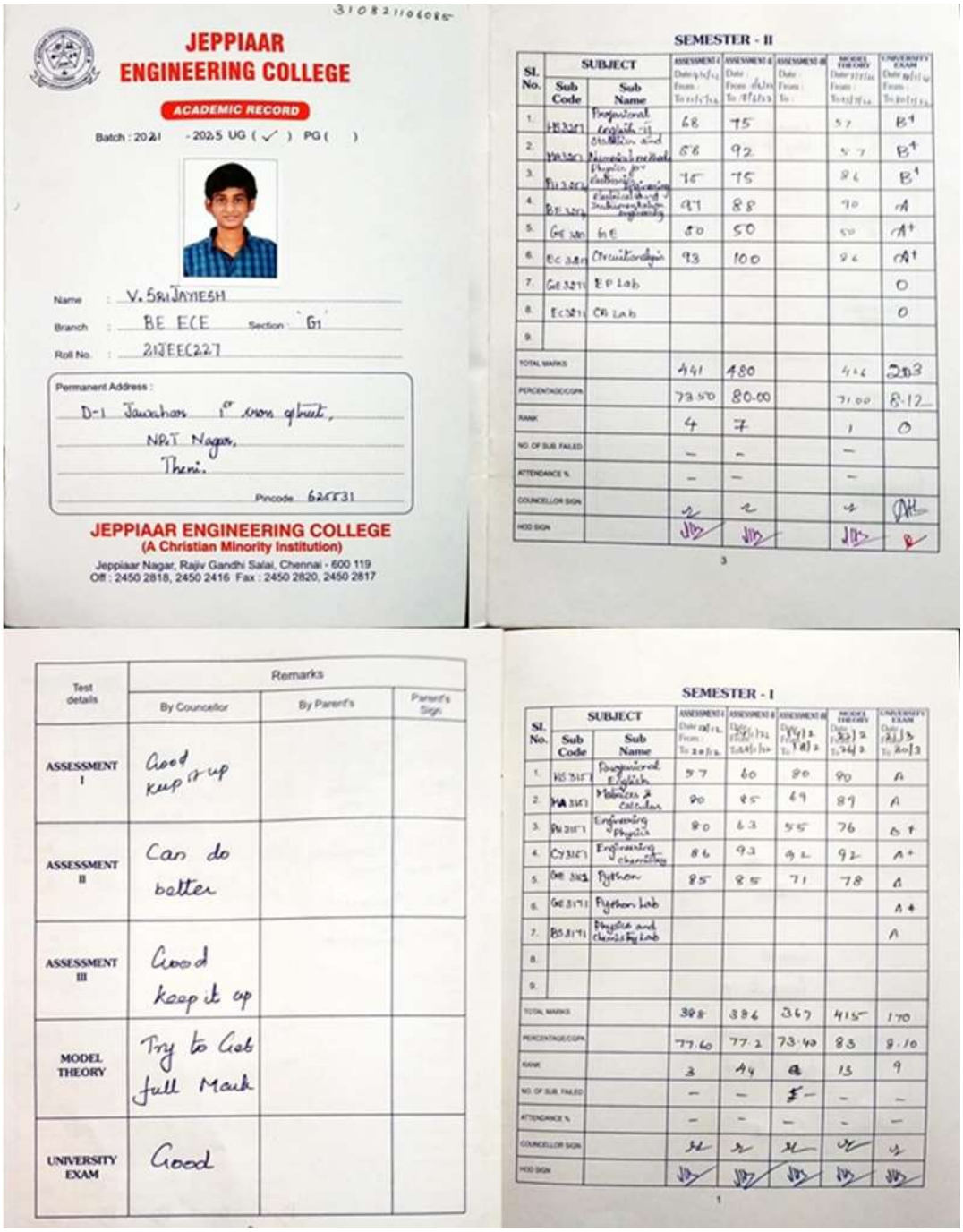
- The college has a successful system in place for student mentoring. Starting on the day they enroll in the college, students from all departments are subject to this system. Faculty members are assigned the role of student mentors and given Mentoring Registers to track their success.
- Under the mentoring method, each Mentor is assigned 20–25 students.
- The Student Mentoring System keeps track of a variety of student activities, including academic, co-curricular, extracurricular, and social accomplishments as well as information on parent meetings. The academic progress of each student is regularly evaluated by student mentors (faculty members), and all of their activities are discussed and recorded in the register.
- Any inconsistencies, such as disciplinary problems, health problems, feelings of insecurity, absences, etc., are carefully explored and counseled.
- Every month, a mentoring meeting is held, during which mentors present the documentation of their visits as well as the mentoring forms to the high-level mentoring/counselling committee, which is made up of HODs and the head of the institution. The committee examines each situation carefully and makes suggestions for improvement.
- The committee consults with the parents and the medical counselor as needed.

Efficacy of the Mentoring System

The current mentoring method benefits us in the following ways:

- It strengthens the teaching-learning process by putting the focus on the students.
- Offers unbiased guidance and support to students
- Helps students' solve problems and builds their self-confidence.
- Provides each pupil with individualized attention.
- Enhances students performance on end-of-semester exams and internal evaluation tests.
- Lowers the chance of failure and dropouts while raising academic performance.
- Encourages increasing students attendance rates
- Assists in discovering students interests and generating growth possibilities in pertinent fields.
- Encourages students to take part in a range of extracurricular and co-curricular activities.
- Encourages students to develop decision-making skills that support their objectives, talents, and aspirations and enables them to better manage their careers.
- Fosters a cooperative interaction between academics and students.
- Fosters a supportive workplace.
- Promotes efficient use of college facilities and resources. Facilitates information gathering and distribution.
- Makes for better placement.

Sample of Student Mentoring Book



JEPPIAAR ENGINEERING COLLEGE

ACADEMIC RECORD

Batch : 2021 - 2025 UG (✓) PG ( )

Name : V. SRI JAYIESH

Branch : BE ECE Section : G1

Roll No. : 21UEEC227

Permanent Address :

D-1 Jawahar 1st cross street,
NPT Nagar,
Theni.

Pincode 625531

JEPPIAAR ENGINEERING COLLEGE
(A Christian Minority Institution)
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119
Off : 2450 2818, 2450 2416 Fax : 2450 2820, 2450 2817

SEMESTER - II

Sl. No.	SUBJECT Sub Code	Sub Name	ASSESSMENT I	ASSESSMENT II	ASSESSMENT III	MODEL THEORY	UNIVERSITY EXAM
1.	HS3251	Professional English - II	68	75		57	B+
2.	MA3251	Statistics and Numerical methods	58	92		57	B+
3.	PH3256	Physics for electronics Engineering	75	75		84	B+
4.	BE3254	Electrical and Instrumentation engineering	91	88		90	A
5.	GE3251	ME	50	50		50	A+
6.	EC3491	Communication	93	100		96	A+
7.	GE3271	EP Lab					O
8.	EC3211	CR Lab					O
9.							
TOTAL MARKS			441	480		446	283
PERCENTAGE/CGPA			73.50	80.00		71.00	8.12
RANK			4	7		1	O
NO. OF SUB. FAILED			-	-		-	
ATTENDANCE %			-	-		-	
COUNCELLOR SIGN			✓	✓		✓	
HOD SIGN							

3

Test details	Remarks By Councellor	By Parent's	Parent's Sign
ASSESSMENT I	Good keep it up		
ASSESSMENT II	Can do better		
ASSESSMENT III	Good keep it up		
MODEL THEORY	Try to Get full Mark		
UNIVERSITY EXAM	Good		

SEMESTER - I

Sl. No.	SUBJECT Sub Code	Sub Name	ASSESSMENT I	ASSESSMENT II	ASSESSMENT III	MODEL THEORY	UNIVERSITY EXAM
1.	HS3151	Professional English	97	60	80	90	A
2.	MA3151	Matrices & Calculus	90	85	69	89	A
3.	PH3151	Engineering Physics	80	63	55	76	B+
4.	CY3151	Engineering Chemistry	86	93	92	92	A+
5.	GE3152	Python	85	85	71	78	A
6.	GE3171	Python Lab					A+
7.	BS3171	Physics and Chemistry Lab					A
8.							
9.							
TOTAL MARKS			398	386	367	415	170
PERCENTAGE/CGPA			77.60	77.2	73.40	83	8.10
RANK			3	4	8	13	9
NO. OF SUB. FAILED			-	-	-	-	-
ATTENDANCE %			-	-	-	-	-
COUNCELLOR SIGN			✓	✓	✓	✓	✓
HOD SIGN							

1

Mentoring style: All-around development

The following four advancements are the main focus of the method for all-around student development:

a) Academic advancement

a) Co-curricular development

d) Development in extracurricular activities

d) Professional growth

a) Academic advancement

- Following each Internal Assessment Test and each set of end-of-semester exam results, all students will get mentoring from their designated mentors. As a result, the mentors can keep track of how each student is doing.
- The students' receive monthly mentorship based on their academic success. Good performers are urged to assist the slow learners whenever feasible, promoting peer collaboration and active learning among the students while also encouraging the good performers to perform even better.
- Toppers are driven to maintain high GPAs throughout each semester and achieve university rankings.
- Slow learners are urged to attend coaching sessions in order to comprehend the courses better.
- Class winners and deserving students receive scholarships and awards.
- College Toppers are recognized based on academic achievements.
- Additionally, the Best Outgoing Student Award is given to encourage the students.

Efficacy:

Through this effective mentoring system

- The students performance on the internal evaluation tests has increased, and the better performers are inspired to perform well in the next exams.
- Due to peer learning, slow learners have also demonstrated improvement in test performance. They have a drive to improve on the next exams.
- Attending coaching seminars has helped slow learners improve their performance on internal tests.

b) Co-curricular development

- The involvement of students in extracurricular activities is periodically observed. The mentors choose appropriate events and inform the students about them.
- Students are encouraged to take part in a variety of activities in order to improve their technical and soft abilities.
- Interdepartmental projects are encouraged for students to complete.
- Students participate in a variety of Value Added Courses based on their interests, as well as symposiums, seminars, conferences, training programs, workshops, and other events at the state and national levels.
- Students from our institute take part in a range of extracurricular activities all throughout India.

Efficacy

- Students have taken an active interest in a number of co-curricular activities both inside and outside of the college. Students have taken part in a variety of activities that the instructor has recommended.
- Students technical and life skills have improved.
- They have become industry-ready thanks to several interdepartmental projects, value-added courses, symposiums, conferences, contests, training programs, and workshops.
- Students have traveled to numerous colleges throughout the nation and in Tamilnadu to compete in tournaments and win prizes.

c) Development in extracurricular activities

- Mentors recognize students potential abilities with the help of the physical education department, extracurricular clubs, NSS, and YRC units, and they encourage them to take part in a variety of extracurricular activities like athletics, NSS, NCC, and other social activities.
- Extracurricular involvement shapes a persons personality and character. Students leave school in good physical and mental shape. Such involvement also helps pupils feel more confident.

Efficacy

- Students have taken part in numerous activities at the state and national levels and have won awards.
- Students have participated in numerous village welfare initiatives, clean-up campaigns, and health and hygiene campaigns.
- The NSS unit has carried out numerous tree planting campaigns.
- Students have participated in several internal and external competitions and earned awards for their photography, acting, elocution, aptitude, and other abilities.

d) Professional growth

- Mentors assist students in achieving their career goals through the Career Guidance Cell, Higher Education Cell, and Entrepreneurship Development Cell.
- Value-added programs, placement training courses, and skill-building courses

Efficacy

- Several students are preparing for the UPSC and GATE exam following graduation.

9.2 Feedback analysis and reward /corrective measures taken, if any (10) Total Marks 10.00

Institute Marks : 10.00

The various Feedback systems is followed as given below

Interactive Feedback

The HOD will hold a direct interactive discussion with the section of students regarding the Academic Activities following each Second Assessment exam.

