RAO BAHADUR Y MAHABALESWARAPPA ENGINEERING COLLEGE, BALLARI, KARNATAKA

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

UPDATED SAR

(CAY2021-22, CAYm2 2020-21, CAYm2 2019-20)

APPLICATION NO: 6201-22-12-2021

PART A

PART A: Institutional Information

1. **Name and Address of the Institution:**

   Rao Bahadur Y. Mahabaleswarappa Engineering College,
   (Formerly Vijayanagar Engineering)
   Cantonment, Ballari - 583104

2. **Name and Address of the Affiliating University:**

   Visvesvaraya Technological
   University, Jnana Sangama,
   Belagavi-590018

3. **Year of establishment of the Institution: 1980**
4. **Type of the Institution:**

   University
   Deemed University Government
   Aided
   Autonomous
   Affiliated √

5. **Ownership Status:**

   Central Government
   State Government
   Government Aided
   Self-financing √
   Trust
   Society √
   Section25Company
   Any Other (Please specify)
   Provide Details:

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

Institutions – Degree Level Courses				
Sl. No	**Name of the Institution(s)**	**Year of Establishment**	**Programs of Study**	**Location**
1	Veerasaiva College	1945	Non-Technical	Veerasaiva College Campus, Airport Road,
2	Smt. Allum Sumangalamma Memorial Women's College	1969	Non-Technical	Sri Togari Veerappanavara Datti Avarana, Allum Sumangalamma Road, Gandhinagar, Ballari
3	Vijayanagar College	1964	Non-Technical	Hospet, Ballari District, Karnataka
4	Kottureshwara College	1967	Non-Technical	Kottur, Ballari District, Karnataka
5	Gangavathi Bhagyamma Rural College	1970	Non-Technical	Hoovinhadagali, Ballari District, Karnataka
6	Ambli Dodda Bharamappa First Grade College	1972	Non-Technical	Harapanahalli, Ballari District, Karnataka
Institutions – Professional Courses				
7	RYMEC, Ballari	1980	Technical	Veerasaiva College Campus, Airport Road, Cantonment, Ballari
8	PDIT, Hospet	1997	Technical	Sha Bhavarlal Babulal Nahar Campus, T.B. Dam, Hospet
9	Hangal Kumareshwara Polytechnic	1997	Technical	Veerasaiva College Campus, Airport Road, Cantonment, Ballari
10	Allum Karibasappa Institute of Management	1998	Non-Technical	Veerasaiva College Campus, Airport Road, Cantonment, Ballari
11	Vunki Sanna Rudrappa Law College	1975	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
12	Togari Veeramallapa Memorial College of Pharmacy	1985	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
13	Kottur Swamy College of Education	1963	Non-Technical	Ballari, Karnataka

14	Sha Babulal Bhavarlal Nahar College of Education	2004	Non-Technical	Sha Bhavarlal Babulal Nahar Campus, T.B. Dam, Hospet
15	Kottur Swamy P.G. studies in Education	1993	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
16	GBR College	1970	Non-Technical	Hadagli
Institutions – PU (Plus 2) Course and High Schools				
17	Setra Gurushanthappa Pre- University College	1942	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
18	Kittur Rani Chennamma Girl's High School	1993	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
19	Haraginadoni Basavanagouda Pre- University College	1963	Non-Technical	Kudithini, Ballari(T) & (Dt)
20	Vijayanagar Comp. Pre-University College	1963	Non-Technical	T.B.P. Munirabad, Koppal (Dt)
21	Kinnalu Parammombe Gurusiddappa High School	1968	Non-Technical	Hagaribommanahalli (T) Tambrahalli Ballari (Dt)
22	Akki Basamma Thotappa	1997	Non-Technical	Hagaribommanahalli (T) Tambrahalli Ballari (Dt)
23	Sha Seshaji Hastimal Jain	1999	Non-Technical	Harapanahalli, Davanagere (Dt)
24	V.V. Sangha High School	2006	Non-Technical	Harapanahalli, Davanagere (Dt)
25	Vivekananda public School	1993	Non-Technical	Devalapura, Ballari Road, Siruguppa, Ballari (Dt)
26	Deshanuru Sadashivareddy High School	1999	Non-Technical	Deshanuru (P), Siruguppa(T) Ballari (Dt)
27	V.V. Sangha's Independent PU College, Hospet	2014	Non-Technical	College Road, Hospet
28	V.V. Sangha Independent P.U. College	2010	Non-Technical	Veerasaiva College Campus, Airport Road, Cantonment, Ballari

29	Smt. Allum Sumangalamma Memorial Women's College (PUC)	1969	Non-Technical	Sri Togari Veerappanavara Datti Avarana, Allum Sumangalamma Road,
30	Kittur Rani Chennamma English Medium School	1993	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
31	Heerada Sugamma Higher Primary School	1924	Non-Technical	H.S.M.H.P. School opp. K.S.R.T.C. Bus Stand, Ballari.
32	Kottureshwara College, Kottur	1967	Non-Technical	Kottur, Ballari District, Karnataka
33	Veerasaiva College	1945	Non-Technical	Veerasaiva College Campus, Airport Road, Cantonment, Ballari
34	GBR College	1970	Non-Technical	Hadagli
Institutions – Primary School				
35	Heerada Sugamma Higher Primary School	1924	Non-Technical	H.S.M.H.P. School opp. K.S.R.T.C. Bus Stand, Ballari.
36	Silver Jubilee memorial Higher Primary School	1954	Non-Technical	Jumma Masjid Street, Ballari.
37	Vunki Marisiddamma Primary School	1993	Non-Technical	1st Main, Basaveshwara Nagar, Ballari
38	Gandharva Sangeeta Vidyalaya	2006	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
39	Kittur Rani Chennamma Girls Primary School	1993	Non-Technical	Kappagal Road, Y. Nagesh Shastri Nagar, Ballari
Institutions - Pre-Primary Schools				
39	S.K. Modi National School	2014	Non-Technical	Veerasaiva College Campus, Airport Road,
40	V.V. Sangha's Kindergarten School, Hagaribommanahalli	2014	Non-Technical	Hagaribommanahalli (P) Ballari (Dt)
41	Vijayanagara Kindergarten School, Munirabad	2014	Non-Technical	Vijayanagar College Campus, TBP, Munirabad, Koppal (Dt)

42	V.V. Sangha's Kindergarten School, Ballari	2019	Non-Technical	Ballari, Karnataka
43	Karadesha Sishuvihara	2000	Non-Technical	Ballari, Karnataka

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

Sl. No.	Program Name	Year of Start	Intake	Increase in intake, If any	Year of increase	AICTE Approval	Accreditation Status*
01	Civil Engineering	1980	40	50 40 60 120	1994 2002 2009 2011	F. 2-15/B-III/RC-MB/93/26885dated31/03/1994 F.No. 770-53-251(E)RC/94 dated 05/06/2002 F.No. 770-53-251(E)RC/94dated 26/06/2009 F.No. SW/1-405698242/2011/EOAdated01/09/2011	15/02/05to 14/02/08 &19/07/08to 18/07/11
02	Mechanical Engineering	1980	40	90 120	1994 2009	F. 2-15/B-III/RC-MB/93/26885dated31/03/1994 F.No. 770-53-251(E)RC/94dated26/06/2009	15/02/05to 14/02/08 &19/07/08to 18/07/11
03	Electrical& Electronics Engineering	1983	40	60 120	2005 2013	F.No. 770-53-251(E)RC/94dated19/09/2005 F.No. SW/1-1337581065/2013/EOAdated19/03/13	15/02/05to 14/02/08 &19/07/08to 18/07/11
04	Electronics& Communication Engineering	1983	40	80 90 120	1994 1998 2005	F. 2-15/B-III/RC-MB/93/26885dated31/03/1994 F.No. 770-53-251(E)RC/98dated30/07/1998 F.No. 770-53-251(E)RC/94dated19/09/2005	15/02/05to 14/02/08 &19/07/08to 18/07/11
05	Industrial& Production Engineering	1986	30	50 40	1994 2002 2022	F. 2-15/B-III/RC-MB/93/26885dated31/03/1994 F.No. 770-53-251(E)RC/94 dated 05/06/2002 Progressive Closer	15/02/05to 14/02/08 &19/07/08to 18/07/11
06	Computer Science& Engineering	1987	30	60 90 120 180	1994 2000 2005 2018	F. 2-15/B-III/RC-MB/93/26885dated31/03/1994 F.No. 770-53-251(E)RC/94dated25/10/2000 F.No. 770-53-251(E)RC/94dated19/09/2005 F.No. South-west/1-3516119678/2018	**30/06/2020to 30/06/2023** **F. No 25-101-2010 NBA**
07	CSE (Artificial Intelligence & Machine Engineering)	2021	60	60	2021	F.No. South-west/1-9322850902/2021	Not Applied
08	Information Science &Engineering	2000	40	60	2001	F.No. 770-53-251(E)RC/94dated15/06/2001	Not Applied
10	Master of Business Administration	2006	60	--	--	F.No. 770-53-250(E)RC/94dated29/08/2006	Not Applied
11	M.Tech. in Computer Science& Engineering	2011	18	--	--	F.No. SW/1-405698242/2011EOAdated01/09/11	Not Applied
12	M.Tech. in Mechanical Engineering (Production Management)	2012	18	--	---	F.No. SW/1-698260301/2012EOAdated10/05/12	Not Applied
12	M.Tech. in Mechanical Engineering (Thermal Power Engineering)	2012	18	--	-- 2022	F.No. SW/1-698260301/2012EOAdated10/05/12 Progressive Closer	Not Applied
13	M.Tech. in Civil Engineering (Structural Engineering)	2013	18	--	--	F.No. SW/1-1337581065/2013EOAdated19/03/13	Not Applied
14	M.Tech. in Electronics Communication Engineering (Digital Communication & Networking)	2013	18	--	--	F.No. SW/1-1337581065/2013EOAdated19/03/13	Not Applied

8. Programs to be considered for Accreditation vide this application:

Sl. No	Programme Name
1.	Electrical and Electronics Engineering – UG Level

9. **Total number of employees in the institution:**

A. **Regular* Employees (Faculty and Staff)**

Items		CAY 2021-22		CAY*m*1 2020-21		CAY*m*2 2019-20	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	105	112	113	124	114	122
	F	43	49	42	49	42	44
Faculty in Maths, Science &Humanities	M	12	12	12	12	12	12
	F	7	7	6	6	6	6
Non-teaching staff	M	72	89	76	83	75	77
	F	2	45	4	4	4	4

B. **Contractual Staff Employees (Faculty and Staff) :(Not covered in Table A):**

Items		CAY 2021-22		CAY*m*1 2020-21		CAY*m*2 2019-20	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	0	0	2	2	2	2
	F	0	0	0	0	0	0
Faculty in Maths, Science & Humanities	M	0	0	0	0	0	0
	F	0	0	0	0	0	0
Non-teaching staff	M	22	12	22	12	16	16
	F	15	6	15	6	5	5

10. **Total number of Engineering Students: UG**

Item	CAY 2021-22	CAY*m*1 2020-21	CAY*m*2 2019-20
Total no of Boys	1,506	1,476	1,401
Total no of Girls	977	905	924
Total no of Students	2,483	2,381	2,325

11. Vision of the Institution:

To build Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Engineers and Entrepreneurs.

12. Mission of the Institution:

M1	To impart quality education in engineering and management.
M2	To establish a continuous Industry Institute Interaction, Participation, collaboration to contribute skilled Engineers.
M3	To build human values, social values, entrepreneur skills and professional ethics among the technocrats
M4	To focus on innovation and development of technologies by engaging in cutting edge research areas.

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

i. Name: **Dr. T. Hanumantha Reddy**

Designation: **Principal**

Mobile No: **9448043949 9448844232**

Email Id: **principalrymec.in**

ii. NBA Coordinator, if designated:

Name: **Dr. S.G. Anuradha**

Designation: **Professor**

Mobile N**o: 9449975860**

Email ID: **anuradhasuresh@rymec.in**

CRITERION-1

CRITERION 1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	

1.1	State the Vision and Mission of the Department and Institute	

Vision of the Institution

"To produce professionally excellent, knowledgeable, globally competitive and socially responsible Engineers and Entrepreneurs".

Mission of the Institution

M1	To provide quality education in Engineering and Management.
M2	To establish a continuous industry - institute interaction, participation and collaboration to contribute skilled Engineers.
M3	To develop human values, social values, entrepreneurship skills and professional ethics among the technocrats.
M4	To focus on innovation and development of technologies by engaging in cutting edge research areas.

Vision of the Department

"To produce Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Electrical & Electronics Engineers and Entrepreneurs".

Mission of the Department

MD1	To impart quality education in Electrical & Electronics Engineering.
MD2	To establish a continuous Industry-Institute Interaction, Participation and collaboration to inculcate skilled Electrical & Electronics Engineers.
MD3	To build human values with social responsibilities, entrepreneur skills and professional ethics among the Electrical & Electronics Engineers.
MD4	To focus on innovation and development of technologies by engaging in wide range of research areas in Electrical & Electronics Engineering.

1.2	State the Program Educational Objectives (PEO's)	

PEO1 Graduates will have successful professional career with employment in various industrial and government sectors, both at national and international level endowed with competence and ethical acumen.

PEO2 Graduates will have ability to pursue higher education and career in multi disciplinary areas involving core engineering subjects with appropriate solutions to social and environmental issues.

PEO3 Graduates will have capacity for lifelong learning with emerging technologies in academics, as an entrepreneur or in research and development.

1.3	Indicate where the Vision, Mission and PEOs are Published and Disseminated among Stakeholders	

The Vision, Mission and PEO's are published at:

- Institute website (http://www.rymec.in/).
- HOD Chamber and Staff Rooms.
- Department Laboratories and Notice Boards.
- Department Library.
- Department Class Rooms and Seminar Hall.
- Internal Assessment (CIE) Books

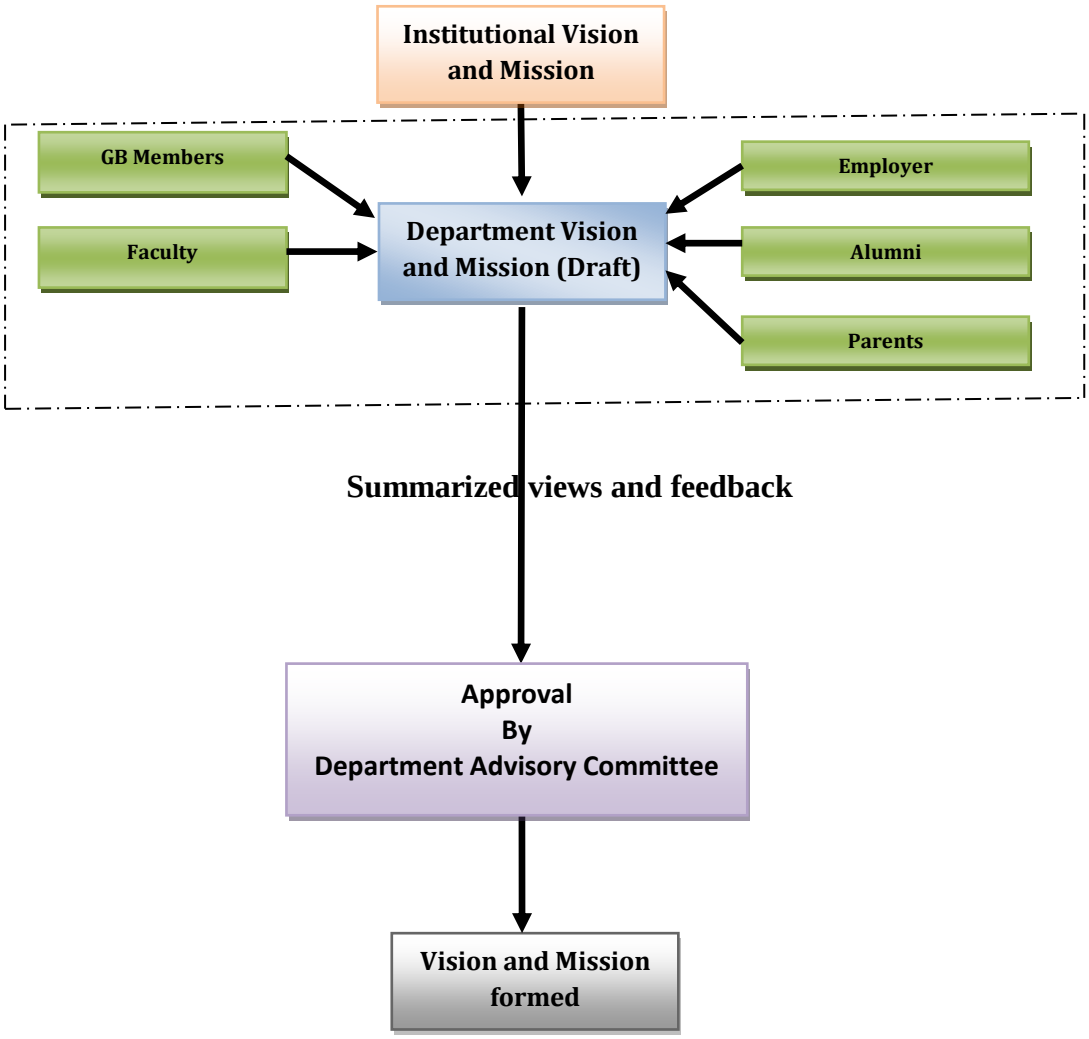
The Vision, Mission and PEO's are disseminated at:

- Workshops.
- Seminars.
- Parents meeting.
- Alumni Association meeting and Alumni meets.
- Faculty development programme (FDP).
- Placement & Training programme for the students.

We convey Vision and Mission during the first day of each academic semester by HOD & respective class coordinators and also convey the same through departmental associations such departmental forum. Apart from these Vision and Mission are disseminated to all the stakeholders of the programmes through faculty meetings,

student awareness workshops, student induction programmes, Alumni meetings and parent meetings

1.4	**State the process for defining the Vision and Mission of the Department, and PEOs of the program**	



Process for Defining the Vision and Mission of the Department

Step 1	Vision and mission of the institution are taken as reference.
Step 2	Summarized views and feedback are collected from internal stake holders like governing body members, faculty, students and external stake holders like alumni, industry experts, employers.
Step 3	Intermediate vision and mission statements are formed based on the observations.
Step 4	The vision and mission statements so developed are submitted for the approval from Department Advisory Committee.
Step 5	After final approval from Department Advisory Committee, vision and mission of the department are finalized.

The process was adopted for articulating Department Vision & mission statements are stated as follows:

Vision:

1. Where we would like to go? Or what would we like the program to become?

2. In what directions would we like the program to move?

3. What program outcomes would we like to see in a specific time frame?

Mission:

1. Where we are? - clearly stating the purpose of the program.

2. What the program is?

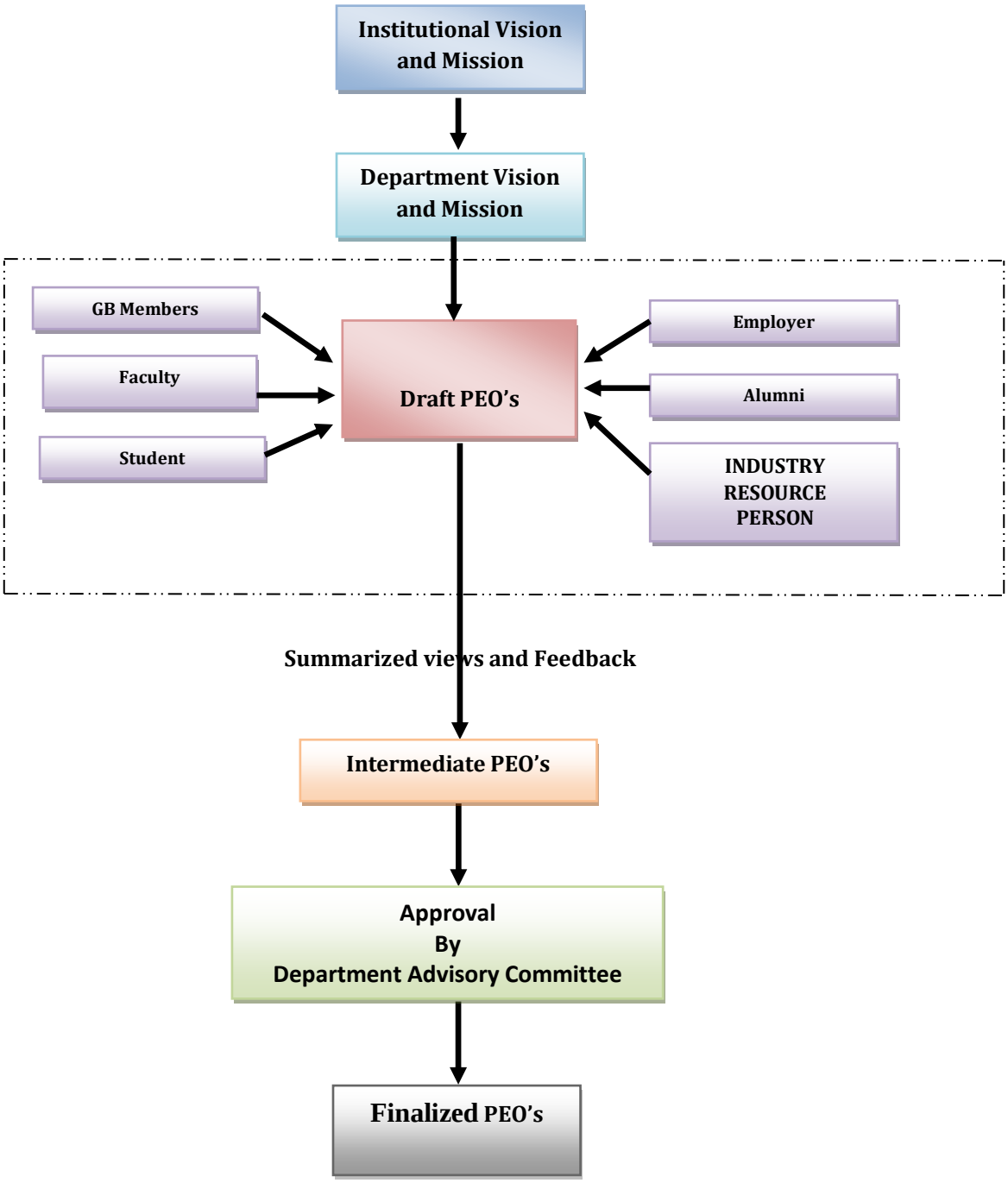
3. What it does?