Important interactive questions include the following:

a. Have all of the lecture notes and question banks for the semesters subjects been sent to you?
b. Did the faculty finish the sections in accordance with the Anna University syllabus?
c. Have all of the assignments been correctly turned in?

Program end Feedback

At the conclusion of each semester, all students will be asked for their opinions on the program and each subject. Corrective action will be done for improvement in next semesters based on student input about the courses. Each courses student feedback is watched, analyzed, and reviewed with the head of department for suggestions on how to make improvements.

Faculty Feedback

At the conclusion of each semester, student input is gathered using a well defined system. Ten criteria are used to gauge student opinion of the faculty, and a Teaching Performance Index (TPI) is created for 100 marks. The alternatives provided in the feedback system for the student to provide their input regarding the problematic topic handling faculty are Excellent, Very Good, Satisfactory, and Poor. The HOD reviews the student feedback and sends a copy of the findings to the Principal. Each faculty member reviews their feedback scores for self-evaluation and ongoing growth. The Faculty Appraisal system takes into account the concern facultys feedback score. Faculty members who received scores of more than 90% are recognized, while those who received ratings of less than 75% receive individualized advice from the department head and are advised to attend faculty development programs in order to improve their performance.

Exit Survey

An effective technique for getting student input is the student exit survey. This allows students to discuss their on-campus experiences and helps gauge how satisfied graduating students are with various program-related features. A core collection of inquiries form the surveys structure and are intended to elicit proposals from the graduates based on the traits of graduates, which center on knowledge, competence, and attitude.

Alumni Survey

Former students are questioned in the alumni survey about their career and continued education, their opinions of the institutional emphasis, and their estimated gains in knowledge and skills. It gauges how satisfied graduates are with every facet of their education. Surveys of alumni are also used to determine how they are adjusting to life after school and to gauge the connection between their college major and present work.

Employer Survey

Employer surveys are an effective technique for obtaining an honest assessment of our graduates from employers. This poll gives the organization a clear sense of what it needs to do for graduates in the following academic years.

Class Committee Meeting

Every class must have a class committee made up of the head of the department, faculty mentors, concerned class teachers, and student representatives. It has the same general objective of enhancing the teaching-learning process as the "Quality Circle," which is more frequently utilized in enterprises.

The functions of the class committee include

- Resolving issues that arise for students in the classroom and in the lab.
- Informing the student representatives of the academic calendar, which includes test dates and the material covered in each test.
- Providing information on the rules governing the weight age utilized for each evaluation to the student representatives.
- Examining the exam results of the classs students and identifying any flaws, if any, with their performance.
- Identifying any weak pupils and asking the relevant teachers to give those poor students some extra assistance, direction, or coaching.

Parent Feedback

After the internal tests, parents are invited to a conversation that is held in the middle of each semester to discuss academic activities and general amenities.

9.3 Feedback on facilities (5) Total Marks 5.00

Institute Marks : 5.00

Student Feedback Collection Process:

- Every semester, student feedback is personally collected in order to raise the standard of the labs, libraries, dorms, mess, gyms, and sports facilities. Every month, a meeting is held to discuss issues affecting students.
- A suggestion box is also there for seeking student feedback.

Analysis

- The students feedback has been compiled and examined. The in-charges of each section and the principal meet with management to examine the results in the consolidated report and determine the appropriate next steps.

Corrective Measures:

Based on feedback from students,

- To conduct value-added courses and projects, tools such Arduino, Arduino Mega, ArduinoUNO, Zigbee module, etc., have been received.
- In laboratories, the size of the display charts has been raised for greater comprehension.
- Whenever necessary, damaged hardware components are duly replaced and bought.
- Damaged equipment is located and repaired as soon as possible. It is done to calibrate the lab apparatus on a regular basis.

Library

The following corrective measures have so far been implemented in response to student feedback.

- There are now more general, novel, and competitive novels available.
- A student WhatsApp group has been established, where students regularly inform other members about conferences, workshops, the details of E-Books, etc.
- The working hours and opening times of the library have been extended to accommodate longer student use after normal working hours.

Sports:

- A separate sports area has been set aside for the practice of different field events, such as badminton, volleyball, kabadi, cricket, throw ball, and football.
- The size of the playing field has also been expanded, and new sports equipment has been purchased.

Hostel

- The food quality in the boys and girls hostel is ensured by incorporating the recommendations of the hostel welfare committee.
- The building has a softening plant constructed to treat the water for multiple uses.

Mess

- The menu is modified following consultation with the Mess Committee.
- During lunchtime, faculty members are sent to inspect the quality of the meal preparation.
- In the mess hall, there is a register where faculty members and students can leave suggestions. After examining them, the appropriate action is done.

9.4 Self-Learning (5) Total Marks 5.00

Institute Marks : 5.00

The Total Student Development Program helps students enhance their interpersonal, technical, and business abilities by focusing on all facets of their personalities.

- Encouraging students to use the NPTEL, and library resources.
- Students are encouraged to prepare and present topics of their interest by providing a weekly seminar hour.
- Encouraging students to take part in workshops, seminars, and symposiums.
- Encouraging students to compete in intra- and intercollegiate events.
- Encouraging students to complete small projects and deliver papers at conferences.
- Requiring pupils to respond to technical/aptitude training questions online.
- Mentoring and industry-institution interaction to enhance learning outside of the prescribed curriculum.
- The college has a student web portal that enables students to readily access the course syllabus and readings.
- Digital library facility: To keep students up to date, the college library offers a variety of online publications and technical literature.

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

Institute Marks : 10.00

9.5.1 Placement Cell

For the purpose of assisting students with campus placement, the Institute offers a fully functional Training and Placement Centre (TPC). The training schedule is created to accommodate students demands and improve their employability. All students, beginning in the first year, receive training in communication skills with the assistance of experts in order to fulfill the standards of industry expectations. From the second year on, career focus events are planned to assist students in setting goals so they can have enough time to build their competencies. All second-year students participate in career awareness programs designed to inform them about all career opportunities and the qualities that employers value.

Placement Team

Sl.No	Name of the Staff	Designation
1	Mr.Subash Chandar	Assistant Professor – IT
2	Mr.B.Arun Vijaya Kumar	Assistant Professor – ECE
3	Mr.Insol Rajasekhar	Assistant Professor – CSE
4	Mrs.Anuja	Assistant Professor – IT
5	Mr.Jagandhas	Assistant Professor – Mech
6	Mr.Jeya Manikandan	Assistant Professor – Bio Tech
7	Mr.Haston Amith Kumar	Assistant Professor – Aero
8	Dr.E.Gopi	Assistant Professor – MBA

Facilities and Campus Placement Support

The following facilities and practices are available to promote career guidance in college:

- Pre-placement meetings and training courses in logical thinking, personality development, and aptitude, among other topics.
- Encouraging and supporting students in developing their soft skills through activities including resume writing, group discussions, interview preparation, and simulated interviews with reputable instructors. Posting articles on competitive exams and industrial careers on departmental notice boards.
- Raising pupils understanding of career planning and career mapping
- Offering instruction in life skills. Additionally, students receive instruction in verbal reasoning, logical reasoning, and numeric ability.
- The continuation of placement efforts beyond the allotted time has passed, until every student has been placed. Signing agreements with industries to assist job placement and internships.

9.5.2. Career Guidance

v. The Jeppiaar Engineering Colleges Advisory Bureau for Higher Education was established for the benefit of students aspiring to higher education, including masters and other higher degree programs. Through frequent awareness seminars, professional organizations, and educational advisers from embassies overseas, the Bureau is connected to a team of consultants from India and other countries that are both private and government-related. For competitive exams like the GMAT, GATE, GRE CAT, IELTS, and TOEFL, the Bureau is furnished with a variety of the most recent books, journals, and CD-ROMs.

v. The Jeppiaar Engineering Colleges Advisory Bureau acts as a hub for information about advanced studies and inspires students to pursue careers in those fields. The bureaus operations include instructing students on transcript attestation, career assistance and counseling, coaching sessions led by distinguished professors for competitive exams like the GMAT, GATE, IELTS, and TOEFL, as well as brief courses in a few other languages. Students also get access to audio and visual resources for GRE, TOEFL, IELTS, and GMAT test preparation. Students can access CDs and audio cassettes on vocabulary, listening, writing, and oratory abilities to help them with their communication skills. Every year, magazines on topics like personality development, health, science, and many others are purchased to encourage reading.

v. Additionally, reputable professional organizations like IDP, Study Overseas, Global Education, SI-UK Education Council, and various foreign country collaborators like The United States-India Educational Foundation, Germany Overseas Education Consultants in Chennai, and Canada India Education Council regularly hold awareness seminars to disseminate up-to-date information about the courses offered in their respective universities and proclaim their respective qualifications. Additionally, this Bureau lends a helping hand to underprivileged students by enhancing their communication abilities, completing their training needs, and increasing their proficiency in their chosen fields of study.

9.6 Entrepreneurship Cell (5) Total Marks 5.00

Institute Marks : 5.00

9.6.1.Entrepreneurship Development Cell (EDC)

EDC was established in 2005 to foster entrepreneurship abilities and produce businesspeople for the advancement of our country. Engineering graduates are given the option to become entrepreneurs through EDC so that they can stop relying solely on employment as their career path and open up more employment prospects for their peers and juniors. Creativity, unconventional thinking for business solutions, and the capacity to accept measured risk are the fundamental qualities needed to be an entrepreneur. Students who exhibit these traits, even without having spent a dime, are welcomed with open arms at EDC in preparation for becoming great entrepreneurs.

Additionally, our Colleges EDC hosts the Jeppiaar Icon Award ceremony each year to recognize and reward exceptional entrepreneurs and alumni from all fields and walks of life. Thus, EDC satisfies students thirst for becoming successful entrepreneurs who would guide the country.

9.6.2 Institute Innovtion Council (IIC)

The Institution Innovation Council (IIC) will be established in our college during the academic year 2018–2019 with approval from the MHRD Innovation Council (MIC). Our college received a 3 star rating in the 150–300 slab for the 2023 NIRF Innovation Ranking.

IIC Committee Members Details

Sl. No.	Portfolio	Faculty In-charge	Frequency of meeting
1.	IIC President	Dr. Paul Chandra Kumar - Mech	Once in two months
2.	IIC Convener	Mr.G.C.Jagan - ECE	
3.	IIC Faculty In-charges	Dr. Regan Maria Sundarraj - SH	
		Dr. Damodharan - Mech	
		Mr. T.R.Chenthil – ECE	
		Mrs. Jeevitha – CSE	
		Dr. Vidhya – IT	
		Mr. Sorna Kumar – Biotech	
		Dr. E.Gopi - MBA	

9.7 Co-curricular and Extra-curricular Activities (10) Total Marks 10.00

Institute Marks : 10.00

Co-Curricular and Extra -Curricular Activities

Students participate in co-curricular and extracurricular activities in addition to their academic work. Student associations and student chapters typically carry out this function at the college level as well as various departmental levels. Students can develop their leadership abilities, teamwork skills, and opportunities to explore new interests through co-curricular and extracurricular activities. It is encouraged to participate in technical competitions, such as quizzes, project exhibitions, and competitions for paper presentations. The majority of these initiatives come from students who are interested in creating a vibrant culture on campus and encouraging cooperation.

Co-curricular activities:

There is a student organization or chapter in each department. These associations plan the extracurricular activities each year. The institute also organizes a national level technical student symposium each year.

All departments have department organizations with several committees for the students general growth. These committees usually organize a variety of activities. Students publish a newsletter and a magazine to showcase their creativity. Students continue to use the academic knowledge they have learned in the classroom to develop their unique characteristics by taking part in extracurricular activities.