4. For whom it does?

5. How the program will contribute to the education and careers of students passing out?

6. How the teaching and research efforts of the program will enhance student learning?

State the process for defining the PEOs of the Programme.



Stake Holders involvement /relevance in the Process for Defining the PEO's of the Department

Step 1: Institute vision and mission are taken as reference to form the vision and mission of the department.

Step 2: In alignment to vision and mission of the department, summarized views and opinion of internal and external stake holders are taken to draft the PEO's.

Step 3: Intermediate PEO's are framed.

Step 4: Submitted for future approval of Department Advisory Committee.

Step 5: Once approved by Department Advisory Committee, PEO's are finalized.

1.5	Establish consistency of PEOs with Mission of the Department	

JUSTIFICATIONs
of Mapping PEO's Vs Dept. MISSION's

In the following table consistency shown on a weighted relationship and qualitative relevance is shown as slight, moderate and substantial(1,2,3)

PEOStatements	M1	M2	M3	M4
PEO1:Graduates will have successful professional career with employment in various industrial and government sectors, both at national and international level endowed with competence and ethical acumen	3	3	2	2
PEO2: Graduates will have ability to pursue higher education and career in multidisciplinary areas involving core engineering subjects with appropriate solutions - to social and environmental issues..	2	2	2	2
PEO3:Graduates will have capacity for lifelong learning with emergin technologies in academics, as an entrepreneur or in research an development	3	3	3	2

Note: **1: Slight 2: Moderate 3: Substantial** and the cell is left bank if there is no correlation between PEO's and Mission statement.

Justification of co-relation parameters of the Mission of the Department-PEO's Matrix:

There are four corner-stones of the department mission that are reflected within the PEO's:

- Quality Education
- Industry–Institute Interaction

- Entrepreneurship & Ethics
- Innovation in Research & Development

PEOs Statements	Mission				Justification
	M 1	M 2	M 3	M 4	
PEO1:Graduates will have successful professional career with employment in various industrial and government sectors, both at national and international level endowed with competence and ethical acumen	3	3	2	2	• PEO1 is strongly correlated with M1 in meeting high correlation in the view of providing quality education to pursue successful professional career in Electrical & Electronics Engineering. • PEO1 is strongly correlated with M2 as professional skills are developed among students through continuous Industry-Institute interaction, participation and collaboration to contribute skilled Electrical & Electronics Engineers. • PEO1 is moderately correlated with M3 in meeting medium standards as a pre-requisite to understand human values, entrepreneurship skills, identify and solve societal issues. • PEO1ismoderatelycorrelatedwithM4,asthe scope for innovation & research in average for UG
PEO2: Graduates will have ability to pursue higher education and career in multidisciplinary areas involving core engineering subjects with appropriate solutions - to social and environmental issues.	2	2	2	2	• PEO2 is moderately correlated with M1 in meeting standards which is essential for students those who are willing to pursue higher education. • PEO2 is moderately correlated with M2 in providing every graduate capable of professional development and practicing as skilled technocrats. • PEO2 is moderately correlated with M3 as students explored to take up review projects and impact evolution for technological solutions on the environmental & social benefits. • PEO2 is moderately correlated to M4 as students need to have knowledge of contemporary technologies, need to work in interdisciplinary areas, analyze and solve engineering challenges.
PEO3:Graduates will have capacity for lifelong learning with emerging technologies in academics, as an entrepreneur or in research and development	3	3	3	2	• PEO3 is strongly consistent with the M1 in meetinghighstandardsintheviewofprovidingsuccessful professionalcareer. • PEO3is stronglyconsistentwiththeM2as the students are trained hands-on through workshops, practical session, seminars and internships. • PEO3 is strongly consistent with M3 in a view to produce graduates to adapt to the constantly evolving advancements by engaging in lifelong learning through up gradation of their knowledge. • PEO3 is moderately consistent with M4 in a view of engaging the student in the process of research and review paper publications in National & International level

CRITERION-2

CRITERION 2	Program Curriculum and Teaching - Learning Processes	120

2.1. Program Curriculum (20)

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 Annexure-I. Also mention the identified curricular gaps if any (10)

The Electrical and Electronics Engineering Department is affiliated to Visvesvaraya Technological University (VTU), Belagavi. The department is following the curriculum as prescribed by the university, which is reviewed by the university once in 4 years. The curriculum comprises of Basic Science Courses ,Engineering Science Courses Humanities & Social Sciences Including Management Courses Professional Core Engineering subjects, Elective subjects, Project work, Seminar & Internship. The Board of Studies with representation from various institutions decides on curriculum revision and introduction of new subjects to keep in pace with newtechnology. The Board of Examiners will be responsible for monitoring the quality of question papers and for setting standards of evaluation at the University level& Course modules are enhanced with invited technical talks, industrial visit, soft skill training courses and other activities in order to meet the PEOs. POs have been framed by NBA. Table 2.1.1.1.a presents the details of university curriculum for 2015.

Table 2.1.1.1. University Curriculum

VTU Curriculum ---2015 Scheme	VTU 2015 SCHEME
VTU Curriculum ---2017Scheme	VTU 2017 SCHEME
VTU Curriculum ---2018 Scheme	VTU 2018 SCHEME

Abbreviations

BSC	Basic Science Courses
ESC	Engineering Science Courses
HSMC	Humanities & Social Sciences Including Management Courses
PCC	Professional Core Courses
PEC	Professional Elective Courses
OEC	Open Elective Courses

Table 2.1.1.1.a University Curriculum 2015 Scheme

Course Type	Course Code	Course Title	Teaching Hours/Week		Examination			Credits	Total Credits
			Theory	Practical	CIE	SEE	Total		
HSMC	15CPH18	Constitution of India, Professional Ethics and Human Rights (CPH)	2		20	80	100	1	2
	15CIV18	Environmental Studies	2		20	80	100	1	
BSC	15MAT11	Engineering Mathematics I	4		20	80	100	4	28
	15PHY12	Engineering Physics	4		20	80	100	4	
	15PHYL16	Engineering Physics Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15CHE 12/22	Engineering Chemistry	4		20	80	100	4	
	15MAT21	Engineering Mathematics II	4		20	80	100	4	
	15CHEL 16 / 26	Engineering Chemistry Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15MAT31	Engineering Mathematics III	4		20	80	100	4	
	15MAT41	Engineering Mathematics IV	4		20	80	100	4	
ESC	15ELE25	Basic Electrical Engineering	4		20	80	100	4	28
	15CIV23	Elements of Civil Engineering and Mechanics	4		20	80	100	4	
	15CED24	Computer Aided Engineering Drawing	2 Hour-Instruction 4 Hour-Practical		20	80	100	4	
	15PCD23	Programming in C and data structures	4		20	80	100	4	
	15ELN25	Basic Electronics	4		20	80	100	4	
	18EME 25	Elements of Mechanical Engineering	4		20	80	100	4	
	15WSL26	Workshop practice	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15CPL26	C Programming Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
PCC	15EE32	Electric Circuit Analysis	4		20	80	100	4	
	15EE33	Transformers and Generators	4		20	80	100	4	
	15 EE 34	Analog Electronic Circuits	4		20	80	100	4	
	15 EE 35	Digital System Design	4		20	80	100	4	

PEC	15 EE 36	Electrical and Electronic Measurements	4		20	80	100	4	
	15 EE L37	Electrical Machines Laboratory -1	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EE L38	Electronics Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EE42	Power Generation and Economics	4		20	80	100	4	
	15 EE43	Transmission and Distribution	4		20	80	100	4	
	15 EE44	Electric Motors	4		20	80	100	4	
	15EE45	Electromagnetic Field Theory	4		20	80	100	4	
	15 EE46	Operational Amplifiers and Linear ICs	4		20	80	100	4	
	15 EEL47	Electrical Machines Laboratory -2	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EEL48	Op- amp and Linear ICs Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EE51	Management and Entrepreneurship	4		20	80	100	4	
	15 EE52	Microcontroller	4		20	80	100	4	
	15 EE53	Power Electronics	4		20	80	100	4	
	15 EE54	Signals and Systems	4		20	80	100	4	
	15 EEL57	Microcontroller Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EEL58	Power Electronics Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EE61	Control Systems	4		20	80	100	4	
	15 EE62	Power System Analysis – 1	4		20	80	100	4	
	15 EE63	Digital Signal Processing	4		20	80	100	4	
	15 EEL66	Control System Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EEL67	Digital Signal Processing Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	
	15 EE71	Power System Analysis – 2	4		20	80	100	4	
	15 EE72	Power System Protection	4		20	80	100	4	
	15EE73	High voltage Engineering	4		20	80	100	4	
	15 EEL76	Power System Simulation Laboratory	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	

PEC	15EEL77	Relay & HV lab	1 Hour-Instruction 2 Hour-Practical		20	80	100	2	108
	15EE81	Power System Operation and Control	4		20	80	100	4	
	15EE82	Industrial Drives and Applications	4		20	80	100	4	
PEC	15EE55X	Professional Elective -1	3		20	80	100	3	15
	15 EE65X	Professional Elective - 2	3		20	80	100	3	
	15 EE74X	Professional Elective - 3	3		20	80	100	3	
	15EE75X	Professional Elective - 4	3		20	80	100	3	
	15EE83X	Professional Elective -5	3		20	80	100	3	
OEC	15 EE56X	Open Elective -A	3		20	80	100	3	6
	15 EE66X	Open Elective -B	3		20	80	100	3	
Project	15 EEP78	Project Work Phase – 1			100		100	2	8
	15EEP85	Project Work Phase - 2		6	100	100	200	6	
Seminar	15EES86	Technical Seminar		4	100		100	1	1
Internship	15EE84	Internship	Industry oriented					2	2
Total									198

Table 2.1.1.1. b University Curriculum 2015 Scheme

Sl. No.	Course Type	Credits
1	HSMC	**2**
2	BSC	**28**
3	ESC	**28**
4	PCC	**108**
5	PEC	**15**
6	OEC	**6**
7	Project	**8**
8	Seminar	**1**
9	Internship	**2**
	Total	**198**

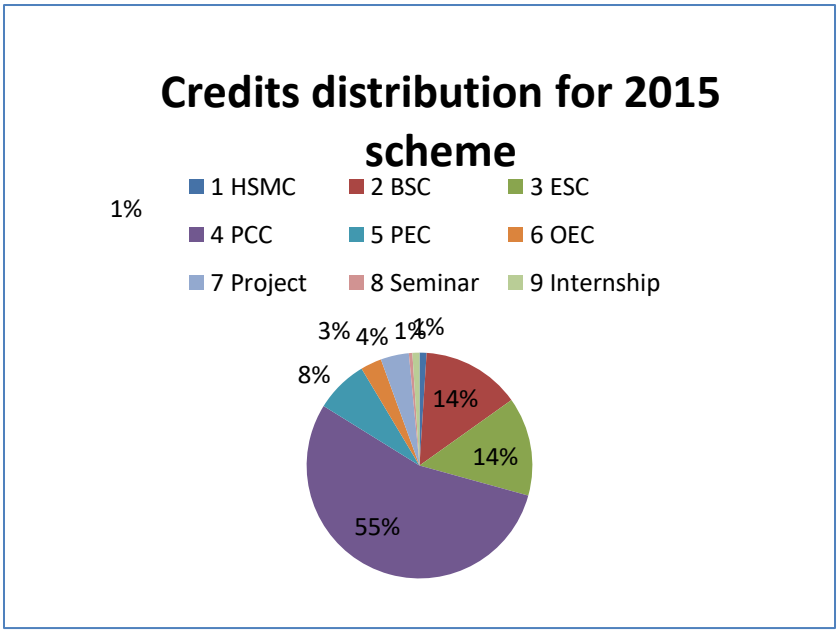


Table 2.1.1.1.c University Curriculum 2017 Scheme

Sl no	Course Type	Credits
1	**HSMC**	3
2	**BSC**	28
3	ESC	28
4	**PCC**	110
5	PEC	15
6	OEC	6
7	Project	8
8	Seminar	1
9	Internship	2
		201

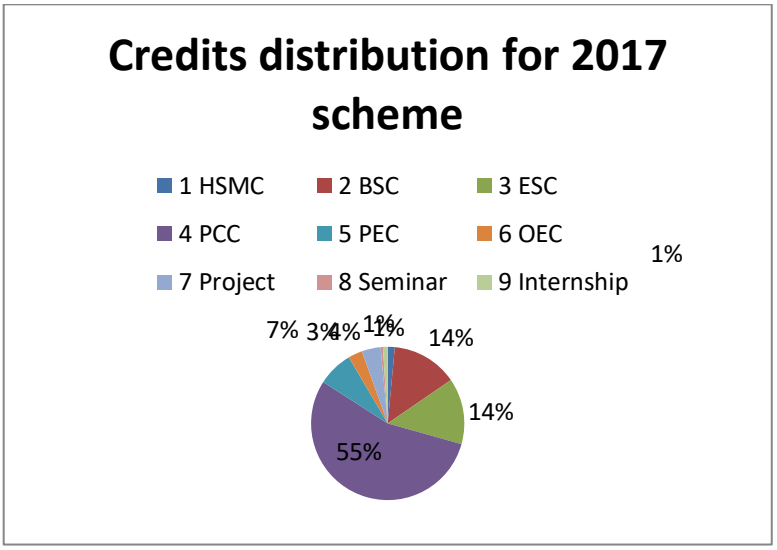
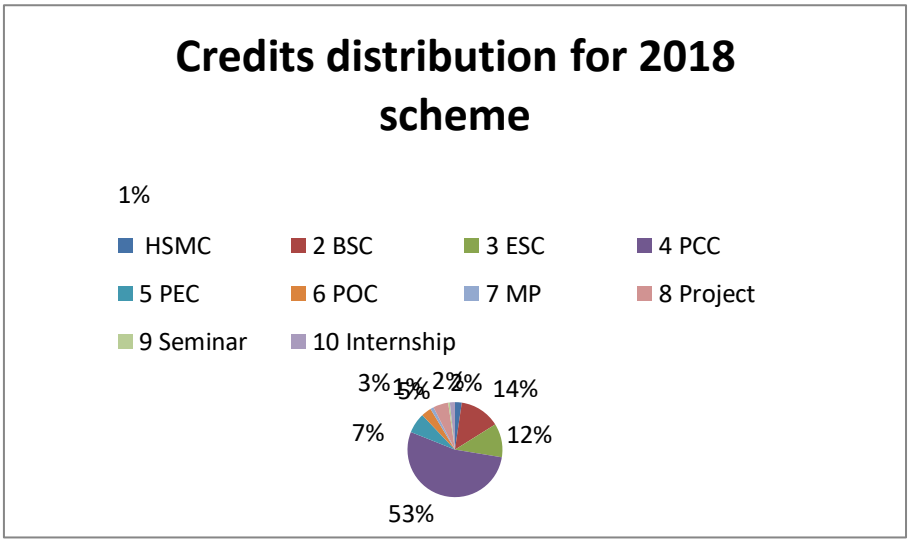


Table 2.1.1.1.d University Curriculum 2018 Scheme

Sl no	Course Type	Credits
1	HSMC	**4**
2	BSC	**24**
3	ESC	**20**
4	PCC	**93**
5	PEC	**12**
6	POC	**6**
7	MP	**2**
8	Project	**9**
9	Seminar	**1**
10	Internship	**3**
		174



2.1.1. A Process to identify the extent of Compliance of University Curriculum for attaining POs & PSOs

1. Course Outcomes (COs) for individual courses are prepared by course in charges and CO-PO mapping is established in the scale of SUBSTANTIAL(3), MODERATE(2) AND SLIGHTLY MAPPED(1). The average CO-PO mapping levels are calculated for, every course, and are consolidated for the entire program.
2. Consolidated CO-PO Mapping table is prepared
3. Number of courses addressing each PO /PSO AND SUM of mapping strength courses for each PO PSO IS documented .
4. The target level for PO/PSO SAMPLING OF 40%OF THE TOTAL COS addrresed are decided in the PAC commite with deatail discusses of PO's and their relavance
5. These contents are delivered to the students through Guest Lecturers/Workshops/Industrial visits etc& the Institution makes additional efforts to impart such knowledge by covering aspects through contents beyond syllabus.

The flowchart below, figure 2.1.1.1depicts the process to identify compliance of the University curriculum forattaining POs & PSOs.

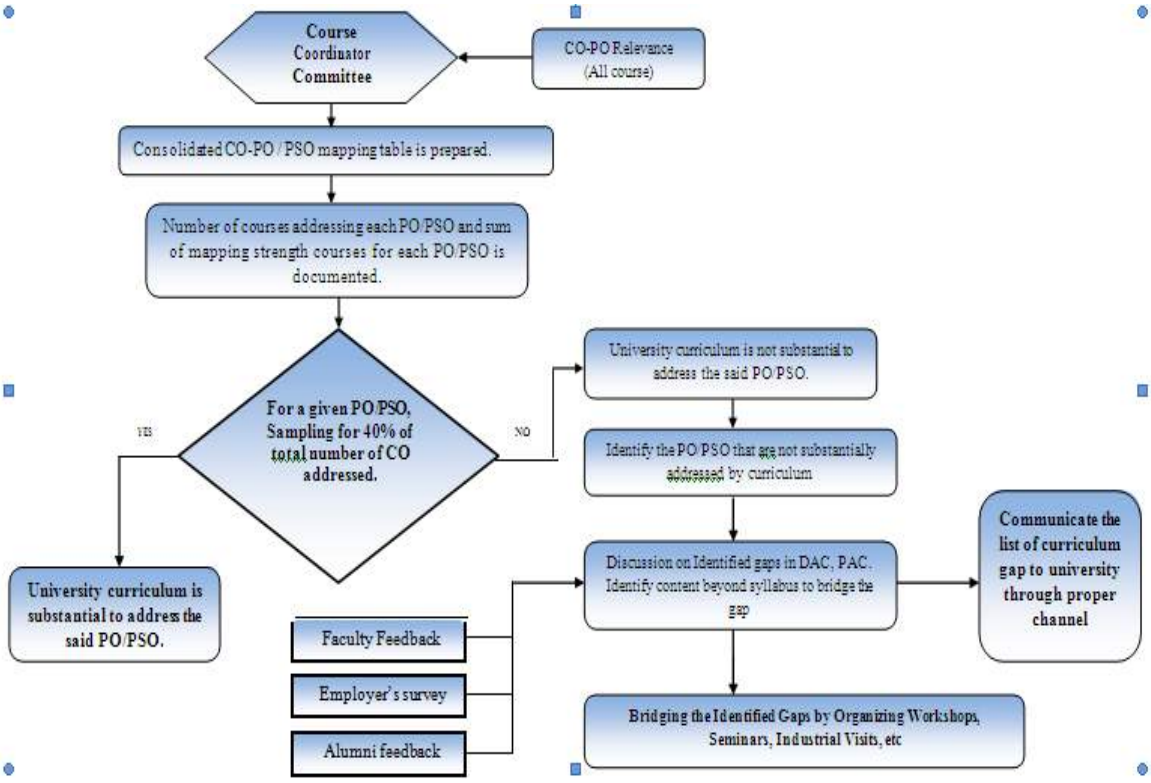


fig 2.1.1.1: Process to identify compliance of the University curriculum

2.1.1. B List the curricular gaps for the attainment of defined POs & PSOs

Correlation between the CO-PO mappings for the the Academic Year 2019-22 (2018Scheme)

Consolidated of all CO PO mapping addressed to the 2018 scheme is mapped to total 179 Course Outcome's. Total 179 Course Outcome's (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliance with PO's is shown in table below.

The percentage contributions from each PO is calculated as below:

% Contribution from each PO = Ratio of Number of CO contributions to each PO to Total number of CO from each curriculum.

Example: % contribution of PO1 = (164/179) = 91.6%

Table 2.1.1A.: Compliance of Courses with POs and PSOs for the the Academic Year 2019-22(2018 Scheme

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	164	160	76	66	39	42	29	20	64	58	30	70	84	60
Total No of COs for Curriculum	179	179	179	179	179	179	179	179	179	179	179	179	179	179
% of Curriculum	91.6%	89.4%	42.5%	36.9%	21.8%	23.5%	16.2%	11.2%	35.8%	32.4%	16.8%	40.0%	43.8%	33.5%
Articulation Average Value	2.77	2.49	2.25	2.11	2.15	1.74	1.90	2.30	2.11	2.26	2.37	1.70	1.85	1.85

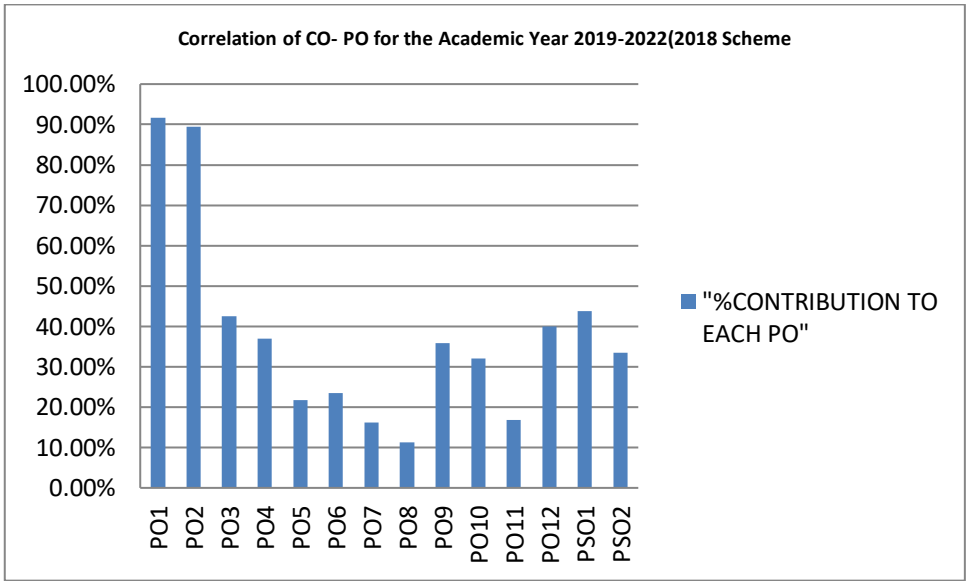


Fig. 2.1.1.A1: Correlation of CO- PO for the Academic Year 2019-22(2018 Scheme).