List of Professional Societies

v. Institute of Electrical and Electronics Engineers (IEEE)
v. Computer Soceity of India(CSI)
v. The Institution of Electronics and Telecommunication Enginners (IETE)
v. Institute of Engineering and Technology (IET)
vi. Indian Society for Technical Education (ISTE)
v. Society of Automotive Engineers (SAE)

EXTRA-CURRICULAR ACTIVITIES

NATIONAL SERVICE SCHEME (NSS)

About the Unit

Through community service, the NSS Unit aims to help students develop their personalities. "NOT ME BUT YOU" is NSSs motto. It emphasizes how a persons welfare ultimately depends on the welfare of society as a whole. This captures the core of democratic behavior and supports the demands of selfless service and respect for opposing viewpoints.

Faculty Coordinator: Mr.B.Arun Vijaya Kumar AP / ECE

Major events organised:

1. Seven Days NSS Camp
2. Blood Donation Camps
3. Tree Plantation Drives
4. Organized Yoga Camp
5. Drug Awareness Campaign

Sample Photos

YOUTH RED CROSS (YRC)

About the Club

The clubs mission is to educate its young members and the public about the functions and duties of the Red Cross. This club promotes health and hygiene awareness. Students are urged to comprehend and accept their civic duties and to act in accordance with them while showing consideration for others. With commitment and devotion, students grow in their feeling of duty and service. Overall, this club supports students in developing better, inclusive friendships with everyone.

Faculty Coordinator: Dr. G.Bala Chandran AP / ECE

Major events organised:

1. International Yoga Day Celebrations
2. Blood Donation Camps
3. Awareness Programmes

Sample Photos

National Cadet Corps

About the Division:

National Cadet Corps (NCC) Naval Wing was started in our college on 17th September 2003 in the presence of Commander B.V.Ramakrishna and is functioning successfully under the excellent guidance of our Founder Chairman Colonel Dr.Jeppiaar M.A, B.L, Ph.D. and energetic Director Dr.Regeena,J.Murali B.Tech.,M.B.A.,Ph.D. Mr.S.K.Sinu Siva Singh is the care taker of our College.

The strength of NCC division is 50 cadets, including 16 Girl Cadets. Every year 20 Parades are conducted, each parade consisting of 6 periods (i.e.) 4 hours. Petty officers from 4(T.N) Naval Tech Unit train and infuse great enthusiasm in our cadets.

ACTIVITIES CONDUCTED:

COASTAL CLEANING:

Every Year our cadets participate in Coastal cleaning activities joining hands with CII- YI and International Coastal Cleanup day event and clean in ECR coastal region.

TREE PLANTATION:

Our Cadets actively participate in Tree plantation program to make our campus and world green.

BLOOD DONATION CAMP:

We also Organise, participate and donated blood during the **'Blood Donation camp'** conducted by the **Youth Red Cross** of our college.

KARGIL DAY:

26 July Kargil Day: Honoured Kargil Jawans who sacrificed their lives for protecting our Country. Wreath was placed by our Director Mrs.Regeena J.Murali and delivers the patriotic speech. Candles were lit by our Director Mrs.Regeena J.Murali followed by Principal, faculties and students participated in this historic event and made successful event every year.

Yuva club

This club gives the students a platform to develop themselves, build a skill set and it also enables them to contribute to the country , however little it may be.Yuva club of Jeppiaar Engineering College was established in the year 2014 ,and it continues to provide rare opportunities for students to showcase their talents and develop their leadership qualities . Students will work in the following sectors with delegates of various companies:

1. Entrepreneurship sector
2. Membership sector
3. Road safety sector
4. Health sector
5. Special project sector
6. Climate change sector
7. Sports sector
8. Masoom sector
9. Innovation sector
10. Rural initiative sector
11. Organ donation sector

Some of the memorable events conducted in our club includes INSTAMINDS-an inter college design thinking workshop,Care and Share- Orphanage and old age home visit by our students , Reality buzz- a virtual reality games fiesta held as part of Pratiyog 2023,Mathare-a menstrual hygiene awareness session for the girl students of Jeppiaar School, Drug abuse awareness programme held in collaboration with NCC and NSS,Health Fusion -an event to emphasize on the importance of physical and mental health among college students ,and so on.

We are extremely happy to announce that all the students of Jeppiaar Engineering College are members of Yuva club without having to pay any entry fee.

We encourage the students to take part in all the activities conducted in this club and develop themselves as well as the society.

Events Conducted by Yuva Club

The Rotaract Club

The Rotaract Club of Jeppiaar Engineering College, sponsored by Rotary Club of Madras | Rotary International District 3232 was chartered on 21st July 2015. Since then, it has been an exemplary armada of service, fellowship and growth. Our Rotaract Club is essentially to serve the community and to give back to the society that we are a part of. Following the motto of Rotary International, “Service above Self”, our ultimate goal is to make the world a better place, one day at a time.

We foster a safe and prejudice free environment for an inclusive, self-help zone for the personal development of the students into good societal beings and young professionals.

Our students do a set of signature project like VR Challenged, a project to take Virtual Reality to the physically disabled, MetroviloruNaal, which is essentially a day out with orphaned kids, riding the metro rails of chennai. Most notable is our legacy project “TAMIZHI”, a tribute to the tamil culture and our deepfounded heritage. The students find underprivileged traditional dancers and artists who are keeping our tamilartforms alive, give them a forum and conduct, what could reductionistically be labelled as a “Tamil Conference”. The students raise funds for this event via ticket sales and donate the proceeds to a good cause. In the Rotary Year 22-23, they donated it to “The Prathyasha Story”, a home for children affected with HIV AIDS.

Rotaractors, i.e., The Rotaract Club members also connect with other members across the district (the Chennai geographical area) and quite literally the entire world, through international service where they build networks that would be essential for their careers in the future.

Such is the nature of the Rotaract Club of Jeppiaar Engineering College with its 9 year legacy.

Events Conducted by Rotaract Club

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

10.1 Organization, Governance and Transparency (40) Total Marks 40.00

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

Vision :
To build Jeppiaar Engineering College as an institution of academic excellence in technological and management education to become a world class University

Mission :

M1	To excel in teaching and learning, research and innovation by promoting the principles of scientific analysis and creative thinking
M2	To participate in the production, development and dissemination of knowledge and interact with national and international communities.
M3	To equip students with values, ethics and life skills needed to enrich their lives and enable them to meaningfully contribute to the progress of society
M4	To prepare students for higher studies and lifelong learning, enrich them with the practical and entrepreneurial skills necessary to excel as future professionals and contribute to Nation's economy

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

- The All India Council for Technical Education (AICTE), the Directorate of Technical Education (DOTE), and Anna University are the regulatory agencies that Jeppiaar Engineering College abides by .The Chairman and Managing Director of the Jeppiaar group of organizations serves as the head of the Governing Council (GC), which also includes representatives from prestigious academic institutions, members of the Jeppiaar Educational Trust, nominees from governing and affiliating agencies, and industry specialists. The Governing Council makes policy decisions and creates expansion plans for the institute. The Jeppiaar Educational Trust, Management, and Governing Council are in favor of continuing to upgrade the institutions physical plant, labs, and other teaching tools.
- The Governing Council, Internal Quality Assurance Cell (IQAC), Management Review Committee Board, Program Assessment and Evaluation Committee(PAEC) and Department Advisory Committee (DAC) develop the institutes vision and mission. Periodically, internal and external audits are carried out to provide information on how funds are allocated and used, as well as how instruction is being delivered. The quality goals, practices, and metrics for the colleges ongoing improvement are handled by the Internal Quality Assurance Cell (IQAC) Organization for Standardization . The institute has a good organizational structure and an organogram, and it has delegated responsibility among internal stakeholders. Numerous committees, councils, clubs, teams, and cells have been established, and they operate with clear objectives and roles.
- In order to support both faculty and non-teaching personnel academic excellence and professional growth, welfare measures have been adopted by the Governing Council. By including them in co-curricular and extracurricular categories, as well as extension service programs, youngsters are taught the best social behaviors.

The list of various committees and respective conveners are listed in table 10.1.2.1.

Table 10.1.2.1 List of Committees and Frequency of Meeting

S.No	Name of the Committee	Chairperson / Convener	Functions and Responsibility	Frequency of Meeting
1	Governing Council (GC)	Chairman and Managing Director	Governs the institution and offers assistance for the ongoing improvement of the buildings facilities, labs, and other teaching aids.	Once in a Year
2	Management Review Committee Board	Principal	• Creates a plan for the colleges expansion and development. • Plans for resource mobilization via extra-mural financing and industrial involvement. • Review and monitoring of performance in relation to academic, research, co-curricular, extracurricular, administrative, placement, discipline, and extension activities on a regular basis with appropriate action taken.	Once in a Year
3	Internal Quality Assurance Cell (IQAC)	IQAC Convener	• Setting up quality standards • Internal audits are conducted on a regular basis, followed by recording numerous actions that contribute to quality enhancement. • Spreading knowledge and best practices to all stakeholders; preparing and submitting AQAR to NAAC. • The procedures and techniques used to carry out the internal quality management system. • Review the teaching-learning process Plan-Do-Check-Act cycle.	Twice in a Semester
5	Program Assessment and Evaluation Committee(PAEC)	Program Coordinator	• Reviews to see if the POs, PSOs, and quality objectives are being met. • Evaluates the success of the program and suggests any necessary modifications. • For key management stakeholders, prepares periodic reports or records on program activities, progress, status, or other special reports. • Encourages academics and students to participate in workshops, collaborate on projects, create working models, publish papers, give presentations, and conduct research	Twice in a semester

6	Department Academic Committee (DAC)	Head of the Department	• Follow the programs development. • Analyses of program-related challenges from the present and the future. • Develops and suggests brand-new or updated program objectives.	Once in a Year
8	Research and Development Cell	Professor In-charge	Enhance academic members and students abilities in research and development, including publications, financed projects, patents, and product creation.	Once in a Month
9	Student Development Cell (SDC)	Professor In-charge	• Through professional societies and associations, organize and give resources for extracurricular activities for students. • Obtaining input from students and launching corrective measures. • Through NSS, YRC, NCC, and clubs, organize and provide resources for extracurricular activities for students.	Once in a Month
11	Hostel Committee	Chief Warden / DeputyWarden	• Hostel accommodations should be made available for the faculty, staff, and students in need. • Uphold the standards of behavior expected in dormitories for educational institutions.	Once in a semester
12	Training and Placement cell	Professor In-charge /Training and Placement Officer	• Plan training and placement opportunities for students. • Offer students career counseling. • Set up both on- and off-campus interviews on campus. • Plan interactions with the Industry Institute.	Once in a Month
13	Class Committee	Chairperson	• The goal is to improve the teaching and learning process. • Analyzing the performance of the classs students after each test and determining the best strategies to solve difficulties. • Identifying weak students and urging that teachers assist, guide, or coach such students.	Thrice in a semester
14	Student Mentor Meeting	Convener	• Examine and evaluate academic performance. • Encourage and motivate students to thrive in academics, placement, and career development.	Once in a month

The administrative setup is shown in the Figure 10.1.2.1

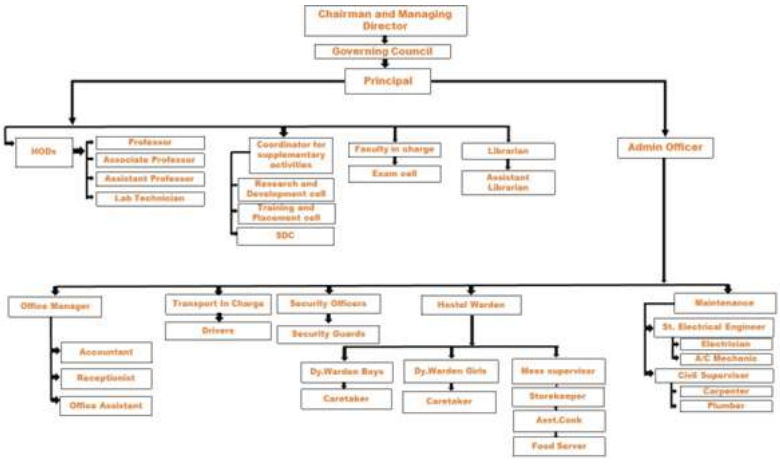


Figure 10.1.2.1 Organization Chart of administrative setup

The members of the governing body are listed in table 10.1.2.2.