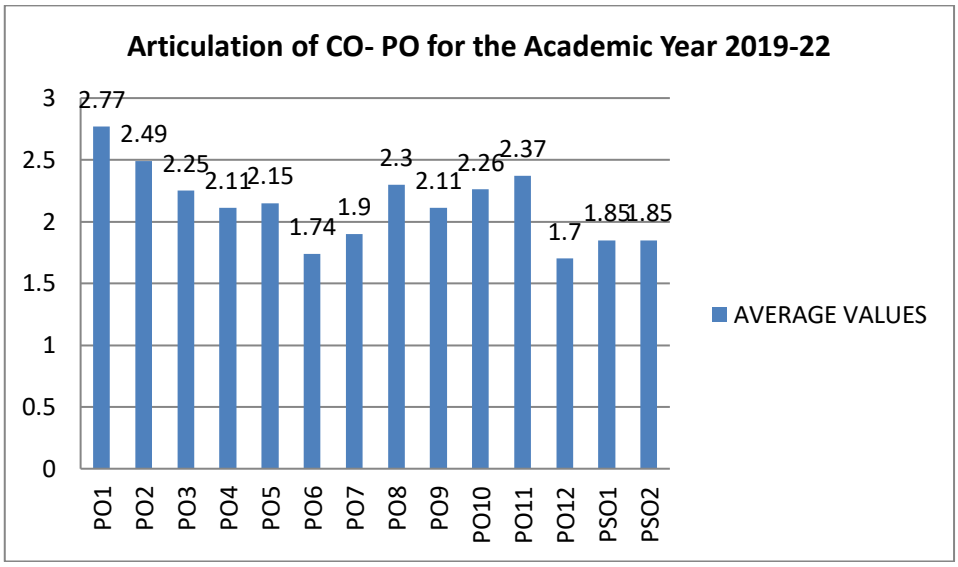


Fig. 2.1.1.A2 Articulation of CO- PO for the Academic Year 2019-2022

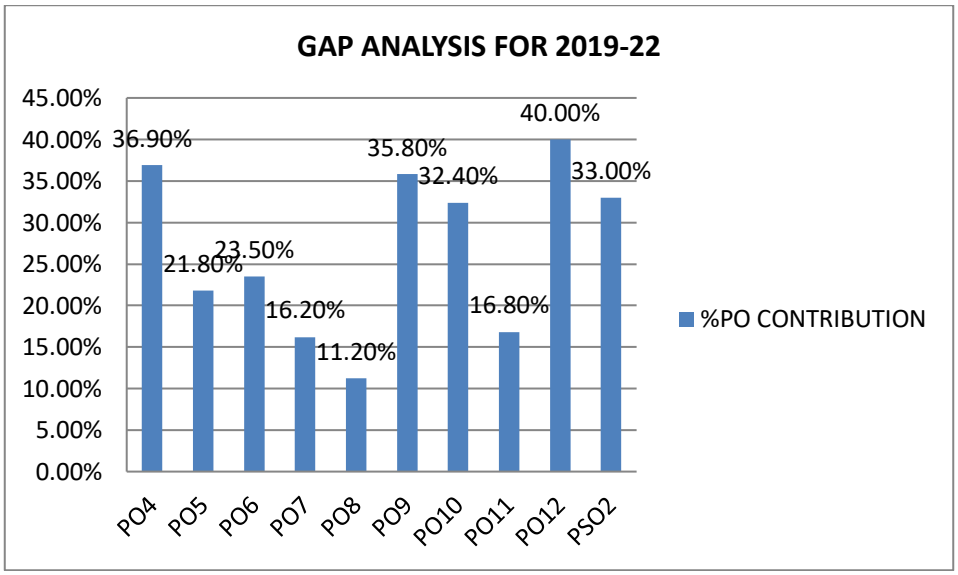


Fig. 2.1.1A3: Identified Gap's in Program Outcomes for 2019-22 (2018 Scheme).

Program Assessment Committee (PAC) has identified less than 40% of 179 number of Course Outcome (CO) contribution to each PO to total number of Course Outcome(CO's) from each curriculum (40% of 179=72CO's).From the above analysis we have identified Curriculum gap of 2019-22 for 2018 Schemethsame is represented in figure 2.1.1A3

Correlation between the CO-PO mappings for the the Academic Year 2018-21 (2017 Scheme

Consolidated of all CO PO mapping addressed to the 2017 scheme is mapped to total 184 Course Outcome's. Total 184 Course Outcome's (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliance with PO's is shown in table below.

The percentage contributions from each PO is calculated as below:

% Contribution from each PO = Ratio of Number of CO contributions to each PO to Total number of CO from each curriculum.

Example: % contribution of PO1 = (169/184) = 91.84%

Table 2.1.1.B: Compliance of Courses with POs and PSOs for the the Academic Year 2018-21(2017 Scheme

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	169	154	101	54	29	45	43	23	54	25	31	51	49	86
Total No of COs for Curriculum	184	184	184	184	184	184	184	184	184	184	184	184	184	184
% of Curriculum	91.8%	83.7%	54.9%	29.3%	15.8%	24.5%	23.4%	12.5%	29.3%	13.6%	16.8%	40.0%	25.5%	46.7%
Articulation Average Value	2.78	2.44	2.32	2.02	1.97	2.16	2.00	2.13	2.13	2.24	2.13	1.47	1.94	1.78

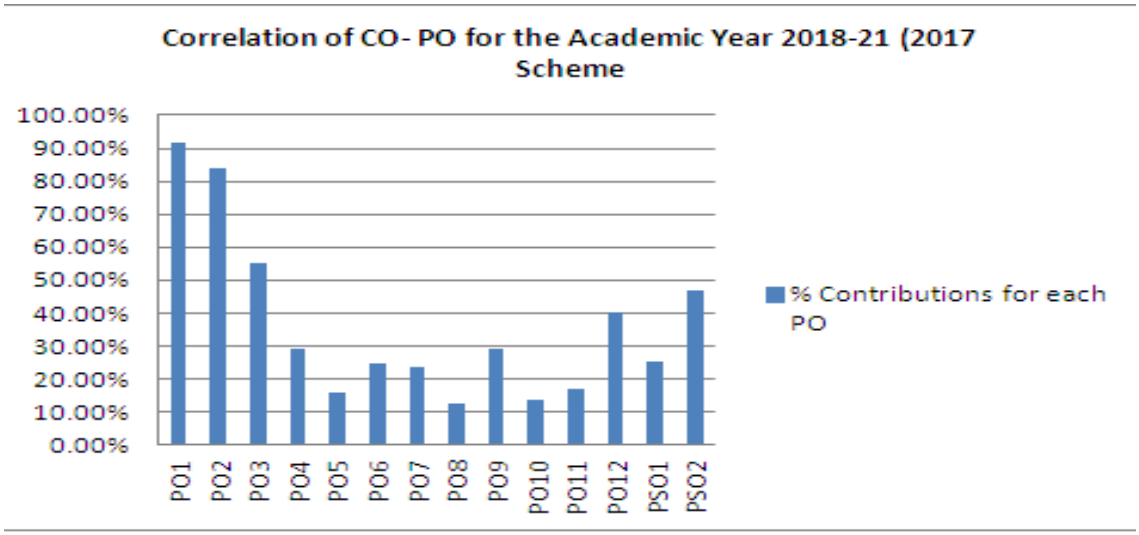


Fig. 2.1.1.B1: Correlation of CO- PO for the Academic Year 2018-21(2017 Scheme).

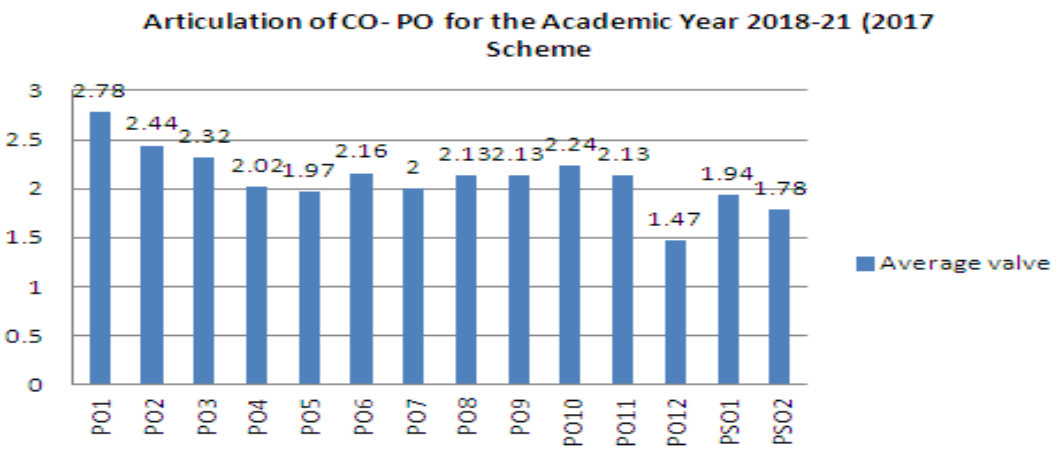


Fig. 2.1.1.B 2 Articulation of CO- PO for the Academic Year 2018-2021

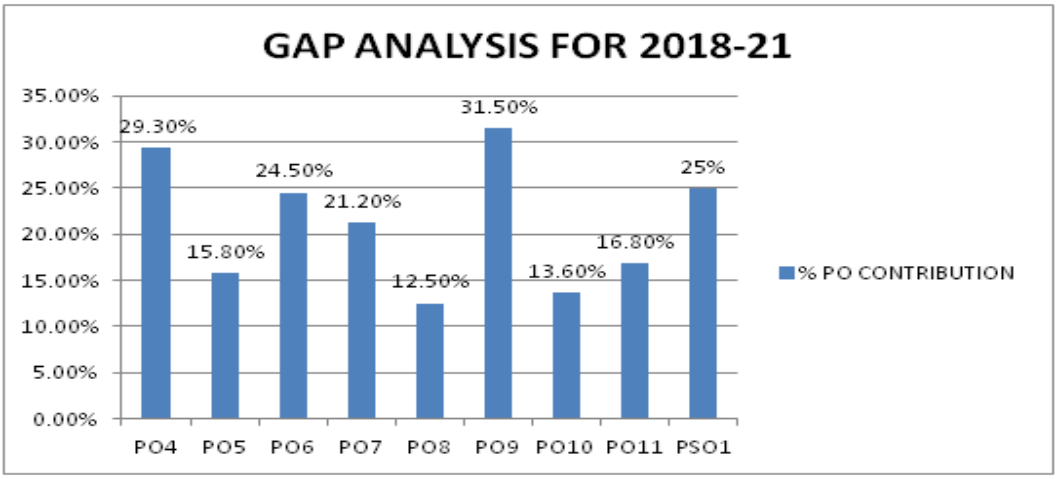


Fig. 2.1.1.B3: Identified Gap's in Program Outcomes for 2018-21 (2017 Scheme).

Program Assessment Committee (PAC) has identified less than 40% of 184 number of Course Outcome (CO) contribution to each PO to total number of Course Outcome(CO's) from each curriculum (40% of 184=74 CO's).From the above analysis we have identified Curriculum gap of 2018-21 for 2017 Schemethsame is represented in figure 2.1.1.B3

Correlation between the CO-PO mappings for the the Academic Year 2017-20 (2015 Scheme)

Consolidated of all CO PO mapping addressed to the 2015 scheme is mapped to total 184 Course Outcome's. Total 184 Course Outcome's (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliance with PO's is shown in table below.

The percentage contributions from each PO is calculated as below:

% Contribution from each PO = Ratio of Number of CO contributions to each PO to Total number of CO from each curriculum.

Example: % contribution of PO1 = (169/184) = 91.84%

Table 2.1.1.C: Compliance of Courses with POs and PSOs for the the Academic Year 2017-20 (2015 Scheme)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	169	154	101	54	29	45	39	23	58	25	31	51	49	86
Total No of COs for Curriculum	184	184	184	184	184	184	184	184	184	184	184	184	184	184
% of Curriculum	**91.80%**	**84%**	**54%**	**29.90%**	**12%**	**20%**	**20%**	**13%**	**29%**	**19%**	**15%**	**40%**	**25%**	**41%**
Articulation Average Value	2.78	2.45	2.30	2.05	1.82	2.29	2.11	2.17	2.24	2.23	2.24	1.55	1.90	1.82

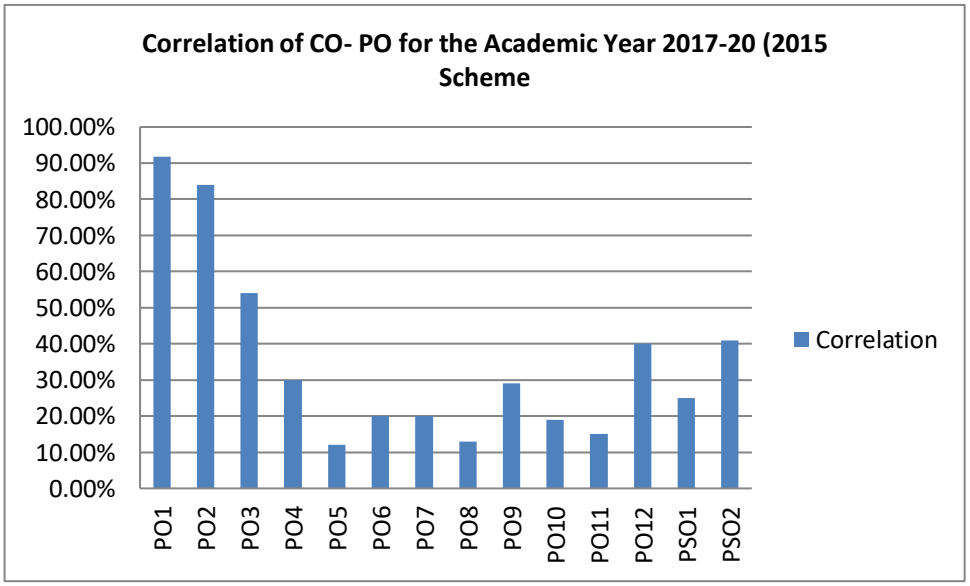


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Fig. 2.1.1C:1 Correlation of CO- PO for the Academic Year 2017-20(2015 Scheme).

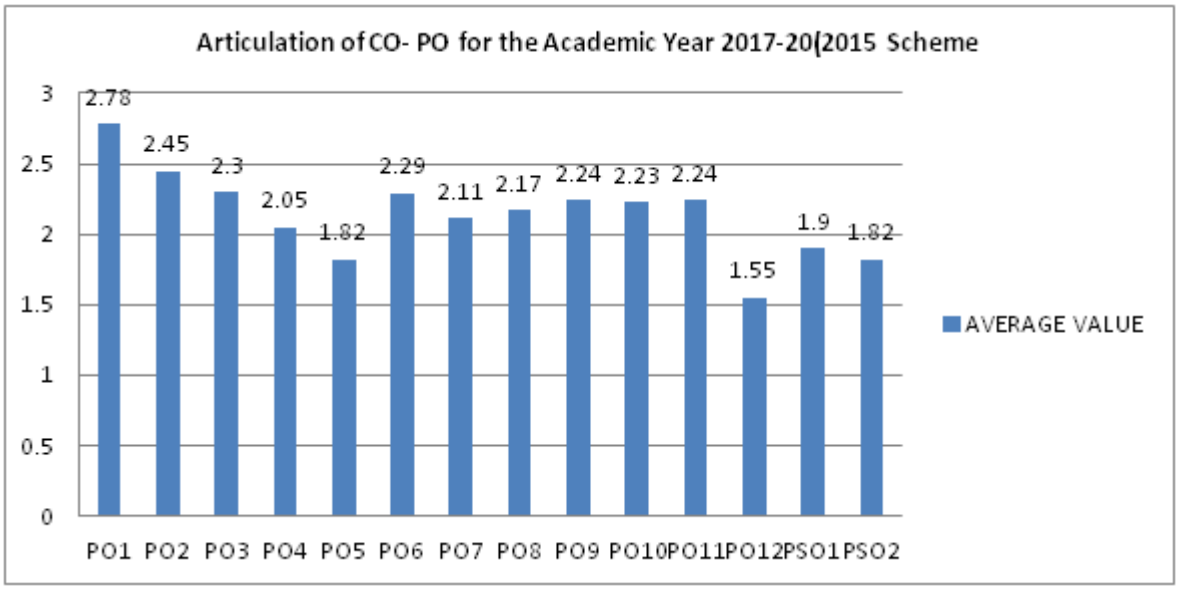


Fig. 2.1.1C2 Articulation of CO- PO for the Academic Year 2017-20

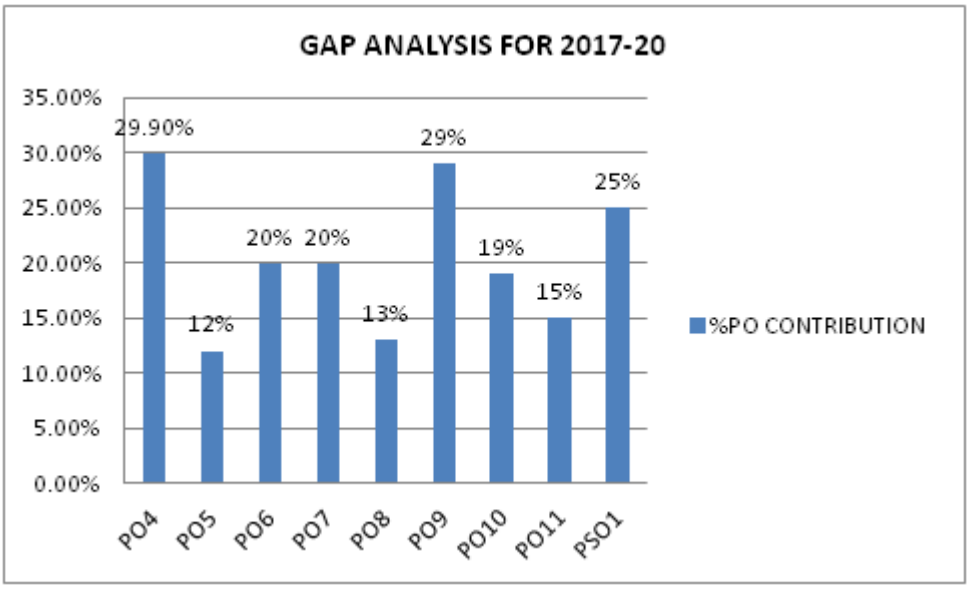


Fig. 2.1.1C3: Identified Gap's in Program Outcomes for 2017-20 (2015 Scheme).

Program Assessment Committee (PAC) has identified less than 40% of 184 number of Course Outcome (CO) contribution to each PO to total number of Course Outcome(CO's) from each curriculum (40% of 184=74 Co's).From the above analysis we have identified Curriculum gap of 2017-20 for 2015 Schemethsame is represented in figure **2.1.1C3**

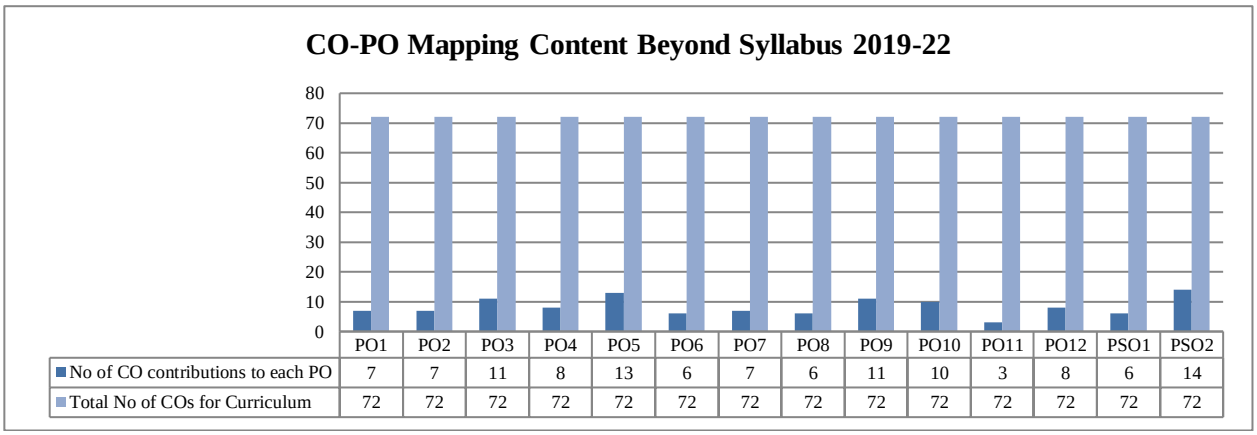
The following is the List of PO's and PSO's which are identified as gaps

Table 2.1.1.2: PO's and PSO's which are identified as gaps for 2018-21, 2017,-21, 2016-20

Sl. No	Description
PO4	Conduct investigations of complex problems
PO5	Modern tool usage
PO6	The Engineer and Society
PO7	Environment and Sustainability
PO8	Ethics
PO9	Individual and team work
PO10	Communication
PO11	Project management and Finance
PSO1	Model and design

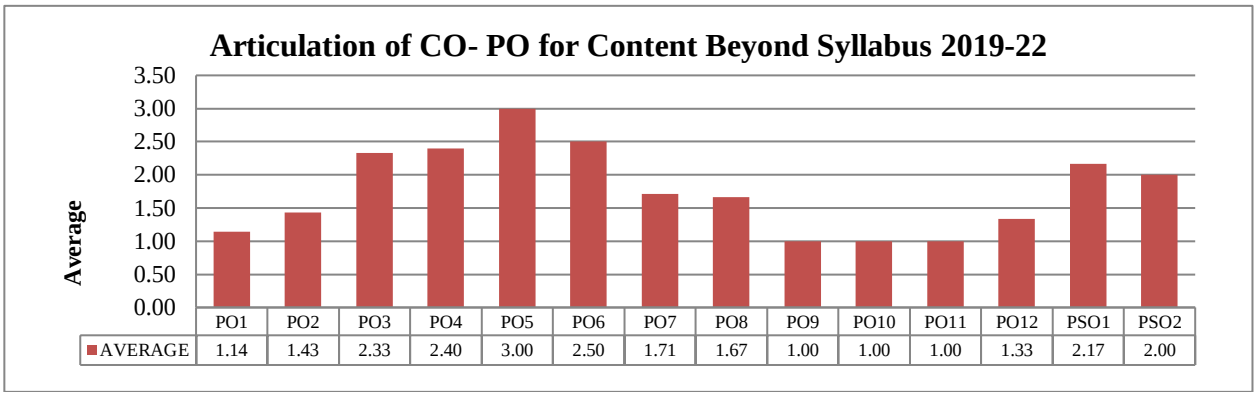
Correlation between the CO-PO mappings of CONTENT BEYOND SYLLABUS for the Academic year 2019-22 (2018scheme)

Consolidated of all CO-PO mapping addresses for the 2018 scheme is mapped to 72 course outcomes (CO's)
Total 72 course outcomes (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliancewith PO'S is shown in below table .the gap identified has been fulfilled by organizing seminar and workshops personality development programs ,inviting experts to give talks and intract with students Correlation mapping of course outcomes (CO'S) of content beyond syllabus is mapped to PO'S The details are given below



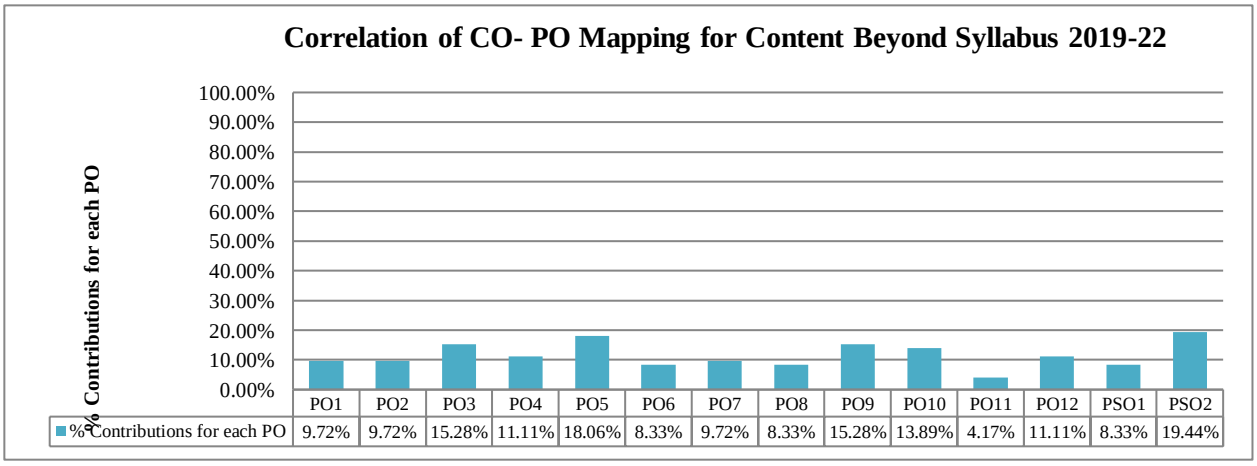
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	7	7	11	8	13	6	7	6	11	10	3	8	6	14
Total No of COs for Curriculum	72	72	72	72	72	72	72	72	72	72	72	72	72	72

Fig Contribution of CO for PO's of content beyond syllabus 2019-22



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
AVERAGE	1.14	1.43	2.33	2.40	3.00	2.50	1.71	1.67	1.00	1.00	1.00	1.33	2.17	2.00

Articulation of CO- PO for Content Beyond Syllabus 2019-22



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
%Contributions for each PO	9.72%	9.72%	15.28%	11.11%	18.06%	8.33%	9.72%	8.33%	15.28%	13.89%	4.17%	11.11%	8.33%	19.44%

Fig Contribution of CO for PO's of content beyond syllabus 2019-22

Identified gap at course level-2018 scheme

Sl no	Coursed with code	GAP IDENTIFIED	PO/PSO
1	CS -18EE61 CS LAB-18EEL67 PE-18EE-53 PELAB -18EEL58 18EE732 S&S -18EE54	APPLICATION OF POWER ELECTRONICS AND CONTROL SYSTEM	ALL POS & PSO
2	T&G-18EE33 EM-18EE44 18EEL-37-47	ELECTRICAL Maintenance	PO-1,PO2,PO3,PO5, POS1,PSO2
3	CS -18EE61 ,CS LAB-18EEL67 PE-18EE-53 ,PELAB -18EEL58 , 18EE732 S&S -18EE54 T&G-18EE33 EM-18EE44 18EEL-37-47	IEEE Students Project Symposium	ALL POS & PSO
4	CS -18EE61 CS LAB-18EEL67,18EE71,18EE81	Programmable Logic Controllers and SCADA	PO1TOPO5,PSO1,PSO2

ACTION TAKEN

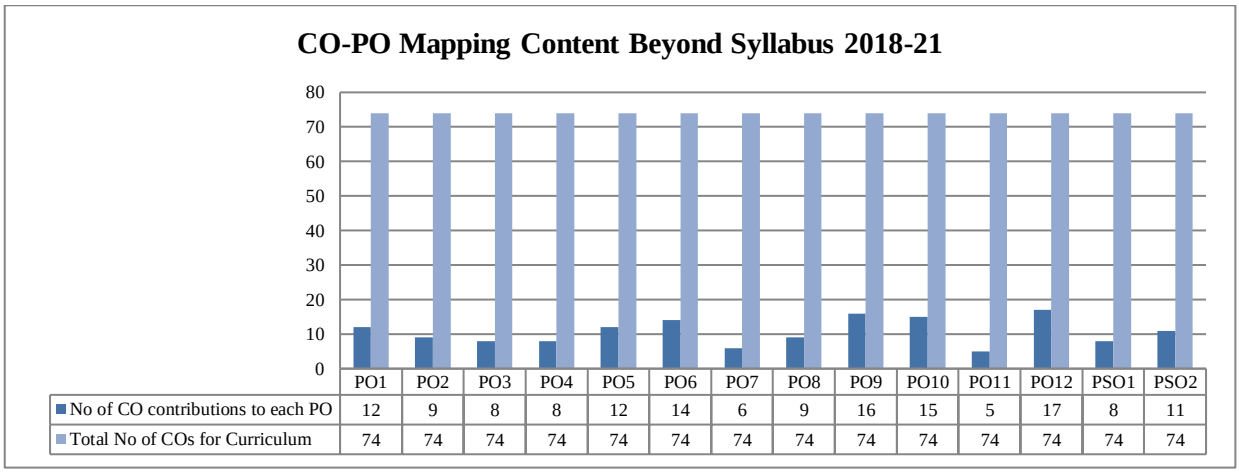
Sl no	GAP	ACTION TAKEN	DATE	RESOURCE PERSON WITH DESIGNATION	Relevance to PO's,PSO's
1	CS -17EE61 , LAB-17EEL67 PE-17EE-53 PELAB -17EEL58 S&T-17EE662 S&S -17EE54	DRONES AND ARTIFICIAL INTELLIGENCE	15/5/2021	Mr.Leo Peter charies, founder & MD Jane Aerospace Pvt.Ltd/ in association with Jane Aerospace pvt ltd	PO1,PO2,PO3,PO4PO5PO12 PO6,PO7,PO8,PO9P10,PO11 PSO1.PSO2
2	T&G-18EE33 EM-18EE44 18EEL-37-47	ORGANIZED ON DAY TECHNICAL TALK ON ELECTRICAL Maintenance And Scope Of	21st july -2021	Mr. T K Nagaraj Rao General Manger Mangalore Refineries and Petrochemicals	PO-1PO2PO3PO5PO6PO7PO8PO9, PSO1,PSO2

3	**CS -18EE61 ,CS LAB-18EEL67 PE-18EE-53 ,PELAB -18EEL58 , 18EE732 S&S -18EE54 T&G-18EE33 EM-18EE44 18EEL-37-47**	**ORGANIZED** **IEEE Students Project Symposium**	**17-6-2022**	**Dr Vijaya laxshmi IEEE SENIOR MEMBER BAGALOT KARNATAKA**	**ALL POS & PSO**

Correlation between the CO-PO mappings of CONTENT BEYOND SYLLABUS for the Academic year 2018-21 (2017scheme)

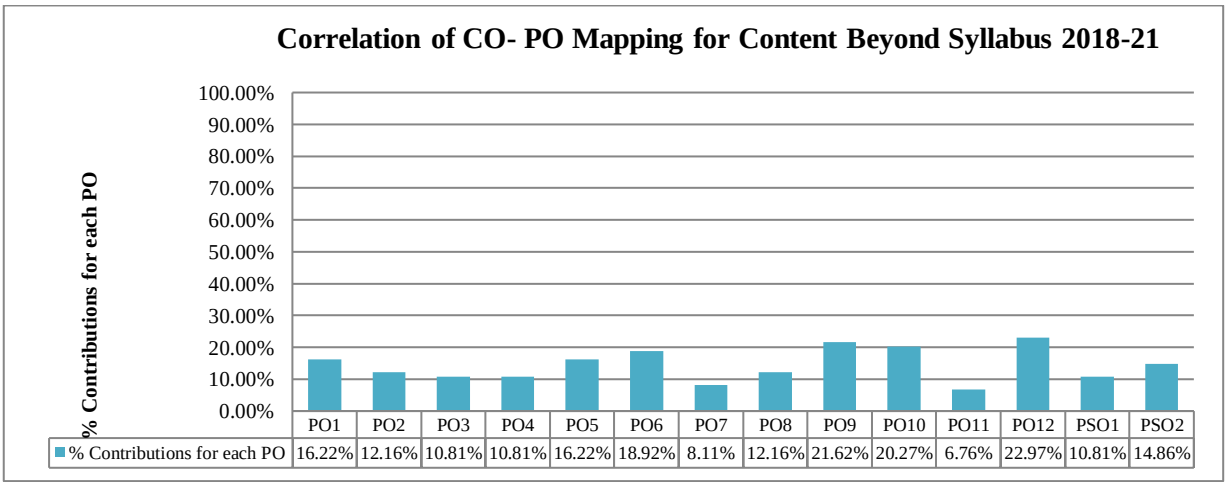
Consolidated of all CO-PO mapping addresses for the 2017 scheme is mapped to 74 course outcomes (CO's)

Total 74 course outcomes (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliancewith PO'S is shown in below table .the gap identified has been fulfilled by organizing seminar and workshops personality development programs ,inviting experts to give talks and intract with students Correlation mapping of course outcomes (CO'S) of content beyond syllabus is mapped to PO'S The details are given below



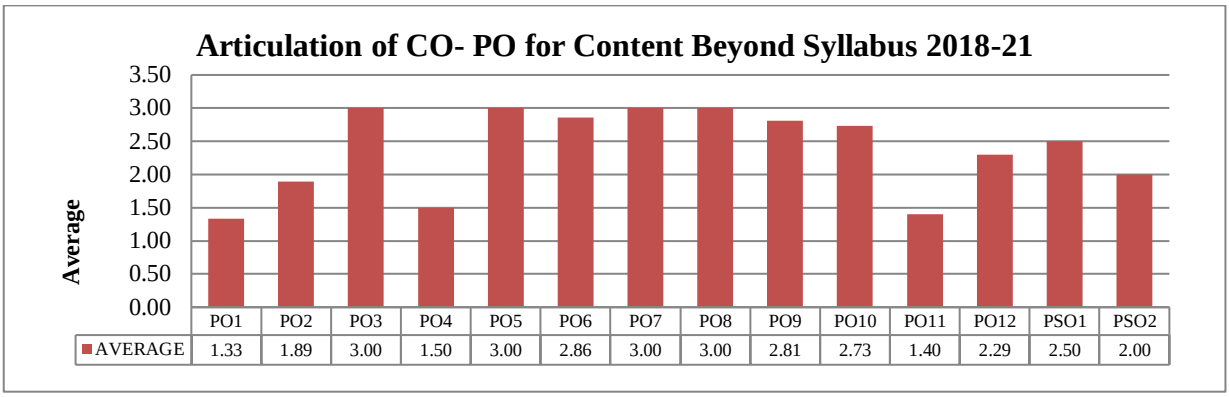
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	12	9	8	8	12	14	6	9	16	15	5	17	8	11
Total No of COs for Curriculum	74	74	74	74	74	74	74	74	74	74	74	74	74	74

Fig Contribution of CO for PO's of content beyond syllabus 2018-21



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
% Contributions for each PO	16.22%	12.16%	10.81%	10.81%	16.22%	18.92%	8.11%	12.16%	21.62%	20.27%	6.76%	22.97%	10.81%	14.86%

Fig Contribution of CO for PO's of content beyond syllabus 2018-21(2017 scheme)



Articulation of CO- PO for Content Beyond Syllabus 2018-21

Identified gap at course level-2017 scheme

Sl no	Coursed with code	GAP IDENTIFIED	PO/PSO
1	TCEE-17EE752 IDA-17EE82 T&G-17EE33 EM-17EE44 17EEL-37-47	ELECTRICAL Maintenance	PO-1,2,3,5,6.7,8,9 PSO1,PSO2
2	CS -17EE61 ,CS LAB-17EEL67 PE-17EE-53 ,PELAB -17EEL58 ,S&T-17EE662 S&S -17EE54	APPLICATION OF POWER ELECTRONICS AND CONTROL SYSTEM	ALL POS & PSO
3	IDA-17EE82 T&G-17EE33 EM-17EE44 17EEL-37-47	Control of Electrical Machines	PO-1,PO2,PO3,PO5, POS1,PSO2

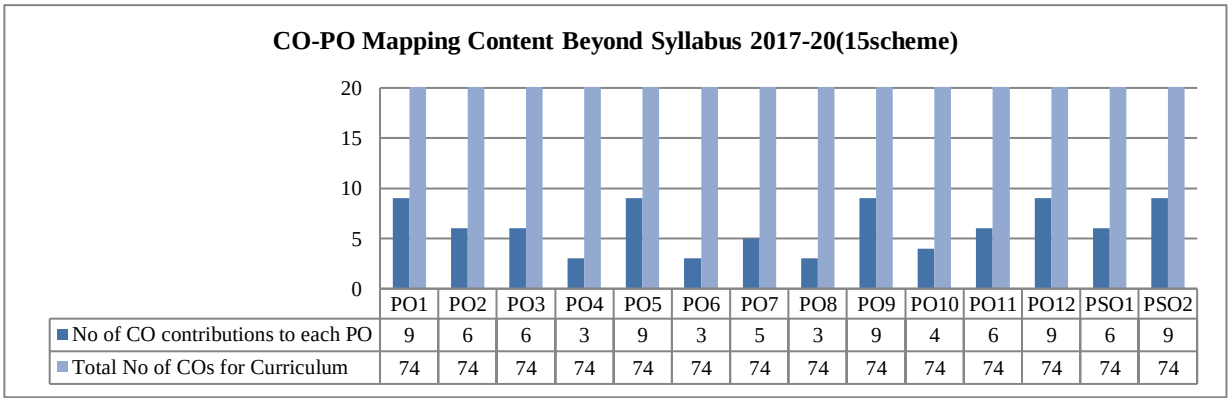
ACTION TAKEN

Sl no	GAP	ACTION TAKEN	DATE	RESOURCE PERSON WITH DESIGNATION	Relevance to PO's,PSO's
1	TCEE-17EE752 IDA-17EE82 T&G-17EE33 EM-17EE44 17EEL-37-47	ORGANIZED ON DAY TECHNICAL TALK ON ELECTRICAL Maintenance And Scope Of EEE	21st july -2021	Mr. T K NAGARAJ RAO General Manger mangalore Refineries and petrochemicals	PO1,PO2,PO3,PO5,PO6,PO7, PO8, PO9, PSO1,PSO2
2	CS -17EE61 ,CS LAB-17EEL67 PE-17EE-53 ,PELAB -17EEL58 ,S&T-17EE662 S&S -17EE54	DRONES AND ARTIFICIAL INTELLIGENCE	15/5/2021	Mr.Leo Peter charles, founder & MD Jane Aerospace pvt.Ltd/ in association with Jane aerospace pvt ltd	PO1,PO2,PO3,PO4 PO5PO12 PO6,PO7,PO8,PO9 P10,PO11 PSO1.PSO2
3	IDA-17EE82 T&G-17EE33 EM-17EE44 17EEL-37-47	WEBINAR ON control of electrical machines	01/09/2020	Mr. Sreenivasulu	PO1,PO2, PO3PO4 PO5,PSO1.PSO2

Correlation between the CO-PO mappings of CONTENT BEYOND SYLLABUS for the Academic year 2017-20 (2015scheme)

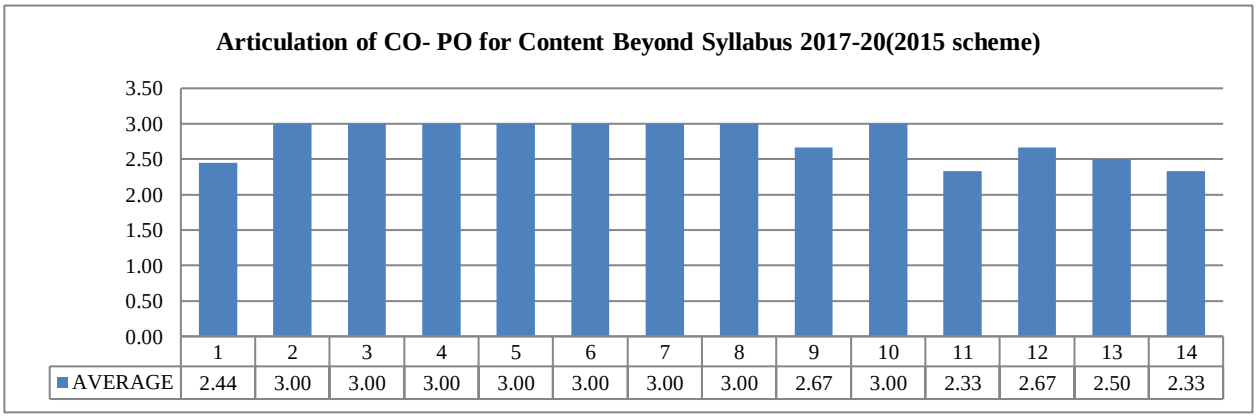
Consolidated of all CO-PO mapping addresses for the 2015 scheme is mapped to 74 course outcomes (CO's)

Total 74 course outcomes (CO's) are collected from all staff members based on the curriculum and mapping is done. The percentage compliancewith PO'S is shown in below table .the gap identified has been fulfilled by organizing seminar and workshops personality development programs ,inviting experts to give talks and intract with students Correlation mapping of course outcomes (CO'S) of content beyond syllabus is mapped to PO'S The details are given below



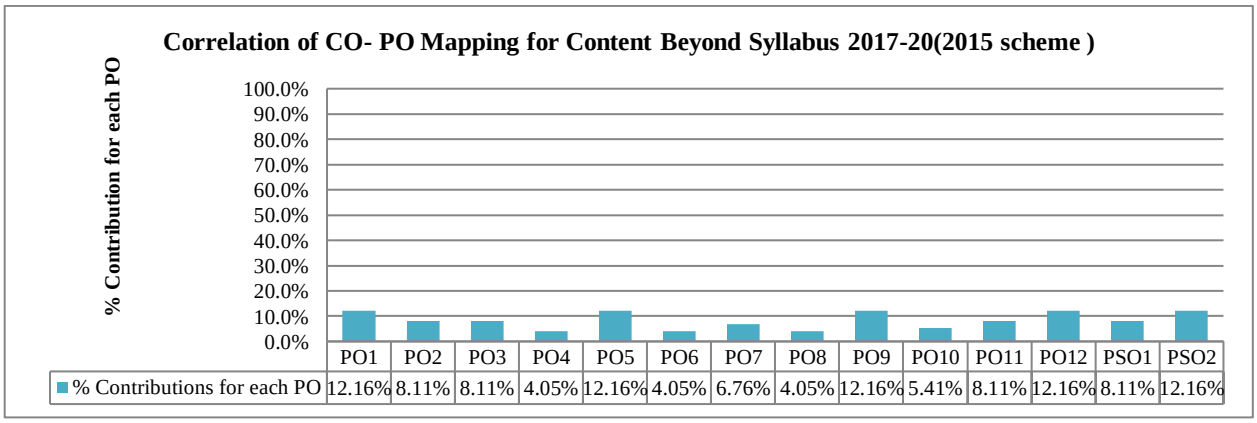
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
No of CO contributions to each PO	9	6	6	3	9	3	5	3	9	4	6	9	6	9
Total No of COs for Curriculum	74	74	74	74	74	74	74	74	74	74	74	74	74	74

Fig Contribution of CO for PO's of content beyond syllabus



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
AVERAGE	2.44	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.67	3.00	2.33	2.67	2.50	2.33

Fig Contribution of CO for PO's of content beyond syllabus 2017-20(2015 scheme



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
% Contributions for each PO	12.16%	8.11%	8.11%	4.05%	12.16%	4.05%	6.76%	4.05%	12.16%	5.41%	8.11%	12.16%	8.11%	12.16%

GAP INDENTIFIED

Sl no	Course with code	GAP IDENTIFIED	PO/PSO
1	15EE52-MICROCONTROLLER 15EE57-MICROCONTROLLER LAB	ADVANCED MICRONTROLLER	PO1,PO2,PO3,PO4,PO12,PSO1,PSO2
2	15EE42- P&G TCEE-17EE752	Demand side management and safety precautions	PO1,PO2,PO3,PO5,PO10,PO11,PSO1,PSO2
3	15EE832-OMSES	SOLAR PV WORKING ANALYSIS	PO1,PO2,PO3,PO5,PO7,PO11,PSO1,PSO2

ACTION TAKEN

Sl no	GAP	ACTION TAKEN	DATE	RESOURCE PERSON WITH DESIGNATION	Relevance to PO's,PSO's
1	15EE52-MICROCONTROLLER 15EE57-MICROCONTROLLER LAB	Hands on session on advanced microcontroller	23rd and 24th feb 2020	Dr. P Manjunath professor & Head, ECE dept JNNCE, Shivamoga	PO1,PO2 PO3,PO4,PO5,PO12,PSO1 PSO2
2	15EE42- P&G TCEE-17EE752	Demand side management and safety precautions	4TH AND 5TH OCT 2019	Mr. ashok reddy chavadi AEE RSD, GESCOM, Ballari	PO1 PO2 PO3 PO5PO5PO10 PO12 PSO1 PSO2
3	15EE832-OMSES	Industrial Visit SOLAR PLANT	19TH OCT 2019	SOLAR POWER PLANT AT RAJAPUR	PO1 PO,,3 PO,4 PO5 PO7, PO12

2.1.12.STATE THE DELIVERY DETAILS OF THE CONTENT BEYOND THE SYLLABUS FOR THE ATTAINMENT OF POS AND PSOS (10)

A. Steps taken to get identified gaps included in the Curriculum. (Ex. Letter to University/BOS)

The Table 2.1.2.1shows the details of communication to university/ Board of studies in Electrical and Electronics Engineering, VTU, Belgravi related to the curriculum gaps that exist in the syllabus prescribed by the University.