Table 10.1.2.2 List of Governing Council Members

Governing Council Members			
Sl. No.	**Name**	**Position**	**Professional Occupation**
1	Dr. Regeena Jeppiaar	Chairman	Chairman and Managing Director, Jeppiaar Group of Institutions, Chennai.
2	Dr.Francis Xavier.J	Member Secretary	Principal
3	Dr.Shaleesha A Stanley	Member	Professor, Biotechnology Department.
4	Dr.J.Jebastine	Member	Professor, Electronics and Communication Engineering Department.
5	Dr.R.Jayavel	University Nominee	Professor, Anna University, Chennai.
6	Dr.V.Amalan Stanley	Member	Vice Chair, Scientific and Academic Board, IIBAT, Chennai.
7	Dr.C.Ponnuraja	Member	Scientist E, ICMR-NIRT, Chennai.
8	Dr.S.Vasudevan	Member	Director-Business Development at Institute of Analytics, USA
9	Mr. Sethuraman Krishnamoorthy	Member	Founder and Managing Director, Prag Robotics Pvt Ltd, Chennai.
10	Dr. Adithiya Pothan Raj.V	Member	Lead Architect-Technology, CTS, Chennai.
11	Dr. Arun Kumar	Member	Chief Director, Chettinad Hospitals, Chennai

Figure 10.1.2.2 depicts participation details:

JEPPIAAR
ENGINEERING COLLEGE

Governing Council Meeting

Date: 06.04.2023 Time: 11:00 AM

Venue: Conference Hall, JEC

Chairman and Member Present Details:

Governing Council Members

Sl. No.	Name	Position	Professional/Occupation	Signature
1	Dr. Regeena Jeppiaar	Chairman	Chairman and Managing Director, Jeppiaar Group of Institutions, Chennai.	
2	Dr.Francis Xavier.J	Member Secretary	Principal	
3	Dr.Shaleesha A Stanley	Member	Professor, Biotechnology Department.	
4	Dr.J.Jebastine	Member	Professor, Electronics and Communication Engineering Department.	
5	Dr.R.Jayavel	University Nominee	Professor, Anna University, Chennai.	–
6	Dr.V.Amalan Stanley	Member	Vice Chair, Scientific and Academic Board, IIBAT, Chennai.	
7	Dr.C.Ponnuraja	Member	Scientist E, ICMR-NIRT, Chennai.	–
8	Dr.S.Vasudevan	Member	Director-Business Development at Institute of Analytics, USA	
9	Mr. Sethuraman Krishnamoorthy	Member	Founder and Managing Director, Prag Robotics Pvt Ltd, Chennai.	
10	Dr. Adithiya Pothan Raj.V	Member	Lead Architect-Technology, CTS, Chennai.	–
11	Dr. Arun Kumar	Member	Chief Director, Chettinad Hospitals, Chennai	

Details about the members of the internal quality assurance cell are shown in Table 10.1.2.3.

INTERNAL QUALITY ASSURANCE CELL (IQAC)			
Sl. No.	**Composition**	**Category**	**Member(s)**
1	Member from Management	Chairman & Managing Director	Dr.M. Regeena Jeppiaar
2	Chairperson	Head of the Institution	Dr.Francis Xavier.J
3	IQAC Coordinator	Professor & Head / ECE	Dr.J.Jebastine
4	Internal Member	Dean / Academics	Dr. Shaleesha A Stanley
5	Internal Member	Assistant Professor/ Mech	Dr.J. Paul Chandra Kumar
6	Internal Member	Assistant Professor/CSE	Dr.J.Anitha Gnana Selvi
7	Internal Member	Placement Officer/CSE	Mr.A.Subash Chandar
8	Internal Member	Associate Professor/S&H	Dr.S.Titus

9	Internal Member	Associate Professor/MBA	Dr.S.Akila
10	Internal Member	Associate Professor/S&H	Dr.F.Regan Maria Sundar Raj
11	Student	ECE(2021-2025)	Gokul Sarathy R
12	Alumni	Associate Professor,Anna University,Chennai.	Dr.S.Esther Florence
13	Member from Industry	Assistant Manager,Majulah Infotech	Ms.Swathy Mani
14	Councilor, Semmanchery	Member from Local Society	A Murugesan

Circular details of IQAC Meeting is shown in Figure 10.1.2.3.

JEPPIAAR
ENGINEERING COLLEGE

INTERNAL QUALITY ASSURANCE CELL

27.05.2023

CIRCULAR

The first meeting of IQAC for the AY 2021-22 is convened on 08.06.2023,Wednesday at 10.00 AM.

Agenda of the Meeting:

- To confirm the minutes of meetings held on 03.01.2022 and25.03.2022 along with action taken report
- Presentation of NAAC review report
- Review of planned activities of 2022-23
- Plan for the academic year 2023-24
- IQAC Internal Audit
- Enrichment Program for Students & Faculty Members
- Any other Agenda with the permission of the Chair

All the members are requested to make it convenient to attend.

Principal

PRINCIPAL
JEPPIAAR ENGINEERING COLLEGE
JEPPIAAR NAGAR
RAJIV GANDHI SALAI,
CHENNAI - 600119

Details about the members of the Program Assessment and Evaluation Committee are shown in Table 10.1.2.4.

Program Assessment and Evaluation Committee(PAEC)			
Sl. No.	**Composition**	**Category**	**Member(s)**
1	Chairperson	Head of the Institution	Dr.Francis Xavier.J
2	Member	Dean / Academics	Dr. Shaleesha A Stanley
3	Member	Professor & Head / ECE	Dr.J.Jebastine
4	Member	Assistant Professor/ Mech	Dr.J. Paul Chandra Kumar
5	Member	Assistant Professor/CSE	Dr.J.Anitha Gnana Selvi
6	Member	Assistant Professor/IT	Mr.A.Subash Chandar
7	Member	Associate Professor/S&H	Dr.S.Titus
8	Member	Associate Professor/MBA	Dr.S.Akila
9	Member	Exam Cell Incharge	Dr.F.Regan Maria Sundar Raj
10	Member	Librarian	Mr.D.Marikolundu
11	Member	NSS officer	Mr.Sinu Siva Singh
12	Member	Physical Director	Mr.Thangavel

10.1.2. B. The published rules, policies and procedures with year of publication.

The faculty and non-teaching staff handbooks contain the institutions well-written and documented service regulations, processes, and promotional policies. The service standards, regulations, and procedures are provided to faculty and non-teaching staff members together with their appointment letters. Day scholars and hostel residents receive different copies of the student handbook, and the information in it is distributed at student gatherings. On the college website, a copy of the handbook that contains the rules, policies, and procedures is accessible.

Below are the main points of the welfare programs offered to faculty members and non-teaching staff members.

For Faculty Members:

- Providing Provident Fund (PF)
- Female faculty members are given a maximum of six months of paid maternity leave, with the first month being paid at full salary and the second at half compensation. Tax deductions are allowed on salary and benefits.
- 12 days of unpaid leave every year in addition to vacation. Every Month 2hours Permission is allowed.
- Promotion and increments are given based on the performance appraisal.
- Cash awards and Certificate of Appreciation for academic excellence Reward for producing 100% results in Teachers Day Celebration.
- Sponsoring the registration fee, boarding expenses and travel expenditure for participation in FDP/Workshop/STTP etc., Sponsoring the online course.
- Sponsoring the registration fee for Patent filing.
- Faculty members seeking a Ph.D. will be granted Special Leave. Incentive for publication of research articles in conferences and publications.
- An honorarium of 2% of the total grant will be paid to the Principal Investigator/Co-Investigator of the funded project, with a maximum of Rs. 2.0 lakh. In the case of Consultancy funding, the Investigator is entitled to an honorarium of 60% of the money collected, with the remaining 40% held by the college.
- Enabling employees to participate in company training programs.
- Opportunities for all faculty members to join relevant Professional Societies.
- Assisting faculty members in delivering/organizing guest lectures, conferences/seminars/workshops/FDPs. Transportation is provided for free.
- Free accommodation and food hostel for residential assistant warden / assistant warden / deputy warden.
- Free medical checkup arranged through NSS, NCC&YRC.
- Wi-Fi internet connectivity.
- Recreational activities.
- Free Transportation and Food.
- Felicitated in college functions for special achievements.

For non-teaching staff members:

- Providing PF and ESI.
- 12 days of unpaid leave every year in addition to vacation. Salary and perquisites are subject to deduction of tax.
- Free Transportation and Food.
- Free medical checkup arranged through NSS, NCC&YRC
- Recreational activities.
- Permission to pursue higher education.
- Free dress materials to all Office Assistants.
- Compliments are given to the non-teaching staff during festival times.

10.1.2. C. Minutes of the meetings and action-taken reports

Table 10.1.2.5 Minutes of meeting and action taken references

Sl. No.	Name of the meeting	Date	Figure No.
1.	Governing Council	**05.04.2023**	**10.1.2.2**
2.	Internal quality assurance cell	**08.06.2023**	**10.1.2.3**
3	Program Assessment and Evaluation Committee	**09.06.2023**	**10.1.2.4**

JEPPIAAR
ENGINEERING COLLEGE

GOVERNING COUNCIL
Minutes of Meeting

Date: 06.04.2023 **Time: 11.00 AM**

Venue: Conference Hall, JEC

Chairman and Member Present Details:

Sl. No.	Name	Position	Professional Occupation
1	Dr. Regeena Jeppiaar	Chairman	Chairman and Managing Director, Jeppiaar Group of Institutions, Chennai.
2	Dr.Francis Xavier.J	Member Secretary	Principal
3	Dr.Shaleesha A Stanley	Member	Professor, Biotechnology Department.
4	Dr.J.Jebastine	Member	Professor, Electronics and Communication Engineering Department.
5	Dr.R.Jayavel	University Nominee	Professor, Anna University, Chennai.
6	Dr.V.Amalan Stanley	Member	Vice Chair, Scientific and Academic Board, IIBAT, Chennai.
7	Dr.C.Ponnuraja	Member	Scientist E, ICMR-NIRT, Chennai.
8	Dr.S.Vasudevan	Member	Director-Business Development at Institute of Analytics, USA
9	Mr. Sethuraman Krishnamoorthy	Member	Founder and Managing Director, Prag Robotics Pvt Ltd, Chennai.
10	Dr. Adithiya Pothan Raj.V	Member	Lead Architect-Technology, CTS, Chennai.
11	Dr. Arun Kumar	Member	Chief Director, Chettinad Hospitals, Chennai

Members given leave of absence:

1 Dr.R.Jayavel, University Nominee, Professor, Anna University, Chennai.
2 Dr.C.Ponnuraja Member Scientist E, ICMR-NIRT, Chennai.
3 Dr. Adithiya Pothan Raj.V Member Lead Architect-Technology, CTS, Chennai.

The Governing Council met on April 6, 2014, at 10 a.m. at the Conference Hall. The Chairman has introduced each member to the other members, greeted everyone, and underlined the significance of the meeting. He informed the members that the Management has supplied the College with enough infrastructure and that the College is off to a promising start. He praised the Faculty members and Principal for their efforts in delivering a fantastic outcome and securing the Top Second place out of 506 Engineering Colleges. He hoped that the Institute would maintain its status and continue to enhance its outcomes.

The Principal formally welcomed the Chairman and all members of the Governing Council before presenting the agenda in detail. The Governing Council studied it item by item and deliberated as shown below. The contents of Items changed based on GC Members' suggestions are highlighted and included in the final proceedings.

1.1 To affirm the Institute's mission and vision. Resolution:

Dr. Shaleesha A Stanley informed the Chair that the Institute's goal should include phrases such as quality to represent the importance of NBA certification. Dr.S.Vasudevan, Member, Director-Business Development at Institute of Analytics, USA, advised using phrases such as societal demands.

As a result, the Principal amended the Vision and incorporated it in the approval proceedings.

Mission Resolution:

It was decided that the Mission should be approved as such.

1.2 To approve the 10-year plan and the 5-year plan for short- and long-term goals.

Short-Term Objectives

Resolution:

To boost placement, Dr. Shaleesha A Stanley advised including features on offering corporate-specific training programs. Dr.Francis Xavier.J suggested adding a segment on developing managerial skills.

Long-Term Goals:

Resolution:

To boost placement, Dr. Shaleesha A Stanley advised including features on offering corporate-specific training programs.

Dr.Francis Xavier.J suggested adding a segment on developing managerial skills.

1.2 To approve the Organization Chart

Resolution:

Dr. Regeena Jeppiaar suggested the Principal to change the Organization chart so that positions of similar importance were at the same height. Dr.Shaleesha A Stanley suggested including the jobs of Accounts Officer, Administrative Officer, Head of Corporate Affairs, PRO, and making the ERP Administrator subordinate to the Principal. Dr.J.Jebastine proposed changing the title of Accounts Officer to Finance Officer. Dr. Arun Kumar advised that Assistant Wardens be placed below Deputy Wardens. The Principal emphasized to the members that the Organization Chart depicted shows the current positions, and that if the Institute grows, new positions can be formed and included on the chart.

He stated that existing roles such as Public Relations In Charge and Office Manager cannot be renamed Public Relations Officer and Administrative Officer since the current two employees do not meet the educational and experience requirements for such jobs. He did, however, agree to include such jobs in the organization chart for future growth. The new Organization chart is submitted for approval in the procedures.

1.15 To ratify the appointment of Auditors

Resolution:

It is resolved to approve the same.

1.16 Any other matter with the permission of the Chair

Dr. Shaleesha A. Stanley has proposed, with the Chair's approval, that in order to improve the outcome and placement, a college's adoption plan, which produced the best results, be adopted. The Principal retorted that our Institute has a formal academic framework in place to assist slow learners, provide them the opportunity to advance their knowledge, and ultimately improve the outcome. To improve the outcome, it will be applied more skillfully in the upcoming academic year. A placement officer will be hired during the course of the upcoming year to organize placement in illustrious corporations.

The Principal moved a Vote of Thanks to the Chair and all Members to close the meeting.

Sl. No.	Name	Position	Professional Occupation
1	Dr. Regeena Jeppiaar	Chairman	Chairman and Managing Director, Jeppiaar Group of Institutions, Chennai.
2	Dr.Francis Xavier.J	Member Secretary	Principal
3	Dr.Shaleesha A Stanley	Member	Professor, Biotechnology Department.
4	Dr.J.Jebastine	Member	Professor, Electronics and Communication Engineering Department.
6	Dr.V.Amalan Stanley	Member	Vice Chair, Scientific and Academic Board, IIBAT, Chennai.
8	Dr.S. Vasudevan	Member	Director-Business Development at Institute of Analytics, USA
9	Mr. Sethuraman Krishnamoorthy	Member	Founder and Managing Director, Prag Robotics Pvt Ltd, Chennai.
11	Dr. Arun Kumar	Member	Chief Director, Chettinad Hospitals, Chennai

Principal

PRINCIPAL
JEPPIAAR ENGINEERING COLLEGE
JEPPIAAR NAGAR,
RAJIV GANDHI SALAI,
CHENNAI - 600119

Approved by Chairman

JEPPIAAR
ENGINEERING COLLEGE

INTERNAL QUALITY ASSURANCECELL

MINUTES OF MEETING

Date & Venue
: 08-06-2023 (10.00 AM to 11.00 PM)
: IQAC Room

Members Present

Dr.M. Regeena Jeppiaar	Member from Management
Dr.Francis Xavier.J	Chairperson
Dr.J.Jebastine	IQAC Coordinator
Dr. Shaleesha A Stanley	Internal Member
Dr.J. Paul Chandra Kumar	Internal Member
Dr.J.Anitha Gnana Selvi	Internal Member
Mr.A.Subash Chandar	Internal Member
Dr.S.Titus	Internal Member
Dr.S.Akila	Internal Member
Dr.F.Regan Maria Sundar Raj	Internal Member
Gokul Sarathy R	Student
Dr.S.Esther Florence	Alumni
Ms.Swathy Mani	Member from Industry
A Murugesan	Councilor, Semmanchery

The Chairperson Dr.Francis Xavier.J, welcomed the members of IQAC and the agenda of the meeting was taken up.

1. **To confirm the minutes of meeting held 03.01.2022 and 25.03.2022 along withaction taken report.**
Dr.J.Jebastine, IQAC coordinator read the minutes of last meeting held on 03.01.2022 along with action taken report.

2. **Presentation of NAAC DVV report and HEI claims**
Dr. Shaleesha A Stanley, Dean /Academics presented NAAC review report.

The Chairman and Managing Director appreciated the Core Working Group members, for their efforts in preparing NAAC evidences.

The Chairperson Dr.Francis Xavier.J appreciated the initiatives taken to improve thequality of education by IQAC cell under the guidance of our Chairman and Managing Director.

3. **Review of planned activities of 2022-23.**
Co-ordinator, IQAC presented the planned activities and enlightened the outcomes ofAY 2021-22.

4. **Plan for the academic year 2023-24**
- Tentative Academic schedule to be planned as affiliating University Academicschedule yet to be received for the AY 2023-24.
- Based on the AY 2022-23 EVEN End semester examination time table from affiliating University, special revision/training will be given to students on AY 2022-23 EVEN semester courses during a week before the commencement of Exams.
- Course allotment to faculty based on their competency to be done.
- Time-table to be prepared.
- Organisers of events including seminars and workshops to seek a feedback from participants at the end of the event, so that impact analysis can be done and future events be planned taking into account the suggestions of the participants.
- Faculty members will be encouraged to generate extra-mural funding

from granting agencies for conducting faculty development programs/ workshops/ national/ international Conference in the college.
- Further extra-mural funding through submission of research proposals to granting agencies from faculty members will be encouraged.
- To strengthen college's Alumni association, the Chairperson suggested that every department should continue to invite and engage at least 2-4 alumni to interact with the current batch of students.
- ICT workshops to be conducted for teaching and non-teaching staff.
- To strengthen Placement cell, members suggested conducting workshops and career counselling sessions for the students and coordinating with HR departments of various flagship companies and industries to invite them for campus recruitments.
- Innovation and Start-up promotion in campus through Institution Innovation Council (IIC)
- Internal Academic Audit to be conducted at once the college resumes.
- Online Induction Programme to the Freshers – I sem students of AY 2023-24 admission after the admission process are over.

5. **QAC Internal Audit**
IQAC internal audit will be scheduled based on the Pandemic situation in nearfuture.

6. **Online Enrichment Program for Students & Faculty Members**
- The Chairperson insisted to organize/participate in online Enrichment Program programmes. Also insisted faculty to participate in AICTE-ATAL faculty development programmes.

As a final note, the Chairman and Managing Director asked the class-teachers to conduct

online counselling session with the students to manage student's anxiety about their educationalfuture during this pandemic situation.

Dr.J.Jebastine thanked the members for being present at the meeting and concluded the meeting.

IQAC Coordinator

Principal
PRINCIPAL
JEPPIAAR ENGINEERING COLLEGE
JEPPIAAR NAGAR
RAJIV GANDHI SALAI,
CHENNAI - 600119

JEPPIAAR
ENGINEERING COLLEGE

Program Assessment and Evaluation Committee
Minutes of Meeting

The Principal (Chairman of the Program Assessment and Evaluation Committee) conducted a meeting with the members of the Management Review Committee at 3.30 pm on 09.06.2023 in principal office and discussed the following items.

Members Present :

Dr.Francis Xavier.J	Head of the Institution
Dr. Shaleesha A Stanley	Dean / Academics
Dr.J.Jebastine	Professor & Head / ECE
Dr.J. Paul Chandra Kumar	Assistant Professor/ Mech
Dr.J.Anitha Gnana Selvi	Assistant Professor/CSE
Mr.A.Subash Chandar	Assistant Professor/IT
Dr.S.Titus	Associate Professor/S&H
Dr.S.Akila	Associate Professor/MBA
Dr.F.Regan Maria Sundar Raj	Exam Cell Incharge
Mr.D.Murikolandu	Librarian
Ms.Simi Siva Singh	NSS officer
Mr.Thangavel	Physical Director

Various Points were discussed and the following decisions are taken in the meeting:

1. **Attendance of Student:** It is decided that all those students having less than 75% attendance will not be allowed to appear in Assessment exams and Model exam.
2. **Hostel facility for students having less attendance:** Hostel facility may also be withdrawn from the students having less than 60% attendance.
3. **Reschedule of Model exam :** As reference of university exam timetable the model exam reschedule for 3rd year and 4th year.
4. **Class Test For 1st year Students:** Class test will be conducted for 1st year students.
5. **Parents will be informed by the concerned department about attendance of students having below 75%.**
6. **NBA visit : In view of Forthcoming NBA Visit Hods have to give requirements in their Labs in end June 2023.**

Dean-Academics

10.1.3 Decentralization in working and grievanceredressal mechanism (10)

Institute Marks : 10.00

A. List the names of the faculty members who have been delegated powers for taking administrative decisions.

- In the shape of several cells and academic organizations, the institution has an integrated structure for quality assurance of both academic and administrative activities. The various committees are managed independently by the relevant academic coordinators. They will oversee the activities and responsibilities of the respective committees and will record action taken reports based on meeting findings on a regular basis. The following are a handful of the significant committees, as well as a list of faculty coordinators/conveners.

- Anti-ragging Committee
- Internal Complaints
- Committee SC-ST Cell
- Discipline Committee

- The Anti-Ragging Committee guarantees the protection of students on college campuses. The Principal chairs the committee, which includes officers, parents, students, and teaching and non-teaching staff members. The anti-ragging squad is formed in accordance with the recently amended Anna University, Chennai affiliation format, which is based on the rules in Appendix 12 of UGC regulations 2013 and clause 4 of AICTE regulations F.No.37-3/Legal/AICTE/2009. Table 10.1.3.1 summarizes the members of the Anti-Ragging committee.

Table 10.1.3.1 Anti-Ragging Committee Members

Sl. No	Name	Category	Profession
1	Dr.Francis Xavier.J	Principal	Principal
2	Mr.Mohamed Nazeer	Member	Police Inspector
3	Ms.Shoba	Member	NGO
4	Mr.Naveen.M	Member	Student
5	Ms.Menka.P	Member	Student
6	Mrs.Venkidalakshmi	Member	Student Affairs Exec

The Internal Complaints Committee investigates complaints and concerns of female students and female academic members inside the college. The Principal has the authority to make decisions on complaints presented by the committees Chairperson. It was established in accordance with the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act of 2013.Table 10.1.3.2 summarizes the members of the Internal Complaints Committee.

Table 10.1.3.2 Internal Complaints Committee Members

S.No	Name	Category	Profession
1	Dr.Francis Xavier.J	Chairperson	Principal
2	Dr.J.Jebastine	Member	Professor and Head, Dept. of Electronics and Communication Engineering.
3	Dr.J.Anitha Gnana Selvi	Member	Assistant Professor/CSE
4	Dr.S.Titus	Member	Associate Professor/S&H

The SC/ST division investigates employee and student complaints and grievances. The committee communicates the scholarship to students and staff and resolves any concerns that may arise. It is laid out in compliance with AICTE/UGC guidelines. The SC-ST cells membership is summarized in Table 10.1.3.3.