Table 2.1.2.1: Details of communication to university about the Curriculum Gap

Date	Addressed Person	Issue addressed	Remarks / References
27/04/2018	The Registrar, VTU,Belagavi	Non-compliance of POs with the prescribed curriculum for EE board	Ref: 2017-18/BOS File
17/05/2019	The Registrar, VTU,Belagavi	Non-compliance of POs with the prescribed curriculum for EE board	Ref:2018 2019/BOS File
23/11/2020	The Registrar, VTU,Belagavi	Non-compliance of POs with the prescribed curriculum for EE board	Ref: 2019-20/BOS File

B. Delivery details of content beyond Syllabus and Mapping of content beyond Syllabus with the POs & PSOs

To bridge the gaps identified in Section 2.1.1:, the Department of EEE periodically organizes Seminars, workshops, personality development programs, inviting experts to give talks and interact with students and site visits.

Tables **B.2.1.2a, Table B.2.1.2b, Table B.2.1.2c, 2.1.2D** shows the list of various events organized to bridge the gap in attainment of POs & PSOs for the Academic Year CAY 2021-2022 (2020-21), 2019-20& 2018-19 respectively.

Table B.2.1.2aList of Events organized for Academic Year 2021-22

Sl.No	Gap	Action Taken	Date	Resource Person	No of students	Relevance to POs, PSOs
1	• Knowledge and hands-on experience on various IT tools Analysis and design solutions for complex engineering problems • .Mordern engineering and IT tools • Engaging in self directed learning • Design solutions for complex engineering problems • Exhibit design & testing skills in ec field • Exhibit programming & problem • solving skills in EE domain • Engineering Knowledge • Analysis and design solutions for complex engineering problems • Knowledge and hands-on experience on various IT tools • Engineer & Society • Professional ethics • Team building • Communication skills • Engaging in self directed learning • Exhibit design & testing skills in EE & • Exhibit programming & problem • solving skills in EE domain	**IEEE Students Project Symposium**	**17-06-22**	**DR VIJAYA LAXSHMI IEEE SENIOR MEMBER BAGALOT KARNATAKA**	140	• PO1TO PO12

2	• Modern tools usage • Impact of engineering solutions on Society and environment. • Commitment to professional ethics and responsibilities • Demonstrate knowledge and understanding of the engineering • LEADER in diverse teams and multi disciplinary settings • Exhibit technical skills necessary in EE Engaging in self directed learning	ORGANIZED ON DAY TECHNICAL TALK ON ELECTRICAL Maintenance And Scope Of EEE	21st july - 2021	Mr. T K NAGARAJ RAO General Manger mangalore Refineries and petrochemicals	150	PO5 PO6 PO7 PO8 PO9 PO12 PSO2 PO1 PO2 PO3
3	• Knowledge and hands-on experience onvarious IT tools • The engineer and society Analysis and design solutions forcomplex engineering problems • .Mordern engineering and IT tools • Life-long learning • Environment and sustainability • Exhibit technical skills necessary in EE Individual and team work Ability to implement and operate elelectrical and electronics	DRONES AND ARTIFICIAL INTELLIGENCE	15/5/2021	Mr.leo peter charies, founder & MD Jane Aerospace pvt.Ltd/ in association with Jane aerospace pvt ltd	80	PO1 PO,,3 PO,4 PO,5 PO,7, PO12

4	• Knowledge and hands-on experience onvarious IT tools Analysis and design solutions forcomplex engineering problems • .Mordern engineering and IT tools • Engaging in self directed learning • Design solutions for complex engineering problems • Exhibit design & testing skills in ec field • Exhibit programming & problem • solving skills in EE domain • Engineering Knowledge • Analysis and design solutions forcomplex engineering problems	Programmable Logic Controllers and SCADA"	23-2-2022TO - 25-2-2022	Mr. Pawan Kumar and Mr. Anginayulu	130	PO1TOPO5,PSO1, PSO2

Table B.2.1.2aList of Events organized for Academic Year 2020-21

Sl.No	Gap	Action Taken	Date	Resource Person	No of students	Relevance to POs, PSOs
1	• Modern tools usage • Impact of engineering solutions on Society and environment. • Commitment to professional ethics and responsibilities • Demonstrate knowledge and understanding of the engineering • LEADER in diverse teams and multi disciplinary settings • Exhibit technical skills necessary in EE • Engaging in self directed learning	ORGANIZED ON DAY TECHNICAL TALK ON ELECTRICAL Maintenance And Scope Of EEE	21st july -2021	Mr. T K NAGARAJ RAO General Manger mangalore Refineries and petrochemicals	150	PO5 PO6 PO7 PO8 PO9 PO12 PSO2 PO1 PO2 PO3

2	The Engineer and Society Engineering Knowledge Life-long learning Individual and team work	TECHNICAL SESSION ON GATE	05/06/2021	Mr. pabba ramesh, from ACE Engineering Academy	120	• PO1. P12, PO9 • PO6
3	• Knowledge and hands-on experience on various IT tools • The engineer and society Analysis and design solutions for complex engineering problems • .Mordern engineering and IT tools • Life-long learning • Environment and sustainability • Exhibit technical skills necessary in EE Individual and team work Ability to implement and operate elelectrical and electronics	DRONES AND ARTIFICIAL INTELLIGENCE	15/5/2021	Mr.leo peter charies, founder & MD Jane Aerospace pvt.Ltd/ in association with Jane aerospace pvt ltd	150	• PO3 • PO4 PO5 • PO6 • PO7 PO9 PO12 PSO1 • PSO2 • PO1 • PO2
4	• Life-long Learning • Ethics • Communication • Individual and team work	WEBINAR ON INTERPERSONAL SKILLS	17/12/2020	Ms. Sonu prakashchand manager-IT solutions, ELI lilly and company/ in association with IQAC-RYMEC	130	• 45

5	Conduct investigations of complex problems Modern tool usage The Engineer and Society Environment and Sustainability Ability to implement and operate elelectrical and electronics	WEBINAR ON control of electrical machines	01/09/2020	Mr. Sreenivasulu,	70	PO1 PO2 PO3 PO4 PO5 PSO1 . PSO2
6	Environment and stability	New Age Automotive Industry	29/05/2020	Richard Cole, TTL, Pune	50	PO7, PO8
7	Engineering & Society	Awareness programme on COVID-19 in Haraginadone village	10/08/2021	NSS Team	50	PO6
8	Engineering & Society	Grama Sabha Meeting conducted in Haraginadone village to identify the major issues in the village	10/08/2021	Lead Team	50	PO6, PO9
9	Engineering & Society	Village and House hold survey conducted in Haraginadone to identify the problems in the village	10/08/2021	Lead Team	50%	PO6, PO9

10	• Communication • Life-long learning	Student development program on Guidance on Job Opportunity in IT Industry.	25th sep 2021	Mr. Omkar BN Fouder of Xworkz, Bangalore	150	PO10, PO12
11	Life-long Learning • Communication	Job opportunities in IT	25/09/2021	ISTE Student Chapter	70	PO10, PO12

Table B.2.1.2bList of Events organized for Academic Year 2019-20

Sl.No	Gap	Action Taken	Date	Resource Person	No of students	Relevance to POs, PSOs
1	• Knowledge and hands-on experience on various IT tools Analysis and design solutions for complex engineering problems • .Mordern engineering and IT tools • Engaging in self directed learning • Design solutions for complex engineering problems • Exhibit design & testing skills in ec field • Exhibit programming & problem • solving skills in EE domain	Hands on session on advanced microcontroller	23rd and 24th feb 2020	**Dr. P Manjunath professor & Head, ECE dept JNNCE, Shivamoga**	140	• PO1 • PO2 • PO3 • PO4 • PO5 • PO12 • PSO1 • PSO2

2	• Engineering Knowledge • Analysis and design solutions for complex engineering problems • Knowledge and hands-on experience on various IT tools • Engineer & Society • Professional ethics • Team building • Communication skills • Engaging in self directed learning • Exhibit design & testing skills in EE & • Exhibit programming & problem solving skills in EE domain	Awareness program on Demand side management and safety precautions on electric shock	4TH AND 5TH OCT 2019	Mr. ashok reddy chavadi AEE RSD, GESCOM, Ballari	200	• PO1 • PO2 • PO3 • PO5 • PO5 • PO10 • PO12 • PSO1 • PSO2
3	Environment and sustainability	Industrial Visit SOLAR PLANT	19TH OCT 2019	SOLAR POWER PLANT AT RAJAPUR	80	PO1 PO,,3 PO,4 PO,5 PO,7, PO12
4	Communication	Pre-placementcampus Training Program	MARCH 2020	A SHARANA BASAPA	150	PO10

5	• Professional ethics • Design solution for complex problems • Team building • Communication Skills • Engaging in self directed learning	Invited talk on what industry needs from fresh engineers	17th SEP 2019	Mr. Pradeep kumar kallur Director, MEDINI Mr. mohan prabhu technical head AEC	120	• PO3 • PO8 • PO9 • PO10 • PO12
6	• Professional ethics • Team building • Modern tool usage • Communication Skills • Engaging in self directed learning	Webinar on creative design on adobe photoshop and illuminator	24th june 2020	Mr. shivank kumar from RNSIT, Bangalore	200	• PO8 • PO9 • PO10 • PO12
7	• Engineering Knowledge • Analysis and design solutions for complex engineering problems • Knowledge and hands-on experience on various IT tools • Team building • Engaging in self directed learning • Exhibit design & testing skills in EE	Webinar on dynamic analysis and control of rotor bearings	30th june 2020	Dr. rajashekara reddy Mutra from VIT university	95	• PO1 • PO4 • PO5 • PO9 • PSO1 • PSO2
8	• Engineering Knowledge • Analysis and design solutions for complex engineering problems • Recognize the need for amd have the preapation and ability to engage in independent	Webinar on how to crack GATE and other competitive exams in first attempt	2nd july 2020	Mr. Manipal reddy from ACE engineering Academy, Hyderabad	120	• PO1 • PO2 • PO12 • PO6

Table B.2.1.2c List of Events organized for Academic Year 2018-19

Sl.No	Gap	Action Taken	Date	Resource Person	No of students %	Relevance to POs, PSOs
1	• Engineering Knowledge • Design/Development of solutions • Analysis and design solutions for complex engineering problems • Knowledge and hands-on experience on various IT tools • Team building • Engaging in self directed learning • Exhibit design & testing skills in CS domain	Workshop on programming in C/C++	24th to 29th sep 2018	. S B Sunil kumar Dr.Keerthi Prasad, GMIT Davangere	120	• PO1 • PO3 • PO2 • PO5 • PO9 • PO12 • PSO11

2	• Engineering solutions in societal and environmental contexts • Professional ethics • Engaging in self directed learning • Knowledge to assess societal ,health	EEE Department &NSS unit organized blood donation camp in association with swami vevekananda blood bank	MARCH 2018	Dr. S .Kotresh Professor, Dept of EEE RYMEC		• PO6 • PO7 • PO8 • PO9
3	All POs & PSOs	ICIITF	APRIL 2018	RUDRA Bhanu Satpathy	100	• PO1-12 • PS01-2
4	Environment and sustainability	INDUSTRIAL VIST	1 st oct 2018 3 OCT 2018	Varahi underground hydro power plant HYDRO POWER PLANT	80	PO1 PO,,3 PO,4 PO,5 PO,7, PO12

C Mapping of content beyond syllabus with POs & PSOs

The Mapping of content beyond syllabus with POs & PSOs for various events is shown in the last columns ofTables **B.2.1.2a, Table B.2.1.2b, and Table B.2.1.2c.**

2.2. Teaching-Learning Processes (100)

2.2.1.1 Describe processes followed to improve quality of Teaching and learning (25)

A. Adherence to Academic Calendar

Since the Institute is affiliated to VTU, Belagavi, hence all the program dates program dates will adhere to the calendar of the University . The Department Calendar of events is prepared based on University and Institute calendar of events as mentioned above and is provided to all the students and faculties before commencement of the semester

B . Use of various instructional methods and pedagogical initiatives

Various Instructional methods and pedagogical initiates involved in teaching learning process are listed below:

1. Lecturing using Black board
2. Lecturing through Tutorials and Remedial classes
3. Power point presentation
4. NPTEL videos
5. Models
6. Industrial tours/Field demonstrations /Real World citations
7. Distribution of Handouts
8. Demonstrations in the class room

9 Debates and quiz

C Methodologies to support weak students and encourage bright students.

All the students in a semester are classified as Bright or debilitated in each course taking into consideration about his/her overall CGPA, previous SEE and current semester IA performance.

Initiatives and Implementation details of Assisting Poor academic Performers:

The department process of monitoring, guiding and assisting slow learners is as below

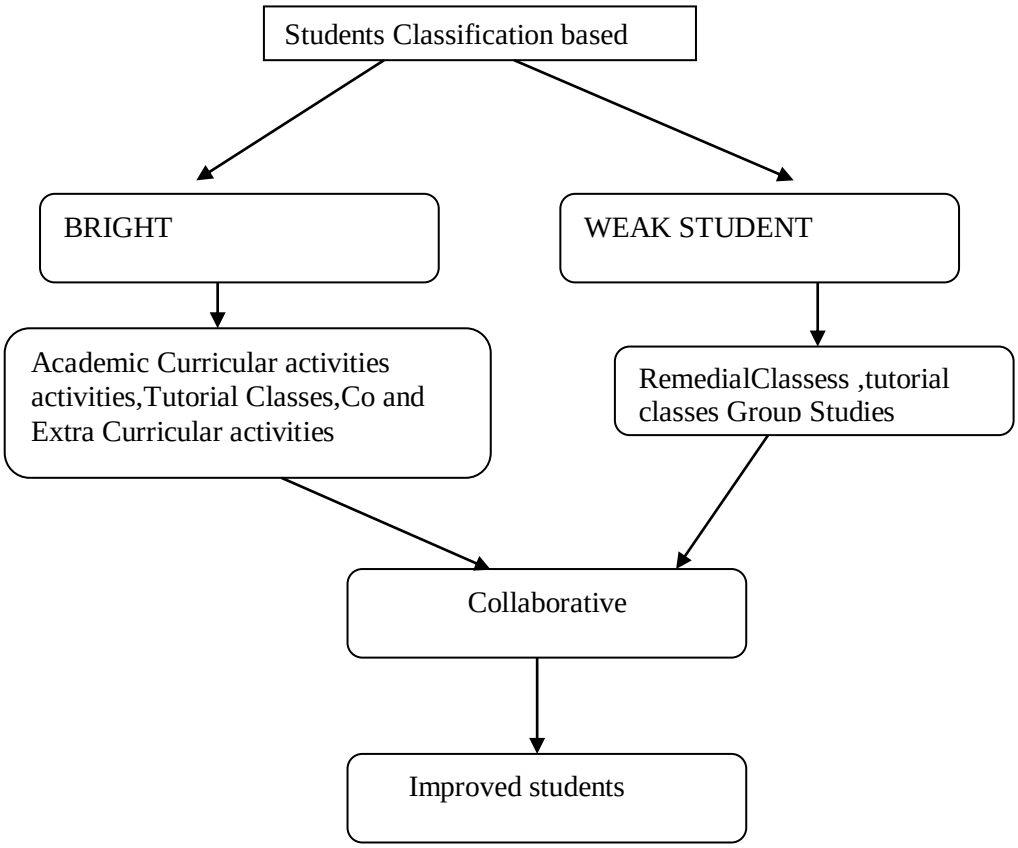
- A separate list of students scored below 15 marks for Non CBCS Scheme/12marks /19for CBCS(2017&2018)9 Scheme in the internals is identified and are given additional coaching by conducting Remedial and tutorial classes.
- Additional coaching is given to slow learners through Remedial and tutorial classes and is prepared to face the exams with confidence.
- A group of students are allocated to each Faculty who act as mentor to address the grievances of each student and after counselling, suitable suggestions/ advise is given and the Department will try to resolve the issues of mentee.

Impact analysis on the performance for Poor academic Performers

- Improvement in the Internal Assessment marks.
- Improved results and less number of failures in each subject.

Initiatives and implementation details of Encouraging Meritorious Students

- Seminar activities.
- Model making, quiz, paper presentation through “EEE” forum.
- Sponsored to attend conferences, workshops and publish papers.
- Motivated to take up innovative projects and apply for funding.
- Encouraged to participate in various competitive exams/quest/quiz.
- Inspired to take up competitive examinations like GATE, PGCET etc.
- Bright students are encouraged by felicitating in College Annual Day Program MANDARA for their Academic



Flow diagram 2.2.1showing process followed to improve students' performance

D . Quality of Class room Teaching.

All classrooms are provided with blackboard, LCD projectors and Audio facility. All the theory courses are delivered through lectures, NPTEL and NITTR recorded videos using these facilities. Students are encouraged to interact and discuss with the faculty during lecture and get their doubts cleared. For the courses involving numerical and designs, problems from the University question papers are solved in the class. Numerical examples with twist in the data or solutions are also discussed or given as assignment. A minimum of 85% attendance is to be attained by the student to appear for the University examination. The University stipulates maximum number of four heads as backlogs in first and second semester to enter third semester and these eligibility criteria depends on the prevailing scheme. The students' attendance is monitored every week and the list of the students with low attendance is displayed in the notice board. All these regulations prompt the students to be regular and serious in their studies.

Based on the request from the faculty and considering the importance of the subject, additional teaching hours are allotted in the Time table as tutorial classes

E Conduct of experiments (Observation in Lab)

- Faculty members of respective specialization along with Laboratory In charge will discuss about the preparation of Laboratory Manual, Requirements, if any, like Electronic Equipments/Computers/Software Tools/Consumables, Conduction of experiments before commencement of semester.
- The Timetable for the Labs along with the batches (2 or 3) with 25 to 30 students in each batch is prepared.
- Each batch is divided into group of 2 to 3 students for Hardware related labs and individual Systems are provided for Software oriented labs.
- Experiments are divided into cycles.
- Every batch of each lab is supported by 2 to 3 Faculty and Instructors.
- The instruction for each experiment is delivered by Faculty In-charge of each batch before the conduction of the Experiment in the lab.
- The student maintains an Observation book to note down the relevant details about the Experiment and obtained values are verified by the faculty before copying into laboratory manual.
- Continuous Evaluation is done by the faculty in every lab session for awarding Internal Assessment.

F. Continuous Assessment in the laboratory

a. **Procedure and Write Up:** Student writes the observations made during the conduction of each experiment and writes it down with relevant circuits, graphs etc.

b. **Execution:** Student is assessed with regard to his performance in the lab and understanding of the technicality of each experiment.

- **Viva-Voce:** A brief questionnaire session is conducted after the completion of each experiment. The student‟s response to this helps to cater to his ability and extra teaching that needs to be given to him. The Laboratory Internal Marks split up is as shown in the Table 2.2.1.a

The Laboratory marks are evaluated by the faculties for 20 marks for Part A, Part B experiments by conducting 1 or 2 tests, as per their convenience. Tables 2.2.1.a, 2.2.1 b: indicate the Lab evaluation details as follows for 2015 , 2017,2018 schemes respectively.

Table 2.2.1.a: Lab Evaluation details(2015)

Level	Evaluation Type	Marks
1.	Continuous Evaluation in every lab session	10
2.	Laboratory Internal Test	5
3.	Record submission	5

The Laboratory marks are evaluated by the faculties for 20 marks for Part A, Part B experiments by conducting 1 or 2 tests, as per their convenience.

Table 2.2.1 b: Lab Evaluation details (2017 Scheme)

Level	Evaluation Type	MarkS (40)
1.	Continuous Evaluation in every lab session	20
2.	Laboratory Internal Test	10
3.	Record submission	10

Table 2.2.1 C: Lab Evaluation details (2018Scheme

Level	Evaluation Type	MarkS (40)
1.	Continuous Evaluation in every lab session	20
2.	Laboratory Internal Test	10
3.	Record submission	10

Impact analysis

- Very good results in laboratory examination.
- Improvement in analytical abilities of students.
- Students are able to carry out innovative Projects.
- The stimulating environment made students to learn on subjects apart from regular curriculum.

G. Student feedback of teaching learning process and actions taken

The feedback collection process is very important for Improvement of the Institution. The faculty feedback is collected from the students every semester. This process contributes to evaluate the faculty performance for reward

/ corrective measures. The online feedback is collected from the students during regular class hours and monitored by the Dean Examination and Feedback monitoring committee.

Average Percentage of Students who participate: Students having attendance more than 75%
The feedback analysis process:

The online feedback will be collected from students by the Dean Examination and Feedback monitoring committee. The consolidated Report generated online is forwarded to the Principal Office for further Corrective measures. The same will be sent to respective HOD's.

Grading Points:

Excellent: 9.01 - 10

Good: 7.01-9.0

Average: 4.01 -7.00

Below Average: 1.00 -4.00

The teaching performance indices are analyzed by the Principal & office and the same is conveyed to theconcerned.

Reward/Corrective measures

Basis of reward / corrective measures: The indices used for measuring the and summary of the index values are mentioned below

1) Creating interest in the subject
2) Regularity in handling class
3) Presentation of the subjects.
4) Audibility /Clarity of speech.
5) Interaction with students.
6) Clarifying students doubts.
7) Fairness in Evaluation in IA and Assignment books.
8) Ability to design Quizzes /Tests/Assignments/Examinations and project to evaluate Students understanding the course.
9) Interact and encourages students to ask question /participation.
10) Fulfillment of course objective and outcomes.

System of Reward:

Best performing faculty is rewarded by issuing a letter of appreciation. Performance rating of faculty throughstudent feedback system is one of the factors in evaluating the annual performance & to release the annual increments.

Corrective Actions taken: The faculties performing below average are trained continuously through FacultyDevelopment Program to improve the quality of the staff.

2.2.2. Quality of Internal semester Question papers, Assignments and Evaluation (20)

Quality of Internal Semester Question papers, Assignments and Evaluation.

Initiatives and Implementation details for improving the quality of Internal Semester Question papers (InternalAssessment Test)

A. Process for Internal Semester Question Paper Setting and Evaluation and Effective Process Implementation

- IA Quality Cell is formed for Internal Semester Question Paper Setting, Evaluation and Effective Process Implementation consisting of HOD, IA coordinator, and Course coordinator.
- The IA committee will frame the policy and monitor activities.

Policy Framed by IA Quality Cell

- The IA coordinator calls the meeting and discuss about the process of IA quality assessment and direct the committee members to follow the quality assurance activity as given below
    1. The IA quality cell will give guidelines for IA Question paper preparation.
    2. After the test, the IA Quality Cell will verify the quality of questions with guidelines given before the test.
    3. IA Quality Cell will make the observations, the observations along with suggestions passed over to IA coordinator.
    4. After finalization of IA marks, IA marks and attendance sent to parents and mentors for the process of intimation and counseling respectively.
    5. After all the tests the summary of test are submitted to other committee in the department.
    - The question paper format will be formatted by IA Quality Cell
    - The question papers format are circulated to course owners for setting the question paper.
    - IA quality cell will verify the question paper with respective policy framed.
    - Before questions are printed they are verified by team for auditing.