SC-ST Cell Members are listed in Table 10.1.3.3

SC-ST Cell (2022-2023)			
Sl. No.	**Name**	**Category**	**Profession**
1.	S.Ranjith	Chairperson	Assistant Professor, Department of ECE
2.	Dr.Muthulakshmi	Convener	Assistant Professor, Dept. of Bio-Tech
3.	Mrs.Venkidalakshmi	Member	Accounts
4.	Mr.Shankar	Member	JA
5.	Ms.B.Sakthi Mahima	Member	II year ECE
6.	Mr. B.Kishore	Member	III year ECE
7.	Mr. Akash	Member	III year ECE

The Discipline Committee supervises the students professional behavior. Regular meetings are held to ensure that the students professional code is upheld. Monitoring is performed by both teaching and non-teaching faculty members. It is organized in accordance with Anna Universitys guidelines. Table 10.1.3.4 summarizes the members of the discipline committee.

Table 10.1.3.4 Discipline Committee Members

Sl. No.	Name	Category	Profession
Discipline Committee (2022-2023)			
1.	Dr.Francis Xavier.J	Chairman	Principal
2.	Mr.A.Subash Chandar	Member	Asst. Professor , Dept. of Computer Science and Engineering.
3.	Mr.B.Arun Vijaya Kumar	Member	Asst. Professor , Dept. of Electronics and Communication Engineering.
4.	Mrs. S.Sivagami	Member	Warden (Girls Hostel)
5.	Dr.G.Jagadeesan	Member	Asst. Warden (Boys Hostel)

10.1.3 B. Specify the mechanism and composition of grievance redressal cell:

The Complaints/Grievance Redressal Committee seeks to resolve student complaints or grievances about both academic and extracurricular activities inside the college. Regarding objections brought up by the committee chair, the Principal has the final say in the matter. It is set up in accordance with the AICTE regulations 2012 and the Anna University of Chennais amended affiliation format as published in notification F.No. 37-3/Legal/2012 dated 25.5.2012. Table 10.1.3.5 lists the members of the committee, including the convener, chairperson, faculty members, and assistant wardens. It addresses all forms of complaints and concerns received from students. The breakdown is as follows.

Table 10.1.3.5 Complaints cum Grievance Redressal Committee Members

Sl.No.	Name	Category	Profession
1.	Dr.J.Anitha Gnana Selvi	Chairperson	Assistant Professor/CSE
2.	Dr.S.Titus	Convener	Associate Professor/S&H
3.	Mrs. S.Sivagami	Member	Warden (Girls Hostel)

10.1.4 Delegation of financial powers (10)

Institute Marks : 10.00

A. Financial powers delegated to the Principal, Heads of Departments and relevant in-charges:

The institution has clearly defined policies for delegating financial authority. Department heads and other in-charges of various departments such as libraries, physical education, NSS, extracurricular activities, deputy wardens, and so on. They prepare their departments annual budget, which includes the estimated expenses for expanding the departments infrastructure and labs, providing financial support to faculty members to attend conferences/workshops, paying professional society membership fees, and running various programs such as value-added courses in the college. During budget preparation, the need for any new equipment or software is also taken into account. The budget will be approved by the administrative officer.

The principal and administrative officer have the financial authority to spend Rs. 1.0 lakh per transaction without the approval of the Chairman. A Governing Council led by the Chairman is responsible for deciding the student fee structure as well as compensation revision for faculty members using an effective scaling method. They also make decisions on new laboratory and infrastructure development initiatives.

Through banking transactions, the institution ensures transparency in its financial, academic, and administrative responsibilities. Fee payments, personnel salaries, scholarships, other monetary rewards for students, and vendor payments are all processed through the bank. The Trust oversees the proper operation of the financial and institutional mechanisms. The recognized auditing agency audits the budget and expenditures on a regular basis.

Sl.No.	Positions	Maximum Limit (Rs)	Duration
1.	Principal, Admin Officer	1,00,000	Per transaction
2.	Heads of the Departments	10,000	Per semester
3.	Accountant	10,000	Per semester
4.	Physical Director	5,000	Per semester
5.	NSS, YRC, NCC officer	5,000	Per semester
6.	Lab In-charges	5,000	Per semester
7.	Hostel Deputy Warden	5,000	Per semester
8.	Power House In-charge	5,000	Per semester

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

A. Information on the policies, rules, processes is to be made available on the website:

- The institution has a website and a Facebook page where periodic announcements and statistics are made available to the public and other relevant parties. The website address is https://jeppiaarcollege.org/jeppiaar/ (https://jeppiaarcollege.org/jeppiaar/). The colleges main website disseminates the colleges vision and mission statements, as well as its quality policy. The college website provides information about the Jeppiaar group, admission policies, department information, infrastructure, laboratory facilities, faculty members, placement records, Recruiters, Stakeholders, extracurricular, co-curricular, and research and development activities.The policies, the information on mandatory disclosure and processes are disseminated in the webpage.
- Recent events or programs held at the college, soft copies of weekly publications, information about professional groups, and student achievements and prizes are all available on the website. The public can view Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) on the department web page.The notices for numerous upcoming events and programs are also featured on the home page. Facebook is used to communicate college and departmental events to students, the general public, and alumni. The handbooks, which are distributed to students and faculty members, contain information about college policies, procedures, and processes.
- Circulars about academic and non-academic activities are distributed to students, teaching and non-teaching faculty members on a regular basis. They are also put on the main and department notice boards for general information if necessary. A suggestion box has been installed in the main building and the hostel for students to express their concerns. To facilitate successful communication, the college has established individual e-mail addresses for students and academic members. Newspapers cover a wide range of events.

B. Dissemination of the information about student, faculty and staff:

- Our college website includes a detailed profile of each faculty member. The college website features faculty innovative practices, student innovative projects, co-curricular and extracurricular activities. Banners display the students who were chosen for campus placement and internships. The same information is also shown on the placement notice board and on Facebook. Students accomplishments and accolades are displayed on websites. Students, faculty members, and non-teaching staff met on a regular basis to discuss knowledge. The meeting minutes will be distributed to all stakeholders, including teachers, staff, and students. The daily updates are distributed via email, website, Facebook, and so on.

Students departure information, grade statements, and other emergency information are communicated to their parents using SMS services.

Home Page

https://jeppiaarcollege.org/jeppiaar/ (https://jeppiaarcollege.org/jeppiaar/)

Mandatory Disclosure

https://jeppiaarcollege.org/jeppiaar/# (https://jeppiaarcollege.org/jeppiaar/#)

Admission Policy

https://jeppiaarcollege.org/jeppiaar/academic/ (https://jeppiaarcollege.org/jeppiaar/academic/)

Training and Placement

https://jeppiaarcollege.org/jeppiaar/placements/ (https://jeppiaarcollege.org/jeppiaar/placements/)

Library

https://jeppiaarcollege.org/jeppiaar/library/ (https://jeppiaarcollege.org/jeppiaar/library/)

Research

https://jeppiaarcollege.org/jeppiaar/research-development/ (https://jeppiaarcollege.org/jeppiaar/research-development/)

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30) Total Marks 30.00

Summary of currentfinancial year's budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years :

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 2022-23

Total Income 194116090				Actual expenditure(till…): 190703254			Total No. Of Students 1670
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
180940372	0	0	13175718	164269164	26434090	0	114193.57

Table 2 - CFYm1 2021-22

Total Income 117008254				Actual expenditure(till…): 117310935			Total No. Of Students 2103
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
108396306	0	0	8611948	100684133	16626802	0	55782.66

Table 3 - CFYm2 2020-21

Total Income 151539360				Actual expenditure(till…): 146638770			Total No. Of Students 2470
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
140774424	0	0	10764936	125855167	20783603	0	59367.92

Table 4 - CFYm3 2019-20

Total Income 184012080				Actual expenditure(till…): 177953053			Total No. Of Students 3129
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
170940372	0	0	13071708	152717963	25235090	0	56872.18

Items	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**	**Budgeted in 2020-21**	**Actual Expenses in 2020-21 till**	**Budgeted in 2019-20**	**Actual Expenses in 2019-20 till**
Infrastructure Built-Up	5524000	5311000	2150000	2049600	2575000	2562000	3125000	3111000
Library	1554000	1491900	930000	923737	1190000	1154672	1300000	1293790
Laboratory equipment	2250000	2149140	1500000	1415904	1780000	1769880	2150000	2149140
Laboratory consumables	18750000	1670250	1150000	1100400	1400000	1375500	1750000	1670250
Teaching and non-teaching staff salary	160000000	180940372	100000000	95524716	120000000	119405895	150000000	144992873
Maintenance and spares	2950000	2839539	1850000	1738990	2200000	2173738	2700000	2639539
R&D	560000	525000	300000	280000	400000	350000	450000	425000
Training and Travel	1450000	1366800	1000000	900480	1150000	1125600	1425000	1366800
	13550000	13206961	9500000	9030468	11500000	11288085	14000000	13706961
Others, specify	0	0	0	0	0	0	0	0
Total	**206588000**	**209500962**	**118380000**	**112964295**	**142195000**	**141205370**	**176900000**	**171355353**

10.2.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

Since the institution is in a growth phase, college administration has made it a point that funding should not be a barrier to a healthy rate of expansion. A sufficient budget is set aside, and expenditure is closely managed. Under no circumstances should the teaching-learning process be jeopardized due to a lack of funds.

Infrastructure and Major Equipment Purchase

Each department creates a budget at the start of each academic year under the headings of capital goods, recurring items, research and development (R&D), training and travel (Faculty and students), and miscellaneous expenses. The estimated budgets of all departments are aggregated and submitted for approval to the Chairman.

The proposals for infrastructure growth and expansion will be debated in the college academic committee, the IQAC, and the planning and monitoring boards before being formally recommended to the Chairman and Governing Council. The budget will be assigned and spent after GC approval. The costs under this section will be handled by the Jeppiaar Educational Trust, which is the primary contributor to the creation and maintenance of the college infrastructure. From the sanctioned approval, the departments will get their share for the purchase of equipment and other infrastructural development of the respective departments.

As of now, the requested and suggested budgets have been sanctioned and adequately supported by the administration and trust for the colleges development. The facilities have been designed in accordance with the AICTE and Anna Universitys statutory standards. Furthermore, the amenities were designed and supported with the students overall growth in mind.

Employee Cost

This budget covers salaries, wages, and employer contributions to PF and ESI, pre-employment medical charges, employee welfare schemes such as fee concession, benefits, and medical insurance (mediclaim). Since its beginning, the college has maintained a student-staff ratio in accordance with industry standards. The remuneration is paid in accordance with the law. This category received the majority of the funds.

Student Cost

The income also covers the costs associated with pupils. This expense is classified as follows. It does not include the cost of training and placement, which is paid for separately.

Academic Expenses;

The produced cash also covers academic expenses for both faculty and students. The various heads are as follows:

Training and Placement

Training and placement costs are also anticipated solely at the start of the year to provide enough training. It allows pupils to obtain higher placement rates.

Governance/Administration

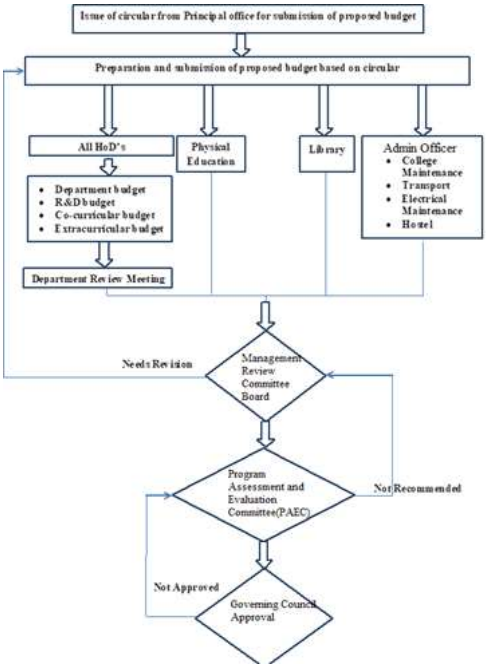
To cover Anna Universitys statutory expenses, AICTE, the consortium of self-financing engineering institutions, accreditation (NAAC and NBA), and Quality Maintainence.

Regular Expenses and Maintenance

The Admin Officer develops a projected budget for regular and maintenance expenses at the start of each year, and the consolidated budget proposal is forwarded to the Chairman for approval. The budgeted money is used for monthly expenses and maintenance work. The following titles are included under this budget heading.

Budget preparation and Approval process in JEC

- The department HoDs inform about the circular to department coordinators of various association and activities. The department coordinators prepare budget proposal based on their academic plan and submits for review of HoD in the Department Review Meeting (DRM). The HoD reviews the budget proposal and justifies the requirement with the department coordinators.
- The Physical Education Director of the college prepares a budget proposal considering activities planned for the following academic year. The physical Director consults with team captains of different games and receives their requirement. After reviewing all the requests, the Physical Director prepares the budget proposal and submits it to the MRC for approval.
- The Training and Placement officer develops a budget plan for the academic year, taking into account training and travel expenses for trainers and interviewers, travel expenses for industry visits, hospitality charges, and so on. The budget is submitted to the MRC for approval.
- The College Librarian develops a budget plan based on changes in university regulations, requests from HoDs and faculty members from all departments, and requests from the colleges research coordinator about journal, e-journal, and educational magazine requirements. After gathering all of the prerequisites, the Librarian submits the budget plan to the MRC for approval.
- The colleges Deputy General Manager - Administration Admin Officer creates a budget plan after examining requests from the Deputy wardens of the boys and girls hostels, the transport officer, and the electrical maintenance supervisor. Following the consolidation of all requirements, the Admin Officer submits the budget plan to the MRC for approval.
- Budget requests from all departments, including the Admin Officer, Librarian, and Physical Director, are aggregated and submitted for approval to MRC members. The whole budget plan is discussed in detail during the MRC meeting. Following debate, the budget plan is recommended to the Planning and Monitoring board for approval, with any necessary revisions. If the Committee suggests any adjustments or modifications, the ideas are forwarded to the appropriate department for consideration.
- After considering the complete budget proposal, the Planning and Monitoring Board recommends or forwards it to the Governing Council for approval. The budget proposal that is not supported by the planning and monitoring board is forwarded to the MRC committee for additional consideration.
- The Governing Council approves the budget, which is subsequently sent to all department heads, the administrative officer, the physical director, and the librarian. If the budget proposal is not approved by the Governing Council, it is referred to the Planning and Monitoring Board with the necessary input to make the necessary changes to the proposal.



10.2.2 Utilization of allocated funds (15)

Institute Marks : 15.00

The details of expenses utilized under different heads are explained as follows Infrastructure, Library, Laboratory Equipment and other common capital items

The expenditure related to these major items is utilized through Jeppiaar educational Trust under which Jeppiaar engineering college is functioning. The fund is additionally invested by the Trust as part of Social Responsibility for the benefit of students and overall growth of the institutions besides fee collections. Separate audited statements for these expenses are maintained by the Trust. The student fee collection is utilized only for the following expenses

Laboratory consumables

The purchase power below Rs. 1,00,000 per transaction is within the purview of Principal, Vice-principal and DGM(A). Most of the required laboratory consumables are purchased and allocated amount is utilized properly.

Teaching and non-teaching salary

The expenditure related to salary of employee is allocated and utilized based on the yearly requirements. Major portion of the student fee collection is spent towards the employee's salary.

Maintenance and Spares

Sufficient funds are also allocated and utilized for the maintenance of the various items such as electricity, water resource management, sanitary requirements, maintenance and service of laboratory equipment, greenery maintenance, hostel facilities, food etc.,.

R&D

As our college is only a 6 years old institution, our primary focus is on the establishment of teaching-learning process and the required infrastructural facilities. We gradually promote the research and developmental activities in our college and try to improvise R&D map of the college. The utilization with respect to R&D.

Training and Travel

The allocated fund is effectively utilized for both the faculty and students' training and travel activities. The student supportive activities such as value added course, placement training, co-curricular and extra-curricular activities etc., are also utilized from the part of the students' fee collection.

Miscellaneous expenses

The other expenses such as electricity charges, telephone and postage, printing and stationery, audit and accountancy charges, advertisement, interest to bank, student scholarship etc., are utilized under this head.

Other expenses

The expenses related to hostel and transport is mentioned under this head.

10.2.3 Availability of the audited statements on the institute's website (5)

Institute Marks : 5.00

https://jeppiaarcollege.org/NBA/4.4.1%20Budget%20details%202022%20-%202023.pdf

10.3 Program Specific Budget Allocation, Utilization (30)

Total Marks 30.00

Institute Marks :

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 2022-23

2830000		Actual expenditure (till…): 2779300		Total No. Of Students 387
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
130000	2700000	122500	2656800	7181.65

Table 2 :: CFYm1 2021-22

2705000		Actual expenditure (till…): 2591050		Total No. Of Students 377
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
120000	2585000	111500	2479550	6872.81

Table 3 :: CFYm2 2020-21

2615000		Actual expenditure (till…): 2537000		Total No. Of Students 366
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
115000	2500000	102000	2435000	6931.69

Table 4 :: CFYm3 2019-20

2635000		Actual expenditure (till…): 2529300		Total No. Of Students 411
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
110000	2525000	101500	2427800	6154.01

Items	**Budgeted in 2022-23**	**Actual Expenses in 2022-23 till**	**Budgeted in 2021-22**	**Actual Expenses in 2021-22 till**	**Budgeted in 2020-21**	**Actual Expenses in 2020-21 till**	**Budgeted in 2019-20**	**Actual Expenses in 2019-20 till**
Laboratory equipment	135000	133500	140000	125000	130000	120500	130000	121500
Software	82000	78000	80000	70000	75000	68000	70000	65000
Laboratory consumable	45000	38000	50000	40000	45000	42500	45000	40000
Maintenance and spares	40000	35000	35000	30000	40000	35000	40000	32500
R & D	30000	25000	30000	25000	22500	20000	30000	25000
Training and Travel	10000	8500	12000	10000	8000	5000	11000	9500
	0	0	0	0	0	0	0	0
Total	**342000**	**318000**	**347000**	**300000**	**320500**	**291000**	**326000**	**293500**

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

- The department budget is produced at the start of each academic year under the headings of Capital Goods, Recurring Items, Research and Development (R&D), Training and Travel (Faculty and Students), and Miscellaneous Expenses. Capital items include lab equipment, software, tools, and infrastructure. Lab consumables, maintenance, services, spares, Annual Maintenance Contract (AMC), and licenses are included in the budget for recurring expenses.
- The budget for attending research events (Faculty and Students), organizing research programs (Conferences / Workshops / Seminars / Special lecture / Research Development Programme, purchase of Journals, Magazines, and books / standards / code books / encyclopedia / hand books) is accounted for under the R&D heading. The R&D head also covers seed money for research projects, patent filing, incentives for research achievements, acquiring equipment, and constructing modern R&D laboratories for conducting research operations on campus.

A second heading, Training and Travel, is designated to improve the competency of staff and students. The following activities are sponsored under the Training and Travel category:

- To attend FDP, Short Term Training Programme (STTP) and other training programs. Online Course Fee
- To Conduct Value Added Courses (VAC).
- To Participate in Various National Level Competitions by Students.

The department review meeting discusses budget allocation and adequacy. It is presented to the Principal by the Department Head via the Admin Officer. At the Management Review Committee Board meeting, the proposed budget for each department is discussed.

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

On receiving the Chairman approval, the allocated fund is utilized under the following heads, are done with the support of purchase committee.

- Capital and Consumable Items.
- Annual Maintenance Contract.
- Co-curricular and Extra-curricular Activities.
- Research and Development.
- Training and Travel.
- Miscellaneous Expenses.

Procedure for Using Capital and Consumable Items Funds:

- Finalize the specs for the equipment/consumables to be acquired with the HOD/Department In-Charge/Librarian/Physical Director. The buying committee prepares and maintains a list of approved vendors for the institution based on quality, delivery, and service. The vendors transmit the quotation to the concerned department/in charge through sealed cover or email. Quotations are forwarded to the procurement committee for further processing after they are received (at least from three reputable vendors). The lab in-charge or concerned department prepares a comparative statement based on the quotations. The vendors have been summoned to a meeting with the buying committee to negotiate. If necessary, a final comparable statement is prepared following the negotiation. Terms and limitations are included in the purchase order.
- To ensure timely delivery, the procurement committee follows the vendor. The operational condition of the articles is confirmed by the respective Lab in charges and department heads whenever they are delivered. The specifics of the equipment/items are recorded in the appropriate stock registry. Finally, payment approval has been granted. In the event of a discrepancy, the received items are either returned to the vendors for replacement or rejected by the procurement committee.

Procedure for Using Annual Maintenance Contract Funds:

- The annual maintenance contract information for varied equipment are given to the procurement committee for further decision. The department is responsible for maintaining a list of service providers and monitoring the services supplied.
- At the end of each academic year, the effectiveness of the suppliers is measured based on the quality, delivery, service, and support provided, and the results are submitted to the purchase committee. The lists of approved suppliers are updated based on the input.

Procedure for Using Co-Curricular and Extra-Curricular Activities Funds:

- The annual budget is prepared by the appropriate faculty coordinator based on the suggested annual plan.
- The suggested estimated budget is submitted to The Principal for approval by the respective coordinator via the Administrative Officer and Vice Principal. Following allocation based on appropriate deliberation, it is forwarded to the chairman for approval.
- Following approval, the appropriate coordinator or in-charge uses the funds in a sequential manner in accordance with their annual plan, with the Principals consent. The operations are carried out in accordance with the annual plan and the budget granted.

After the conduct of each activity, the utilization is submitted to the coordinator with the following document:

- **Expenditure along with bills.**
- **Report about the event organized.**
- **Copy of approval to be enclosed for ready reference.**

Procedure for Research and Development Fund Utilization:

- The R&D budget is used to foster R&D culture by constructing modern laboratories and purchasing the necessary materials. The institutes intellectual property is protected by filing a patent. The institute covers the costs of patent filing.
- Under the research promotional expenses heading, the institute pays for research promotional efforts such as publishing articles in journals and presenting papers at conferences. The RIT seed money is used to provide some financial support to research-oriented student projects.

Procedure for Training and Travel Fund Utilization:

- The annual budget is prepared by the Department Head based on the proposed annual plan and faculty performance appraisal recommendations. The suggested estimated budget is presented to The Principal for approval by the Department Head via the Admin Officer. Following allocation based on appropriate consideration, it is forwarded to the Chairman for approval.
- To participate in various programs, the respective faculty should send a permission request letter to the Principal via the respective HOD, along with the following.
    1. Brochure of FDP/Workshop/STTP
    2. Permission letter to use the amount under the Training and Travel expense.
- Following approval, the faculty use the funds to cover registration fees, travel expenses, and boarding charges for FDP/Workshop/STTP as outlined in their annual plan, with the Principals consent. The faculty reports the utilization details to the department with the following documents after attending the FDP/workshop/STTP.
    1. Expenditure along with bills
    2. Participation certificate provided by the organizing institute
    3. Report of FDP/workshop/ STTP attended.