Flow diagram of CIE is as shown in figure **2.2.2a** below, followed by the Rubrics for CIE question paper.

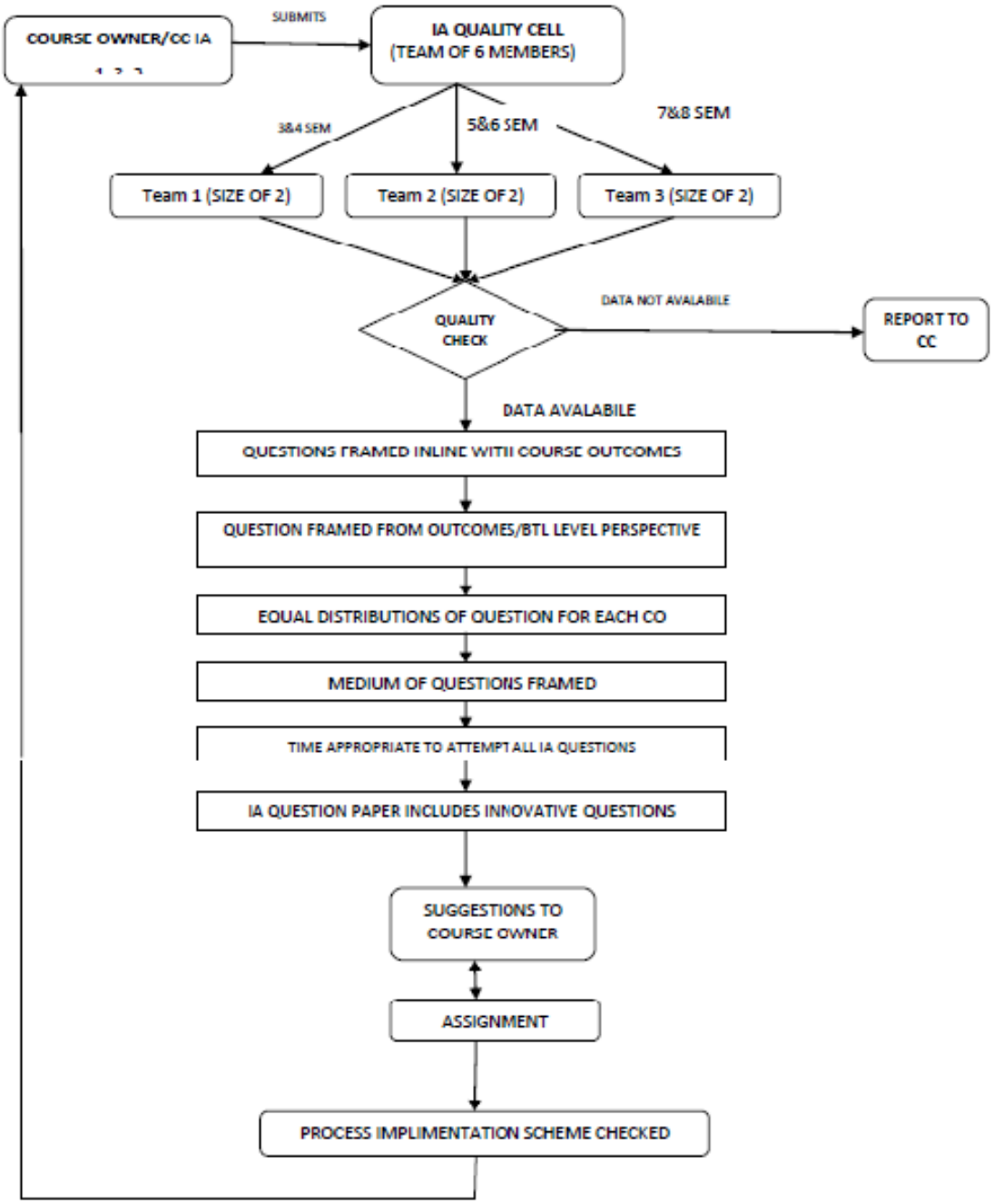


Fig 2.2.2a: Flow Diagram of CIE

RUBRICS

FOR INTERNAL ASSESSMENT QUESTION PAPER: QUALITY ANALYSIS

STAFF NAME :		**SEM :**
SUBJECT NAME :		**SEC:**
SUBJECT CODE :		**DURATION OF IA:**
Sl No	**Assessment Parameters**	**Remarks**
1	Are the Course Outcomes defined for course , met in the direct assessment.	**YES/NO**
2	BTL level specified in IA QP , is it In line with BTL level included in CO of your course.	**YES/NO**
3	Is there equal Weightage of questions set for COs specified in IA QP	**YES/NO**
4	Rate the Medium of questions set in IA Question Paper(with respect to LOTs : Lower order thinking skills and HOTs : Higher order thinking skills)	**Low/Medium/High**
5	Time specified for IA QP Set ,Is it sufficient to attempt the IA question by students comfortably.	**Less/Appropriate/ Not Appropriate**
6	Does the IA Question Paper include /Mandatory Questions	**YES/NO**
7	Does the Internal Assessment question paper reflect from VTU SEE question paper .	**YES/NO**
8	**Other Remarks**	

Signature of Evaluators:

(a) After the test post activities are

- The scheme of evaluation are verified with questions
- The marks and attendance sent to parents
- The weak students are identified by mentors& counseled.
- The quality of question papers analyzed and discussed in meeting for further tests.

(b) After final test

- The final IA marks sent to program coordinator for further activities.
- The faculties of the department conduct three internal assessment tests at 6th, 12th and 14th week respectively.
- However there is no minimum marks criterion from the university with respect to internals marks.

I. Assignments:

- Assignment issue and submission dates are announced by the respective faculty members.
- Assignment questions are prepared using Bloom‟s Taxonomy process and mapped with respective CO‟s and PO‟s.

II. Evaluation:

- The faculties after every internal assessment test they explain the solution of the questions in the class which will enable them to perform well in the final examination.
- For any genuine reasons, if a student was unable to perform well in the given three internal assessment tests, improvement test is given to him/her.
- The average of the marks obtained from any best two test is chosen for the award of internal assessment marks for 2015 scheme and Average of three test is considered for the award of internal assessment marks.
- If a candidate remains absent for all the tests conducted, the Internal assessment marks are marked as "Absent" in the result.
- Total internal assessment marks are calculated by adding internal assessment marks obtained in the test and assignment.

Choice Based Credit System (CBCS)

The university has introduced CBCS system for 2015 admitted batch.

- The new pattern for internal assessment was introduced where in the internal assessment is done for a total of 20 Marks.
- 15 marks assessment is done by tests and 5 marks by assignment, seminar, etc.
- The Table 2.2.2a depicts the IA Pattern for CBCS 2015 scheme.

Table 2.2.2a: Internal Assessment pattern for CBCS (2015)

Internal Assessment	Marks
Test	15
Assignments	5
Total Marks	20

Choice Based Credit System (CBCS)

The university has introduced CBCS system for 2017 and 2018 admitted batch.

- The new pattern for internal assessment was introduced where in the internal assessment is for a total of 40 Marks
- 30 marks assessment is done by tests(CIE is conducted for 50marks and scaled down to 30) and 10 marks by assignment, seminar, etc.
- The Table 2.2.2b depicts the IA Pattern for CBCS 2017 & 2018 scheme.

Table 2.2.2b Internal Assessment pattern for CBCS (2017, 2018)

Internal Assessment	Marks
Test	30
Assignments	10
Total Marks	40

Process of Internal Assessment in the Department

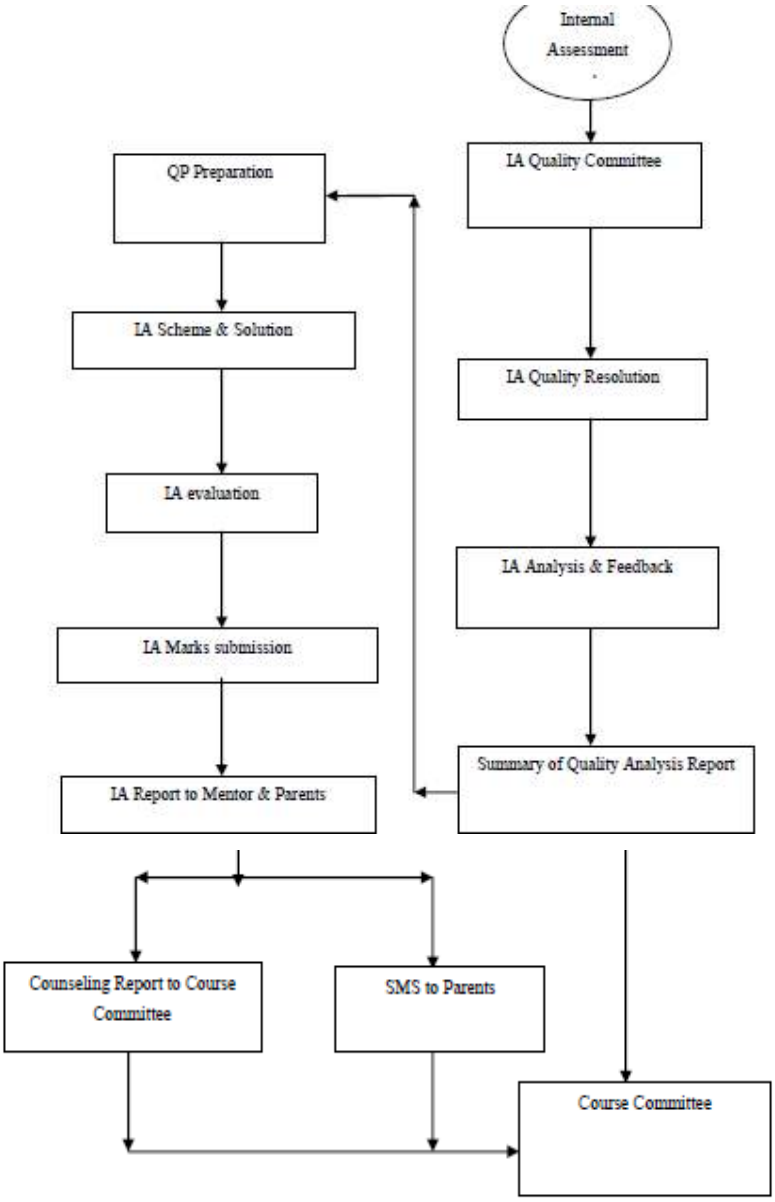


Fig 2.2.2b: Flow Diagram of Internal Assessment

2.2.2.2. Impact analysis

- Very good results in Internal and External examination.
- Improvement in overall performance of students thus improves the placement.
- The stimulating environment made students to plan their study plan for better performance in internal Assessment.

2.2.3. Quality of Student Projects (25)

2.2.3.1. Initiatives

- The student‟s projects are selected in line with Department Vision, Mission, and Program Outcomes.
- Students are provided with brief idea of various fields for selecting the project ideas.
- The list of previous year projects is displayed at notice board which ensures no repetition of project work & also encourages students to enhance the previous works.
- The faculties encourage students to participate in project exhibitions.
- The faculties encourage students to publish their project work in reputed Journals/Conferences.
- The faculties encourage students to avail the external funding schemes for their project work through KSCST, VTU project funding schemes.

Project allocation methodology

- Students will be asked to submit their project batches in Google forms./hard copy
- Project batch numbering will be done in first come first served basis.
- Four project domains are discussed and are decided in the meeting. The same will be circulated to both students and project guides.
- Project batches will be allocated to staff (preferbally according to their domains)
- Project coordinator will circulate previous project titles to all project guides and students so that same projects should not repeat.
- Students will meet their respective guides and will discuss about project areas, interests and will finalize the project title.
- Students with the approval of their respective project guides and project assessment committee will submit project titles to project coordinator

The process for Project Execution in our department is depicted in the figure 2.9 below.

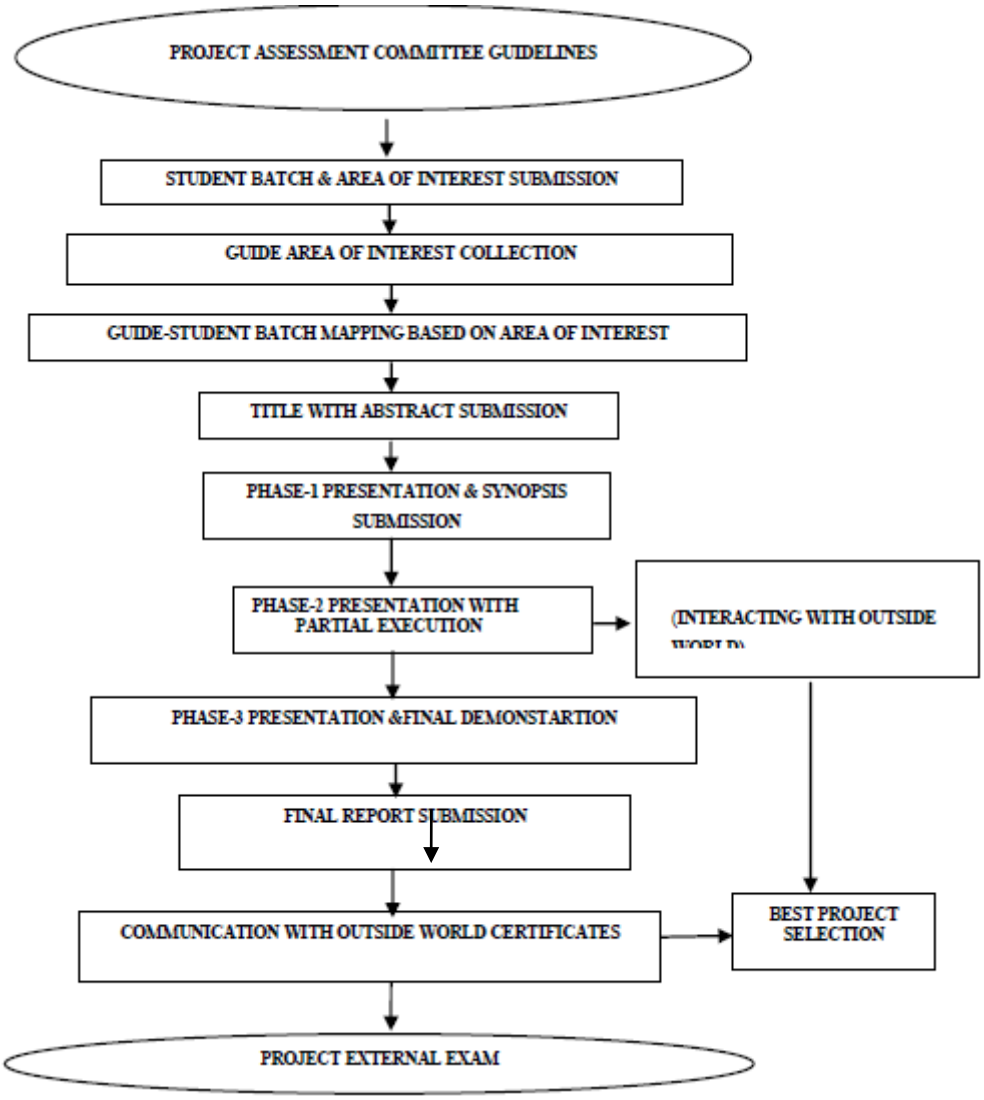


Fig 2.2.3a: Flow Diagram of Project Execution

- A well planned Project work Calendar of events is prepared by project co-ordinator which is communicated to all the students and project guides.
- The faculties encourage students to participate in project exhibitions.
- The faculties encourage students to publish their project work in reputed journals/conferences.
- The faculties encourage students to avail the external funding schemes for their project work. (Like KSCST, DIC, VTU project funding scheme).

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- The best projects for the year are identified

2.2.3.2 Implementation

- Project Coordinators are identified by the Head of the Department who are responsible for Planning, Scheduling and Execution of all the activities related to the Students Project Work as shown below in the Table 2.10

Table 2.2.3a: Project Planning

Timeline	Task	Particulars
Semester Seven		
1st week of 7th Semester	Call for project batches and Guide Allotment.	Students are informed to form the batch and get it registered with the Project Coordinator of the Department. Considering the areas of interest of Faculty and Students, guide is allotted. A unique Project Batch Identification number is used as reference throughout the academic year.
4th week of 7th Semester	Call for Project Titles	Students are instructed to submit the title of the project in consultation with their respective guide in a given perform to the project coordinator.
6th week of 7th Semester	Synopsis submission	The student submitting project synopsis are pre-evaluated by guide..
13th week of 7th Semester	First Review (Phase I Evaluation	Students are instructed to submit Hardware & Software requirements specification and give presentation of their Synopsis
4th week of 8th Semester	Second Review (Phase II Evaluation)	Students are instructed to present partial execution of the project and give presentation.
12th week of 8th Semester	Final Demonstration (Phase III Evaluation)	Students are instructed to submit complete project report with university compliances and give a PowerPoint presentation for the project.

PROJECT EVALUATION RUBRICS-

RUBRICS: Rubrics are scoring or grading tools used to measure a student‟s performance and learning across a set of criteria and objectives. The Project EvaluationRubrics-2021-22 is shown in below in table 2.2.3b

Table 2.2.3b: Project Evaluation Rubrics-2021-,22 2020-21, 2019-20, 2018-19,

Component	Marks[M]	Criteria	Exceptionally Well Executed [M>90%]	Good with room for improvement [70%<M<90%]	Meets minimum requirement [M<70%]	Course Outcome Mapping	PO Mapping	BTL Mapping
Literature Survey &Problem Identification	20	Refer	Refer more number of standard research papers & understand the technology.	Refer more number of research papers & understand the technology.	Refer research papers & understand the technology.	CO1	1,2,7	L2,L4
		Sustainability	Identify a problem integrating and balancing economic, environmental and social factors.	Identify a problem in which one factor out of three is missing.	Identify a problem in which more than two factors out of three are missing.			
		Ethics	Identify a unique problem.	Identify an existing problem to be extended.	Identify a very poor existing problem.			
Synopsis	20	Synopsis	Synopsis submitted with well and clearly identified problem and very good literature survey.	Synopsis with a problem identified and a literature survey.	Synopsis with poor problem and literature survey of few papers.	CO2	7,8,9,10, 12	L3, L5
Objective & Methodology	20	Goal	Well defined Objective to meet the problem Identified.	Defined Objective nearly meets the problem Identified.	Objectives are poorly defined to meet the problem Identified.	CO1	1,2,7	L2, L4
		Functionality	Problem is broken into well thought out elements with good length, reusability and efficiency.	Problem is broken into elements. Length, reusability and efficiency need to be taken care.	Problem elements exist, no reusability and efficiency.			
		Use of Modern Technologies	Most recent and efficient technologies are used.	New technologies but not efficient technologies are used.	Old technologies and platform are used.			
Seminar on Synopsis	40	Demonstration	Team members were very well balanced and had clear articulation and power point presentation	Team members are audible and fluent. Presentation was good.	Team members were inaudible but fluent. Poor presentation.	CO2	7,8,9,10,11, 12	L3,L5

			was excellent.					
Component	Marks[M]	Criteria	Exceptionally Well Executed [M>90%]	Good with room for improvement [70%<M<90%]	Meets minimum requirement [M<70%]	Course Outcome Mapping	PO Mapping	BTL Mapping
Experimental observation	30	Validation	Hardware Program handles erroneous or unexpected input. Meets all requirements.	All error conditions are checked. May not meet all the requirements.	Some error conditions are checked does not meet all specified requirements.	CO2,CO3	3,5,12,PSO1, PSO2	L3,L4,L5 ,L6
		Testing	Hardware Program / Testing is complete without being redundant..	All key items are tested, but testing may be redundant.	Testing was done, but is not sufficiently complete.			
Documentation	20	Thesis	The thesis is clearly stated with good flow and adequate content.	The thesis is clearly stated with adequate content. Flow was little difficult to follow.	The thesis is not clearly stated with inadequate content. Flow was little difficult to follow.	CO4	7,8,9,10,11, 12	L3,L5
Demonstration Presentation & Discussion	30	Demonstration	Team members were very well balanced and had clear articulation and power point presentation was excellent.	Team members are audible and fluent. Presentation was good.	Team members were inaudible but fluent. Poor presentation.	CO4	7,8,9,10,11, 12	L3,L5
Paper Presentation/ Project Exhibition	10	Paper Presentation/ Project Exhibition	Paper was presented in a very good conference or journal with good impact factor./ Participated in project Exhibition and won prizes	Paper was presented in a conference./ Participated in project Exhibition and not won prizes	Paper was presented in conference with no relevant data./ Not Participated in project Exhibition	CO5	8,9,10,11, 12	L4
Team Work	10	Time Management	No adjustments of deadlines. Ensured timely productions. Routinely met the guide.	Usually uses time well. Had to adjust deadlines.	Rarely gets things done by deadlines. Rarely meet the guide.	CO4, CO5	7,8,9,10,11, 12	L3,L4,L5
		Team Work	Team worked with unity and mutual respect. Each member contributed well.	Team worked well with unity most of the times. Each member contributed to the project.	Team did not work well with unity and mutual respect. Contribution from few of the members was lacking.			

2.2.3.3. Impact analysis

- Project work involves working on innovative ideas by the Students.
- Skills and abilities of students improved noticeably.
- Students were able to understand the various aspects of project management.
- Students were able to work with good confidence level.
- Improved teamwork spirit.
- Implementation and deployment of the project for social benefits.
- Document preparation and presentation.
- More tendencies to showcase their project work in project exhibition were observed.
- Students were able to present their Papers based on Project Work in Conferences/Journals.

The following student‟s projects were recognized as the best projects in the project competition/exhibition conducted byKSCST & various events for the AY 2020-21, 2019-20, 2018-2019 which are depicted in the Table 2.2.3b & 2.2.3c ,2.2.3d,2.2.3e respectively.

Table 2.2.3C: Best Projects for the Academic Year 2021-2022

Sl.No	USN	Student Name	Guide Name	Project Title	Remarks
1	3VC19EE434	MD JUNAID AHAMED	Gayatri J	IOT Based message conveyer system for paralytic/Disable people.	Pratcipated and won the prize in IEEE Students Project Symposium held at RYMEC
	3VC19EE435	MOHAMMAD MUZAMMIL M			
	3VC19EE436	MOHAMMED FAYAZ			
	3VC19EE437	MOHAMMED SALMAAN D L			
2	3VC18EE067	VENKATESH N S	U Shantha kumar	Solar powered electric vehicle.	Pratcipated and won the prize in IEEE Students Project Symposium held at RYMEC
	3VC18EE014	AMARESH K			
	3VC18EE027	DAYANAND S LAKKUNDIMATH			
	3VC18EE007	M RAHUL			

Table 2.2.3C: Best Projects for the Academic Year 2020-2021

Sl.No	USN	Student Name	Guide Name	Project Title	Remarks
1	3VC17EE030	Mr. K V Manoj kumar	Lingana Gouda R	SMART ELECTRIC CART FOR STREET VENDORS	Selected for KSCST & Awarded as BEST project of the year by KSCST 44th Series
	3VC16EE041	Mr. Mohammad moieiz ahemad			
	3VC17EE004	Ajay kumar C			
	3VC17EE002	Mr. Akash S			
2	3VC17EE025	Ms.Jayalakshmi B K	Aladalli Sharanba sappa	AUTOMATED WASTE SEGREGAOR	Selected for KSCST
	3VC17EE024	Ms. Ishrath Fathima			
	3VC18EE415	Mr. Gouse Peer			
	3VC17EE028	Ms. Jyothi Prabha L.G			
3	3VC17EE027	Jeevan vikas B	H.VinayKumar	PORTABLE ENERGY METER	VTU Sponsered under student project proposal 2020-21
	3VC16EE066	Prem kumar SG			
	3VC17EE036	Mohammad Shams Tabraiz			
	3VC18EE407	Bhaskar			

Academic Year:2019-20

Table 2.2.3D: Best Projects for the Academic Year 2019-20

Sl No	Name of the Student	USN	Project Title	Project Guide	Remarks
1	Varun P	3VC17EE443	Automated bio fertilizer generating unit	Hanumantha reddy Dr. S Kotresh	**Funded by New Age Innovation Network (NAIN)**
	Ms. Meghana M	3VC16EE038			
	Harsha K M	3VC16EE017			
2	Mahammad Rafi	3VC17EE420	Distribution board of 3 phase and single phase with display	Dr. S B Shivakumar	**Funded by New Age Innovation Network (NAIN)**
	Ashwini T	3VC17EE405			
	Madhu J P M	3VC17EE418			
	Ukkali Karthik	3VC17EE442			
3	Mr.Varun P	3VC17EE443	Automated bio fertilizer generating unit	Hanumantha reddy Dr. S kotresh	Selected for KSCST & sponsered
	Ms. Meghana M	3VC16EE038			
	Harsha K M	3VC16EE017			

- **Academic Year:2018-19**

Table 2.2.3E Best Projects for the Academic Year 2018-2019

Sl.No	USN	Student Name	Guide Name	Project Title	Remarks
1	3VC15EE083	Shivakumar K H	ANUSUYA PATIL	Switch gear control using DTMF technology and ardiuno	Selected for presentation in journal & Useful for power supply regulation
	3VC15EE017	Chandana S D			
	3VC15EE077	Saima sabrin			
	3VC15EE042	Jayasimha D			
2	3VC15EE044	K Prathibha	HANUMANTH REDDY	Smart power source selector using GSM	Selected for presentation in journal
	3VC15EE063	Pooja kolal			
	3VC15EE014	Bhanushree T			
	3VC15EE064	Pooja M A			
3	3VC16EE453	Swathi U	Dr. S Kotresh	Modernization of agriculture for crop protection using sensors(B9)	Useful for society and agriculture
	3VC16EE418	Keerthi Sree			
	3VC16EE448	Shruthi V			
	3VC16EE405	Yeshaswini divya			
4	3VC14EE078	Santosh V Sarvi	K Raghavendra Prasad	Design of an Intelligent Management system of Agricultural Green Houses based on IOT	Useful for Agricultural sections of Society, under varying environmental conditions.
	3VC14EE070	Ravichandra B			
	3VC14EE054	Meghanath E S			
	3VC14EE437	VinayaShree J M			
5	3VC14EE108	Vijaya kumar	Vinaya Kumar H	Development of Smart Helmet Based on IOT technology for safety and accident detection	Useful for Human travellers protection, Traffic system management, etc

The list of papers Published / Presented by Students for the AY 2021-22 is depicted in the Table **2.2.3G**

Academic Year:2021-22

Sl. No.	Name of the Student	Title of the Paper	Remarks
1	AMIT SUBRAYA BHANDARI	Opening and closing using Microcontroller	2022 JETIR June 2022, Volume 9, Issue 6
2	AISHWARYA K M	Solar powered street light illumination control by PIR sensor	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022 JETIR
3	BASAVARAJESHWARI A	MOBILE SIGNAL JAMMER	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022 JETIR
4	PAVAN KALYAN S	Electrical Vehicle Garbage Carrier	ISSN (Online) 2581-9429 Volume 2, Issue 9 DOI: 10.48175/IJARSCT-5343
5	AJAY M K	Wireless Charging of an Electric Vehicle using Solar and Wind	IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
6	P BINDU MAHADEVI	SOLAR BASED vaccum floor cleaner	(ISSN-2349-5162) june2022 Volume 9
7	A K JEELAN	Electronic Jacket for women safety	ISSN:2394-0697 VOL IX, Issue VI 2022
8	G DEEPTHI	GENERATING THE ORGANIC FERTILIZER FROM THE BIO-DEGRADABLE WASTE	(ISSN-2349-5162) JETIR June 2022, Volume 9, Issue 6
9	G T GANESH	Fire Fighting Robotic Machine	ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022
10	B SHRAVANI	Automatic Monitoring of Deforestation using Arduino	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022

11	MOHAMMAD MUZAMMIL M	IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE	ISSN:2349-5162 June 2022, Volume 9, Issue 7
12	MUSKAAN M	Home automation using Blynk	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
13	Pooja B R	PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022 (IJCESR)

Academic Year:2020-21

Table 2.2.3G.: List of Papers Published / Presented By Students

Sl. No.	Name of the Student	Title of the Paper	Remarks
1	Mythri M	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
2	Arpitha G	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
3	Kotrugouda GM	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION :JULY 2021
4	Veeresh B	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION :JULY 2021
5	UMA	IOT based photovoltatic green tree	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021

6	Mounika N	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
7	Srusti N P	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
8	Thirumala D	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
9	Shiva satish	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
10	Mallikrujuna gouda N	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
11	C priyanka	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
12	L G lavanya	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
13	Jayalakshmi B K	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
14	Ishrath Fathima	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
15	Ghouse Peer	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
16	Jyothi Prabha L.G	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021

17	Ajith T	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
18	Akshya kumar	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
19	Abhishek	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021
20	Hanumantha	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021
21	Kishor kumar M	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
22	Nitesh m	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 20201
23	Avinash B M	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
24	Hanumanthappa	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
25	Suma latha	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : july 2021 ISSN:2349-5162
26	Nandish k	Automated water Management system using arduino	JETIR.VOL8 Publication : july 2021 ISSN:2349-5162
27	Veeena r	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : july 2021 ISSN:2349-5162
28	Abdul razaq M	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : : july 2021 ISSN:2349-5162 Impact factor 7.95 i
29	Niranjan E	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020

30	Latif unnisea	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
31	Niveditha N	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
32	Jagadesh k b	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020

Academic Year:2019-20

2.2.3H: List of Papers Published / Presented By Students

Sl. No.	Name of the Student	Title of the Paper	Remarks
1	Gowri priya J	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	Manjunath C N	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	GeethaLakshmi	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	Channabasava G	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
2	Madiha Farheen	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
	Arsha K	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
	Jaipal H	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
	Basavaraj P	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
3	Varun Kumar	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87
	Meghana	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87

	Harsha K M	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87
4	Rukhsar begum	Robotic Arm Control Using Arduino	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION: 08/06/2020 Impact factor :5.87
5	Upendra kumar	Automatice railway gate control and track Fault Detection system	International journal of advance research in electrical and electronics and engineering ISSN :2320-3765 PUBLICATION: june 2020 Impact factor :7.122
6	Sujay IJ	Solar powered automatic irrigation system using soil moisture sensor	IRJET VOL :7 ISSN 2395-0072 PUBLICATION MAY 2020 ISSUE5 Impact factor :7.527N
7	Sanjay kumar	Energy conservation using Arduino &PZEM -004T	IRJET VOL :7 ISSN 2395-0072 PUBLICATION JUNE 2020 ISSUE5 Impact factor :7.527N
8	Kishore kumkar Markal	Solar Powered Automated Siren using Arduino UNO	IRJET VOL :7 ISSN 2395-0072 PUBLICATION August 2020 ISSUE5 Impact factor :7.527N
9	Kodal ashwini	Blind guide stick using GPS and GSM module	IJCRT VOL:8 ISSN:2320-2882 PUBLICATION: JUNE 2020 ISSUE:6 IMPACT FACTOR:7.9
10	Anjali G	Automatic flood gate and food control system with power generation using ARDUINO UNO	IRJET VOL:7 ISSN:2395-0072 PUBLICATION: JUNE 2020 ISSUE:6 IMPACT FACTOR:7.529

The list of papers Published / Presented by Students for the AY 2018-19 is depicted in the Table **2.2.3I**

Academic Year:2018-19

Table 2.2.3I: List of Papers Published / Presented By Students

Sl. No.	Name of the Student	Title of the Paper	Remarks
1.	Farheen Sultana	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019-
2.	Firdous Jahan	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
3.	Shabana Banu	**Net Metering**	ijraset : 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
4.	Devaraja	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
5.	Pooja Kalal	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
6.	K. Pratibha	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
7.	Pooja M Agnihotri	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
8.	Bhanushree. T	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
9.	Nischitha G M	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
10.	Sirisha N	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
11.	Veeresha K	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
12.	Kamaxi	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
13.	Chandana S Dhongade	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X

14.	K H Shivakumar	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
15.	Saima Sabrin	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
16.	Jayasimha D	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
17.	Gouthami.D	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
18.	Ganjigara Srikavya	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
19.	Swapna.K	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
20.	Likhita	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
21.	RUDRA MUNI	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
22.	Sirisha G	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
23.	Kavya D	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
24.	.Sree Prabhu Datta P N	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
25.	Prashanth G	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019

The Student Achievements from,2019-2020,2020-2021,2021-22 is depicted in the Table 2.2.3K

Table 2.2.3 Achievements of,2019-2020,2020-2021 ,2021-22

Sl.No.	Name of theStudent	Events	Organized by
1.	MD JUNAID AHAMED	Pratcipated and won the prize in IEEE Students Project Symposium held at RYMEC 2021-22	IEEE
2.	AMARESH K	Pratcipated and won the prize in IEEE Students Project Symposium held at RYMEC 2021-22	IEEE
3.	Adarsha J	Online Quiz Competition on National Science Day 2021-22	IEEE
4.	Adarsha J	C programming for beginners on windows 2021-22	INFOYSIS
5.	Ms. Meghana M	Selected for KSCST & sponsered project for AY 2020-21	KSCST
6.	Mr.Varun P	Selected for KSCST & sponsered project AY 2020-21	KSCST
7.	Harsha K M	Selected for KSCST & sponsored project AY 2020-21	KSCST
8.	M GHANASHYAM	Participated in K-TECH Innovation hub nain center at rymec ballari 29/09/2019	K-TECH Innovation hub Dept of ITBT Govt of Karnataka
9.	M GHANASHYAM	Completed BARCLAYSLIF ESKILLS PROGRAMME	GTT FOUNDATION
10.	RAGHAVENDRA S	Participated in technical education quality improvement programme (TWQIP-III)HELD FROM JULY 06-10, 2020	NATIONAL INSTITUTEOF ENGINEERING,MYSURU

11.	Nitesh M	Secured 3rd position in virtual event in the PATENT FOCUS AREAS FOR GREEN FUTURE	Karnataka state Council for Science &technology ,CIPAM GOVERNMENT OF INDIA
12.	Mahammad Rafi	Selected for sponsored project by New Age Innovation Network (NAIN)	New Age Innovation Network (NAIN) GOVERNMENT OF INDIA
13.	Ms. Meghana M	Selected for sponsored project by New Age Innovation Network (NAIN)	New Age Innovation Network (NAIN) GOVERNMENT OF INDIA
14.	Mr. K V Manoj kumar	Selected for KSCST & Awarded as BEST project of the year by KSCST 44th Series	Karnataka state Council for Science &technology
15.	Mr. Mohammad moieiz ahemad		
16.	Ajay kumar C		
17.	Mr. Akash S		
18.	Jeevan vikas B	Selected for vtu sponser project	VTU
19.	B Divya	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
20.	Ashwini Mahesh Gowda	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali

Seminar Conduction Process:

The figure 2.2.3.B below shows the seminar conduction process in our department

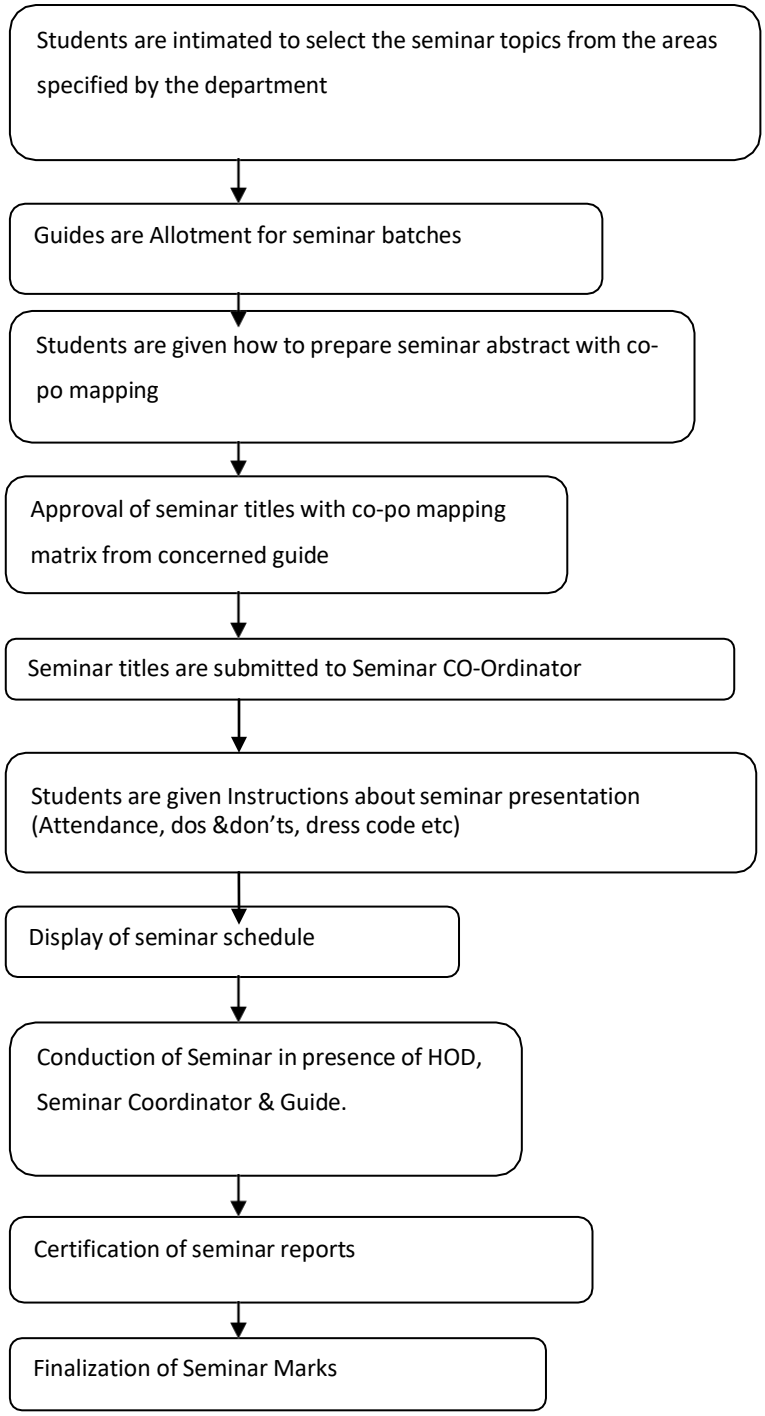


Fig 2.2.3.B: Flow diagram showing Seminar Conduction Process

Seminar Work Evaluation:

- The Department selects a senior faculty member as a Seminar coordinator who along with other faculty would assess the Technical seminar presentations by students.
- He /She would ensure that the students choose advanced concepts in electrical and alliedresearch areas with a lot of relevance and applicability.
- One seminar per student in the VIII semester would be conducted as per the schedule mentioned prior in Time Table
- Seminar coordinators follow rubrics, which is set by the department for evaluation of seminar.
- Seminar coordinators will conduct one seminar per student. It will be evaluated by the seminar coordinator and marks will be submitted to the Department.
- Online Seminar Presentation is carried out through Google Class Room using various e-apps.
- The table 2.23 shows the rubrics for seminar evaluation.

Table 2.2.3L: SEMINAR EVALUATION RUBRICS, 2019-20, 2020-21,2021-22

Component	Marks[M]	Exceptionally Well Executed [M>90%]	Good with room for improvement [70%<M<90%]	Meets minimum requirement [M<70%]
E-Presentation Skills	20M	Varied rate of delivery, Changed pitch for emphasis, No distracting mannerisms, good eye contact, Confident body language, Connected with audience	Information presented in logical sequence; easy to follow , occasional eye contact	Hard to follow sequence of information, no or just occasional eye contact , reads most slides.
Use of Visuals (Efforts to Aid Presentation)	20M	Very good, relevant visuals, good font size/image size, Appropriate number of words and images per slide, good colour schemes, well explained	Good Visual and images per slide Majority of the figures are Reasonably explained	Some figures hard to read, Some figure explanations are lacking
Timing and Pace of Talk	10M	Right length and well paced Appropriate (10-15 min)	Adequate (5-10 min)	Short 5 min OR long >15 min
Audibility and Comprehensibility	10M	Very clear and very precise	Not Very clear and moderately precise	Poor audibility
Seminar Report	40M	Seminar report is submitted as per the VTU guidelines. Seminar is executed as per the Scheduled dates.	Most of the VTU guidelines are followed to prepare report Seminar is executed as per the Scheduled dates.	Most of the VTU guidelines are followed to prepare report Seminar is not executed as per the Scheduled dates.

2.2.4. Initiatives related to industry interaction (15)

2.2.4.1. Initiatives for industry interaction

- The Faculties of the Department interact with Industry Experts, Research Heads for Research/Project guidance and Organizing Workshops/Seminars/Conferences.
- To provide guidance for student internship programs.
- Establishing MOU"s with Industries to bridge the gap between Academia-Industry.

2.2.4.2. Implementation

- Many invited talks and seminars from industry resource persons are arranged and department invites the participants from various Department and also participants from other Colleges.
- The Table 2.24 shows the industry supported labs.

Industry supported laboratories

Table 2.2.4: Industry supported laboratory.

Company Name	Laboratories	Outcomes
TATA Technologies Incubation Centre	Centre of Invention, Innovation, Incubation, & Training Cell	1. Students learn Latest technology Tools used in Industry. 2. Helps in Building good Career Opportunity.

2.2.4.3. Impact analysis

The following events were organized to bridge the gap between industry academies which is shown in table **2.2.4A**.

Activities Organized under MOU

Table 2.2.4A: Events to bridge gap between industry academies.

SL No	Name of the Activity	Dates	MOU Partner	Impact Analysis
1	EMERGING TRENDS IN INDUSTRY	17TH SEP 2019	MEDINI	1. Helps in Employability. 2. Helps in Building goodCareer Opportunity.
2	WHAT INDUSTRIES NEEDS FROM FRESH ENGINEERS	18TH JAN 2020	MEDINI	1. Helps in students competency 2. Students learn Latest technology Tools used in Industry

The list of MOUs is shown in table 2.2.4B.

Table 2.2.4B: Details of MOUs:

List of MOU'S				
SL No	**MOU Partner / Name of the Organisation**	**Type of Organisation**	**Linkage Area**	**MOU Date**
1	LIVEWIRE	Software training Institute Ballari	AUTOCAD/PLC SCADA	06-06-22
2	MEDINI	Company	EMERGING TRENDS IN INDUSTRY	30/05/2019
3	NAIN & KITS	Govt of Karnataka	FUNDED PROJECTS & EDC	2019-2020
4	TECH FORTUNE TECHNOLOGIES BANGALORE	Company	PROJECTS, INTERSHIP & RESEARCH	17/06/2022

Industry Visit Consolidated from 2012-2022 is depicted in table 2.27

Table 2.2.4C: Industry visit Details

Sl. No	Title	Dept/Section Visited	Date	PO/PSO	No of students	Semester
1	Bhoruka power corporation Ltd	HYDRO ELECTRIC POWER PLANT	14th mar 2013	1,2,3,4, 5,7, 12	120	4TH SEM
2	Varahi underground hydro power plant	HYDRO POWER PLANT	1st oct 2015	1,2,3,4, 5,7, 12	80	7th sem
3	Varahi underground hydro power plant	HYDRO POWER PLANT	13th APR 2016	1,2,3,4, 5,7, 12	62	7TH SEM
4	SHIVANA SAMUDRA SOLAR PLANT	Solar power Plant	15TH APR 2016	1,2,3,4, 5,7, 12	62	7TH SEM
5	Varahi underground hydro power plant	HYDRO POWER PLANT	1 st oct 2018 3 OCT 2018	1,2,3,4,5, 7, 12	80	5th SEM
6	SOLAR POWER PLANT AT RAJAPUR	SOLAR PLANT	19TH OCT 2019	1,2,3,4,5, 7, 12	130	5TH SEM
7	WIND POWER PLANT AT CHTRADURGA	WIND POWER PLANT	19TH OCT 2019	1,2,3,4,5, 7, 12	150	5TH SEM
8	KIGA GENERATING STATION	KIGA GENERATING STATION	07TH MAY 2022	1,2,3,4,5, 7, 12	150	8TH SEM
9	KALI NADHI HYDRO PROJECT GANESH GUDI	KALI NADHI HYDRO PROJECT GANESH GUDI	09th MAY 2022	1,2,3,4,5, 7, 12	150	8TH SEM

2.2.5. Initiatives related to industry internship/ summer training (15)

INTERNSHIP

Students are advised to take up industrial training and internship programs during their semester vacations. The students are encouraged to carry out the programs to enhance their skills and knowledge. Department provides the necessary guidelines, contacts and support for the students.