10.4 Library and Internet (20) Total Marks 20.00

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

Institute Marks : 10.00

DETAILS ABOUT THE LIBRARY

Description	Availability
Carpet Area of Library	24000 Sq.feet
Reading Space	8000 Sq.feet
Number of Seats in Reading Space	195
Average Number of User Transactions Per Day	187
Average Number of Users Per Day	278
Working Days	6 days per week
Weekends and on Holidays (Except National Holidays)	Sunday 1/2 Day
Number of Library Staff	3
Number of Library Staff with a Degree in Library Management	3
Computerization for Search, Indexing, Issue/Return Records	Yes
Library Services on Intranet	Yes
Bar Coding Used	Yes
NPTEL Video Courses	Yes
INDEST or Other Similar Membership Archives	Yes

Library Staff Details

S.No	Name	Qualification	Designation
1	Mr.V.MARIKOLUNDU	M.A, MLIS	LIBRARIAN
2	SARASWATHI.R	B.A., MLIS.	ASSISTANT LIBRARIAN
3	DIVYA.D	BSC. MLIS.	LIBRARY ASSISTANT

COMPUTER FACILITIES: 52 Nos

INSTITUTIONAL MEMBERSHIPS

1. DELNET
2. ANNA UNIVERSITY LIBRARY
3. NATIONAL DIGITAL LIBRARY OF INDIA
4. NDLI CLUB MEMBER
5. NPTEL COPYING CENTER IIT MADRAS

The Library has a rich collection of books on Engineering, Science & Humanities and Besides General collection of books, the Library also has specialized collections that are maintained separately.

At present, the Library has following volumes with titles:

Titles and Volumes

Number of Titles available at present : 9958

Number of Volumes available at present : 141459

Details of Number of Books Available Department Wise

Sl.No	DEPARTMENT	TITLES	VOLUMES
	UG COURSES		
1	B.E.CSE	1248	19539
2	B.E.ECE	1270	20275
3	B.E.MECH	1236	25486
4	B.E.EEE	709	18961
5	B.E.AERO	195	5259
6	B.TECH-[IT]	1213	21822
7	B.TECH-[BIO TECH]	802	9200
8	B.TECH-[AI&DS]	186	2036

9	SCI & HUM	1098	5670
10	GK	153	1143
	PG COURSES		
11	MBA	1626	8502
12	M.E-[CSE]	130	1940
13	M.TECH-[BIO TECH]	92	1626
Total		**9958**	**141459**

Department Wise Textbooks & Reference Books Details

Sl.No	Department	Books	
		Textbook	Reference
1	B.E.CSE	19169	370
2	B.E.ECE	19992	283
3	B.E.MECH	25139	347
4	B.E.EEE	18698	263
5	B.E.AERO	5090	167
6	B.TECH-[IT]	21562	260
7	B.TECH-[BIO TECH]	9127	073
8	B.TECH-[AI&DS]	2013	025
9	SCI & HUM	5483	187
10	GK	-	1143
	PG COURSES		
11	MBA	8333	169
12	M.E-[CSE]	1922	018
13	M.TECH-[BIO TECH]	1609	017
	TOTAL	**138137**	**3322**

New Titles and Volumes added during the last three assessment years

Description	CAY 2023-24	CAY 2022-23	CAY 2021-22
Number of New Titles added	101	176	164
Number of New Volumes added	1830	3757	5024

Institutional Membership

The college is an Institutional Membership DELNET, Anna University Library, National Digital Library of India, NDLI Club Member, NPTEL IITM, to facilitate the staff and students to borrow books, journals and video programmes that are not available in the institution.

National Digital Library : Web Address : https://ndl.iitkgp.ac.in (https://ndl.iitkgp.ac.in)

DELNET : Developing library Network (International Library Network) – avail any book, Xerox or soft copy of any journal article through ILL (Inter Library Loan)
Website: www.delnet.nic.in (http://www.delnet.nic.in/)

Web Address: http://Chennai.useonsulate.gov/resources.html

Anna University Library Web Address: https//annauniv.edu/Library/

cards borrow - one books, magazines and CD, against each card

Links

E-journals / Books

- DELNET. http://delnet.in/index.htm

Recommended Websites

- NPTEL http://nptel.ac.in/ (http://nptel.ac.in/)
- JSOR https://www.jstor.org/
- *MIT Open Course Ware*:http://ocw.mit.edu/index.htm (http://ocw.mit.edu/index.htm)
- *Harvard* online *courses:* http://www.extension.harvard.edu/open-learning-initiative (http://www.extension.harvard.edu/open-learning-initiative)
- Electronics for You http://electronicsforu.com/newelectronics/default.asp (http://electronicsforu.com/newelectronics/default.asp)

Useful Links to access Online Journals

- Directory of Open Access Journals: http://www.doaj.org/ (http://www.doaj.org/)
- Indian Academy of Sciences (IAS) – 11 free Indian online journals http://www.ias.ac.in (http://www.ias.ac.in/)
- NISCAIR Full Text Journals http://nopr.niscair.res.in/ (http://nopr.niscair.res.in/)
- BENTHAM 175 Open Access Journals http://www.bentham.org/open/a-z.htm (http://www.bentham.org/open/a-z.htm)
- Journal of the Indian Institute of Science http://journal.library.iisc.ernet.in/ (http://journal.library.iisc.ernet.in/) https://link.springer.com/journal/41745
- IETE Journals (Institution of Electronics and Telecommunication Engineers) http://www.ietejournals.or (http://www.ietejournals.or) https://www.tandfonline.com/loi/tijr20
- (Electronic Journal of University Malaya (EJUM) http://ejum.fsktm.um.edu.my/
- National Institute of Science Communication (NISCOM) http: //www.niscair.res.in
- Springer: https://www.springeropen.com/ (https://www.springeropen.com/)
- Elsevier https: //www.elsevier.com/about/open-science
- Sage Open: http://journals.sagepub.com/home/sgo (http://journals.sagepub.com/home/sgo)
- High Wire Open 320 Journals: http://highwire.stanford.edu/lists/freeart.dtl (http://highwire.stanford.edu/lists/freeart.dtl)
- Hindawi open 200 Journals: https: //www.hindawi.com/journals
- The European Association for Signal Processing EURASIP) Journals: https://www.eurasip.org
- Institute of Physics electronic journals (IOP) 60 e-journals: http://iopscience.iop.org/journalList (http://iopscience.iop.org/journalList)
- Lebanese American University 600 free e-journals: http://libraries.lau.edu.lb/research/databases/ (http://libraries.lau.edu.lb/research/databases/)
- Royal Society Journals: https://royalsociety.org/journals/ (https://royalsociety.org/journals/)
- Sciencedomain International: http://www.sciencedomain.org/ (http://www.sciencedomain.org/)
- ARPN Journal of Science and Technology: http://www.ejournalofscience.org/ (http://www.ejournalofscience.org/)

- IETE Journals (Institution of Electronics and Telecommunication Engineers) http://www.ietejournals.or (http://www.ietejournals.or) https://www.tandfonline.com/loi/tijr20
- (Electronic Journal of University Malaya (EJUM) http://ejum.fsktm.um.edu.my/
- National Institute of Science Communication (NISCOM) http: //www.niscair.res.in
- Springer: https://www.springeropen.com/ (https://www.springeropen.com/)
- Elsevier https: //www.elsevier.com/about/open-science
- Sage Open: http://journals.sagepub.com/home/sgo (http://journals.sagepub.com/home/sgo)
- High Wire Open 320 Journals: http://highwire.stanford.edu/lists/freeart.dtl (http://highwire.stanford.edu/lists/freeart.dtl)
- Hindawi open 200 Journals: https: //www.hindawi.com/journals
- The European Association for Signal Processing EURASIP) Journals: https://www.eurasip.org
- Institute of Physics electronic journals (IOP) 60 e-journals: http://iopscience.iop.org/journalList (http://iopscience.iop.org/journalList)
- Lebanese American University 600 free e-journals: http://libraries.lau.edu.lb/research/databases/ (http://libraries.lau.edu.lb/research/databases/)
- Royal Society Journals: https://royalsociety.org/journals/ (https://royalsociety.org/journals/)
- Sciencedomain International: http://www.sciencedomain.org/ (http://www.sciencedomain.org/)
- ARPN Journal of Science and Technology: http://www.ejournalofscience.org/ (http://www.ejournalofscience.org/)

Magazine

- The central library is subscribing national and international journals/magazines.
- The issues of the particular volumes are bound together and stacked in the Back volumes section for reference.
- Back volumes are available in the central library.
- Journals/magazines (current issues and back volumes) cannot be borrowed.

Arrangement of Print Resources

- Books are arranged according to subject based on Dewey Decimal Classification (DDC) Scheme.
- Rack guides are provided for book racks
- Periodicals subscribed/received by the library are arranged alphabetically for each programme in current periodical section.
- Back volumes of periodicals are arranged according to alphabetical order of subject in Back volume section.

- UG and PG Project reports are available in the library for reference.

A rich reference collection for referencing within the library is available in the Reference Section.

Non Book Materials CD, Audio Cassette, Video Cassette, Etc...

The following non-book materials are also available in Library

S.No	Category	Nos
1.	Educational CDs	1152

Our library provides a sizable collection of Compact Discs and Audio/Videos related to Engineering College and other related courses. All the speeches of top professionals delivered have been archived in the CD ROM format to enable the students and other users to imbibe the thoughts and values adopted by such eminent personalities.

Book Stack Section

This section contains printed books in all areas relevant to the Engineering Education and course curriculum. The books may be borrowed as per the specified circulation policy. Department wise the Books are arranged according to the **Dewey Decimal Classification (DDC)** order.

Circulation Section:

·Circulation section includes issue, return and renewal by the users using their Identity card.

·The Bar coding technology is adapted to each users Identity card and also with library software to speed up the circulation process.

·Students can borrow 7 books at a time and must retain them within a period of 15 days, before the due date.

·Faculty members can borrow 10 books at a time as they might require more books to refer for delivering excellent lectures.

Library Membership

- Membership is automatically conferred to all the faculty members, research scholars or a student on his / her joining the College and remains valid for his full tenure.
- All students are eligible to check out materials for home use, or for use in the library.
- To borrow books from the library you have to activate your membership in the library circulation counter

Loan Periods/ Account Limits

- Category of members, period of loan and number of books are as follows you should take the book you wish to borrow to the Issue Desk. The book will be issued to you and the date it is due for return will be stamped on the date slip inside.
- Enter the details of the book in the register kept in the counter.

Overdue Charges

- Books in loan section are issued as per rules.
- An overdue notice is sent via e-mail when an item is not returned.
- Fines will accumulate each day including Holidays until the item is returned to the library
- An overdue charge of Rs.1/- per day for first five days and thereafter Rs 2/- per day will be charged if the book is not returned.

Renewal

- Most library books, unless reserved for another patron, may be renewed for 2 additional loan periods.
- For renewal a user has to bring books to the Circulation Counter and renew the borrowed books in his/her library account.

Digital Section

The Library boasts an in-house Digital Library, allowing access to all online and digital resources available in the Library.

- E-Journals
- E-Books
- DELNET
- NPTEL
- National Digital Library
- Open Access Journals

10.4.2 Internet (10) Institute Marks : 10.00

Name of the Internet provider	Hathway pvt ltd
Available band width	100 Mbps
WiFi availability	Yes
Internet access in labs, classrooms, library and offices of all Departments	100Mbps
Security arrangements	Cyberoam Firewall

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)

PSO3	Adapt to emerging electronics and communication technologies and develop innovative solutions for existing and newer problems.
PSO1	Design, develop and analyze electronic systems through application of relevant electronics, mathematics and engineering principles.
PSO2	Design, develop and analyze communication systems through application of fundamentals from communication principles, signal processing, and RF System Design & Electromagnetics.

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. J Francis Xavier
Designation : Principal
Signature :

PRINCIPAL
JEPPIAAR ENGINEERING COLLEGE
JEPPIAAR NAGAR,
RAJIV GANDHI SALAI,
CHENNAI - 600119

Seal of The Institution :

JEPPIAAR ENGINEERING COLLEGE
CHENNAI
600 119
RAJIV GANDHI SALAI

Place : Chennai
Date : 06-10-2023 10:34:08