Process for providing or selecting internships:

- The students are encouraged to take up internships in the industry individually or in a group.
- The department issues a request letter to the industry to provide internships to the students.
- In turn the industry authority provide a letter of confirmation mentioning the students selected for internship in their organization, duration of internship and the guide allotted to the students at the industry.
- The department allots the guides to monitor the internship progress of the students.
- During the course of internship the students need to constantly report the whereabouts and training that they undergo.
- After completion of the internship tenure the student submits a detailed report of the training to the guide.

An internship enables the student to gain exposure to the real world working environment. The industries provide with the knowledge, skills and experience with the ongoing projects, organization hierarchy, product development, design, delivery and managerial skills. So, based on the student‟s interests in specific fields, they can undergo these programs during the semester break time.

Program outcomes:

The students gain confidence and meaningful experience in the area of their work during internships. This learning may be listed by the National Board of Accreditation (NBA) in the areas of engineering knowledge (PO1), Individual and team work (PO9) and Lifelong Learning (PO12).

Process flow diagram for Internship is shown in figure 2.2.5

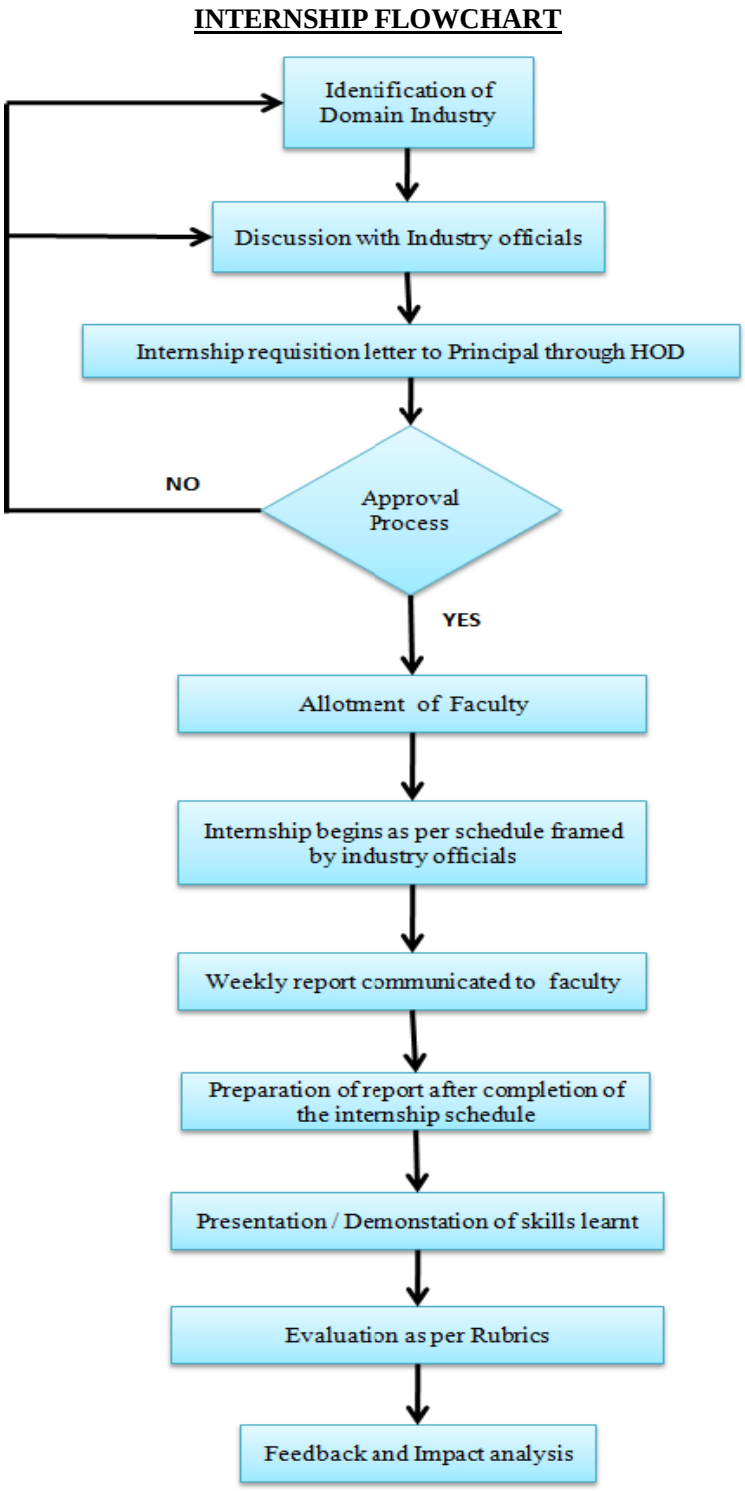


Fig 2.2.5: Process flow diagram for Internship

Initiation

1. Students and department together identify domain industry and discuss with Industry officials for the Internship

2. The requisition letter by the students to Principal through Internship coordinator and Head to undergo internship for the stipulated period.

3. The Internship coordinator allocates a faculty to guide for each student.

Implementation

1. The faculty and the mentor for the internship in the industry will communicate the progress of the internship training periodically.

2. After completion of the internship training, a detailed report is submitted to the department.

Evaluation

1. Student will present a power point presentation about the internship training in front of a panel of professors along with the guide.

2. Based on the performance the evaluation process is carried out by a panel of professors along with the guide and marks are awarded as per the rubrics shown in table below.

Impact Analysis of Industrial training/internship

1. Internship/Industrial visit provides a pathway to students for their first industrial experience
2. Internship will open up the gateway to their professional career.
3. Students are exposed to real time practical experience of the subjects studied in the classrooms and realized the practical importance of the subjects.
4. Industrial training inculcated more interest in the subjects & team work ability and work place ethics are enriched.
5. Professional and technical skills of the students are enhanced due to real time industrial exposure students are inspired to do hard work and get placed in such industries.
6. Communication skills of the students improved.
7. Students were exposed to the industry standards, importance of the safety measures, workplace culture & discipline and meeting the deadlines

Consolidated Internship Visit Details

YEAR	Generation	Transmission & Distribution	Control & Maintenance	TOTAL
2021-22	**30 Students**	**65 Students**	**40 Students**	**133**
	22.55%	**48.87%**	**30.08%**	
2020-21	**78 Students**	**09 Students**	**38 Students**	**125**
	62.40%	**7.20%**	**30.40%**	
2019-20	**13 Students**	**68 Students**	**45 Students**	**126**
	10.31%	**53.97%**	**35.71%**	
Average	**31.75%**	**36.68%**	**32.06%**	

The above table depicts the consolidated internship visit details which contributes to the following major EEE coarses: Transformers & Generators, Electric Motors, Transmission & Distribution, Electric Power Generation, Power Electronics, Power System Analysis, Power System Operation & Control, High voltage Engineering etc., Students gained knowledge through practical approach.

The average of students visited to Generation units (Solar/Thermal/Hydel combined) in last 3 academic years is about 31.75% , From Transmission & Distribution side 36.68%, and took internship from control and maintenance side is about 32.06%. This statistics indicates that all above mentioned 3 areas average values are merely nearest. So, students maintained consistency in relevant core areas of the curriculum in last 3 years.

Detailed visited organizations by the students are given below for last 3 academic years:.

Internship Details for AY 2021-22 2020-21, 2019-20, is depicted in Tables 2.28, 2.29, 2.30 respectively.

Table 2.2.5A, 2.2.2.5B, 2.2.5.C:

Internship Details for Academic Year 2021-22:

S.NO	Name of the Industry	Number of Students
1	Allipur 220KV KPTCL Substation , Karnataka	56
2	Hampi Power House	20
3	Sathvahana Ispat Ltd	16
4	JSW Steel Ltd, Toranagallu, Karnataka	13
5	Thungabadra Hydro Electric Power House, Hosapete	10
6	400/220KV Receving Substatiion ,Guttur	05
7	GESCOM, Bellary	04
8	Abhi Controls and Coatings	03
9	NMDC Donimali, Karnataka	02
10	consyst technologies(India) Pvt.Ltd	02
11	COMSOFT TECHNOLGIES, BENGALURU.	01
12	PRAGMATIC EMBD SOLUTIONS	01
TOTAL		**133**

Internship Details for Academic Year 2020-21:

S.NO	Name of the Industry	Number of Students
1	Allipur 220KV KPTCL Substation , Karnataka	62
2	JSW Energy Ltd, Toranagallu, Karnataka	20
3	NMDC Donimali, Karnataka	09
4	220KV receiving Substaion, Itagi, Karnataka	15
5	GESCOM, Bellary	07
6	A one steel and Alloy Pvt Ltd, Bellary, Karnataka	03
7	JSW Steel Ltd, Toranagallu, Karnataka	03
8	BEML, KGF, Karnataka	01
9	Godrej tyson foods Ltd, Banglore, Karnataka	01
10	Pantech e-learning online	01
11	Tequed Labs, Karnataka	01
12	The Hutti Gold Mines Co-Ltd, Raichur, Karnataka	01
13	Clean max solar power Ltd, Bellary, Karnataka	01
TOTAL		**125**

Internship details AY 2019-20

S.NO	Name of the Industry	Number of Students
1	Relay testing, KPRTCL, Karnataka	19
2	GESCOM, Bellary, Karnataka	17
3	220kv RT substation munirabad, Karnataka	16
4	220KV receiving Substaion, Itagi, Karnataka	16
5	Diesel locoshed, guntakal	15
6	Clean max solar power Ltd, Bellary, Karnataka	13
7	JSW Energy Ltd, Toranagallu, Karnataka	11
8	NMDC Donimali, Karnataka	10
9	Techno fly, Karnataka	04
10	Sandur manganese and iron ores limited, Karnataka	04
11	BEML, KGF, Karnataka	01
TOTAL		**126**

INTERNSHIP EVALUATION RUBRICS AY 2021-22

INTERNSHIP RUBRICS (2018Scheme)

CIE by internship committee

SL .NO		4-5M	2-3 M	1M
1	Organization 5M	Student presents information in a logical, interesting, and creative manner which audience can easily follow. Ends with a conclusion that displays thoughtful, strong evaluation, analysis, and reflection of the evidence presented.	Includes some transitions to connect key points. Most information presented in logical sequence; a few minor points may be confusing Ends with a summary of main points showing some evaluation, analysis, and reflection of the evidence presented	Includes some transitions to connect key points but there is difficulty in following the presentation. Student jumps around topics. Several points are confusing. Ends with a summary or conclusion; very little evaluation, analysis, and reflection of the evidence
2	Depth/Accuracy of Content 5M	Presenter provides an accurate and complete reflection of key concepts related to the selected evidence and internship experience. Level of presentation is highly appropriate for the graduate audience.	For the most part, reflections of key concepts related to the selected evidence and internship experience are accurate and complete. Level of presentation is generally appropriate for the graduate audience.	Reflections of key concepts related to the selected evidence and internship experience are inaccurate or incomplete. There is a great deal of information that is not connected to the presentation.
3	Queries on internship done 5M	Answers the questions.	Answers the questions but not detailed or thoughtful.	Does not answer the questions
4	Internship Report 5M	Writing: Complete sentences Proper grammar Correct spelling	Writing: Several errors.	Writing: Many errors
5	Successful completion of Internship training in an organization and certification from competitive authority-20 marks			

Internship Work Evaluation:

1. The Internship Program duration is of **Four Weeks** and it should be carried out in (VII and VIII) Vacation. The internship can be carried out in any industry /R and D Organization/Research Institute/ reputed Educational institute. .

2. The Department/college shall nominate staff member/s to facilitate, guide and supervise students under internship. The students shall report the progress of the internship to the guide in regular intervals and seek his/her advice. .

3. After the completion of Internship, students shall submit a report with completion and attendance certificates to the Head of the Department with the approval of both internal and external guides.

4. There will be **40 marks for CIE** (Seminar: 15, Internship REPORT: 5 certification 20M) and **60 marks for Viva - Voce**

conducted during SEE..

5. The internal guide shall award the marks for internship report after evaluation. The external guide from the industry shall be an examiner for the viva voce on Internship.

Viva-Voce on internship shall be conducted at the college and the date of Viva-Voce shall be fixed in consultation with the external Guide. The Examiners shall jointly award the Viva- Voce marks. In case the external Guide expresses his inability to conduct viva voce, the Chief Superintendent of the institution shall appoint a senior faculty of the Department to conduct Viva-voce along with the internal guide. The same shall be informed in writing to the concerned Chairperson, Board of Examiners (BOE).

6. The students are permitted to carry out the internship anywhere in India or abroad.

INTERNSHIP EVALUATION RUBRICS 2019-20,2020-21,

Table 2.2.5.D: Internship Evaluation Rubrics

	Component	Marks[M]	Exceptionally Well Executed [M>90%]	Good with room for improvement [70%<M<90%]	Meets minimum requirement [M<70%]
SEMINAR (25M)	Presentation Skills	5M	Varied rate of delivery, Changed pitch for emphasis, No distracting mannerisms, good eye contact, Confident body language, Connected with audience	Information presented in logical sequence; easy to follow , occasional eye contact	Hard to follow sequence of information, no or just occasional eye contact , reads most slides.
	Timing and Pace of Talk	5M	Right length and well paced Appropriate (30-35 min)	Adequate (25-30 min)	Short 30 min OR long >35
	Audibility and Comprehensibility	5M	Very clear and very precise	Not Very clear and moderately precise	Poor audibility
	Technical Content Delivery	10M	Very clear and very precisely explained the Technical Terms and Task Learnt During Internship	Not Very clear and moderately explained the Technical Terms and Task Learnt during Internship	Explained the Technical Terms and Task Learnt During Internship but not Clear.
INTERNSHIP Report		**25M**	INTERNSHIP report is submitted as per the VTU guidelines. INTERNSHIP is executed as per the Scheduled dates.	Most of the VTU guidelines are followed to prepare report INTERNSHIP is executed as per the Scheduled dates.	Most of the VTU guidelines are followed to prepare report INTERNSHIP is not executed as per the Scheduled dates.

Internship Work Evaluation:

7. The Internship Program duration is of **Four Weeks** and it should be carried out in (VII and VIII) Vacation. The internship can be carried out in any industry /R and D Organization/Research Institute/ reputed Educational institute. .

8. The Department/college shall nominate staff member/s to facilitate, guide and supervise students under internship. The students shall report the progress of the internship to the guide in regular intervals and seek his/her advice. .

9. After the completion of Internship, students shall submit a report with completion and attendance certificates to the Head of the Department with the approval of both internal and external guides.

10. There will be **50 marks for CIE** (Seminar: 25, Internship report: 25) and **50 marks for Viva - Voce** conducted during SEE. The minimum requirement of CIE marks shall be **50% of the maximum marks**.

11. The internal guide shall award the marks for internship report after evaluation. The external guide from the industry shall be an examiner for the viva voce on Internship.

Viva-Voce on internship shall be conducted at the college and the date of Viva-Voce shall be fixed in consultation with the external Guide. The Examiners shall jointly award the Viva- Voce marks. In case the external Guide expresses his inability to conduct viva voce, the Chief Superintendent of the institution shall appoint a senior faculty of the Department to conduct Viva-voce along with the internal guide. The same shall be informed in writing to the concerned Chairperson, Board of Examiners (BOE).

12.The students are permitted to carry out the internship anywhere in India or abroad.

CRITERION-3

CRITERION 3	Course Outcomes And Program Outcomes	120

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

POs	Program Outcomes
PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSO	PROGRAM SPECIFIC OUTCOMES (PSO)
PSO1	Apply fundamental knowledge to identify, formulate, design and investigate various problems of electrical and electronics circuits, power electronics and power systems.
PSO2	Apply modern software tools for design simulation and analysis of electrical systems to engage in lifelong learning and to successfully adapt in multidisciplinary environment.

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) (05)

Course Name: Transformers and Generators (18EE33) Year of Study: 2019-20

At the end of the Courses, Students are able to

C203.1	Demonstrate the construction, operation and performance of single phase and three phase transformers.
C203.2	Explain the use of autotransformer, tap changing and tertiary winding transformer of operating transformer in parallel.
C203.3	Discuss the armature reaction and commutation and their efficiency in a DC generator.
C203.4	Analyze the construction, performance of synchronous machines.

Table B.3.1.1.A Course Outcomes of Transformers and Generators (18EE33)

Course Name: Power Generation & Economics (18EE42) Year of Study: 2019-20

C210.1	Describe the working of hydroelectric, steam, nuclear power plants.
C210.2	Explain types of substations and equipments involved in it.
C210.3	Apply economic aspects of power system.
C210.4	Explain the importance of earthing and power factor improvement.

Table B.3.1.1.B Course Outcomes of Power Generation & Economics(18EE42)

Course Name: Management and Entrepreneurship (18EE51) Year of Study: 2020-21

C301.1	Explain the field of management, task of the manager, planning and steps in decision making.
C301.2	Discuss the structure of organization, importance of staffing, leadership styles, modes of communication, techniques of coordination.
C301.3	Show an understanding of role of SSI's in the development of country and state/central level institutions/agencies supporting business enterprises.
C301.4	Discuss the concepts of project management, capital budgeting, project feasibility studies, need for project report and new control techniques.

Table B.3.1.1.C Course Outcomes of Management and Entrepreneurship(18EE51)

Course Name: Computer Aided Electrical Drawing (18EE643) Year of Study:2020-21

C312.1	Sketch the armature winding diagram for DC and AC machines
C312.2	Illustrate a Single Line Diagram of Generating Stations and substation using the standard symbols.
C312.3	Construct the sectional views of core and shell types transformers
C312.4	Analyze the sectional views of assembled DC and AC machine

Table B.3.1.1.D Course Outcomes of Computer Aided Electrical Drawing (18EE643)

Course Name: Power System Protection**(18EE72)** Year of Study: 2021-22

C402.1	Discuss the performance of protective relays, components of protection scheme and relay terminology over current protection.
C402.2	Explain the working of distance relays and the effects of arc resistance, power swings, line length and source impedance on performance of distance relays
C402.3	Illustrate the protection of generators, motors, transformer and bus zone protection, protection against over voltages, Gas insulated substation.
C402.4	Explain the principle of circuit interruption in different types of circuit breakers, feature of fuse also modern trends in Power System Protection

Table B.3.1.1. E Course Outcomes of Power System Protection**(18EE72)**

Course Name: Power System Operation & Control(18EE81) Year of Study: 2021-22

C410.1	Able to understand the operating status of power system, analyze the generator control loop and modeling of AVR & ALFC loops.
C410.2	Able to understand the basics of unit commitment problem, analyze different unit commitment solution methods, and explain methods of voltage and reactive power control techniques.
C410.3	Able to analyze the different techniques of contingency evaluation, explain the basics of power system state estimation and various minimization technics of PSSE
C410.4	Able to understand basics of power system reliability and analyze various reliability index.

Table B.3.1.1.F Course Outcomes of Power System Operation & Control(18EE81)

3.1.2. CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3rd to 8th semester) (05)

Course Name: Transformers and Generators (18EE33) Year of Study: 2019-20

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C203.1	3	3	2											2
C203.2	2	3	2											2
C203.3	3	2												2
C203.4	3	3	2											2
C203	2.75	2.75	2											2

Table B.3.1.2.A CO PO/PSO Mapping of Transformers and Generators (18EE33)

Course Name: Power Generation & Economics(18EE42) Year of Study: 2019-20

PO / CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C210.1	**3**	**2**	**2**				**3**			**2**			**2**	
C210.2	**3**	**2**	**1**							**2**			**2**	
C210.3	**3**	**2**	**2**							**2**			**2**	
C210.4	**3**	**2**								**2**			**2**	
C210	**3**	**2**	**1.667**				**3**			**2**			**2**	

Table B.3.1.2.B CO PO/PSO Mapping of Power Generation & Economics(18EE42)

Course Name: Management and Entrepreneurship (18EE51) Year of Study: 2020-21

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C301.1						3	3	3	3	3	3	3		
C301.2						3	3	2	3	2	3	3		
C301.3						1	1	1	2	2	3	2		
C301.4							2	2	2	2	3	3		
C301						2.33	2.25	2	2.5	2.25	3	2.75		

Table B.3.1.2.C CO PO/PSO Mapping of Management and Entrepreneurship (18EE51)

Course Name: Computer Aided Electrical Drawing (18EE643) Year of Study: 2020-21

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C312.1	**3**	**3**	**3**		**2**	**1**			**1**	**2**			**2**	
C312.2	**3**	**2**	**2**		**2**	**1**			**1**	**2**			**2**	
C312.3	**3**	**3**	**2**		**2**	**1**			**1**	**2**			**2**	
C312.4	**3**	**3**	**2**		**2**	**1**			**1**	**2**			**2**	
C312	3	2.75	2.25		2	1			1	2			2	

Table B.3.1.2. D CO PO/PSO Mapping of Computer Aided Electrical Drawing (18EE643)

Course Name: Power System Protection**(18EE72)** Year of Study: 2021-22

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C402.1	**3**									**2**		**2**		
C402.2	**2**		**2**							**2**		**2**	**2**	
C402.3	**3**	**3**	**2**							**2**		**2**	**2**	
C402.4	**3**	**3**								**2**		**2**		
C402	**2.75**	**3**	**2**							**2**		**2**	**2**	

Table B.3.1.2. D CO PO/PSO Mapping of Power System Protection**(18EE72)**

Course Name: Power System Operation & Control (18EE81) Year of Study: 2021-22

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C410.1	**3**	**2**	**1**										**1**	
C410.2	**3**	**2**												**2**
C410.3	**3**	**2**												**2**
C410.4	**3**	**2**												**2**
C410	3	2	1										1	2

Table B.3.1.2. D CO PO/PSO Mapping of Power System Operation & Control (18EE81)

3.1.3. Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Index	course code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C103 /119	**18ELE13/23**	**BEE**	2.25	2.75												
C107 /123	**18ELE17/27**	**BEE lab**	**2.5**	**2.5**							**2**	**2**				
C201	18MAT31	Engg maths-3	3	3												
C202	18EE32	ECA	3	3		3									2	
C202	18EE32	ECA	3	3	2										2	
C203	18EE33	T&G	2.75	2.75	2											2
C204	18EE34	AEC	2.5	2.5	2.25	2.5									1	1
C205	18EE35	DSD	2.5	3	2.75										2	1
C206	18EE36	E&EM	3	3	2										2	
C207	18EEL37	EM LAB-1	3	1	3	2		2	1.75		2	2	2	1		2
C208	18EEL38	EC LAB	3	1		2		2	1.75		2	2		1		2
C209	18MAT41	Engg maths-4	3	3												
C210	18EE42	PG&E	3	2	1.66667				3			2			2	

C211	18EE43	T&D	3	2.66667											2	
C212	18EE44	EM	2.25	2.75											2	
C213	18EE45	EMFT	2.5	3		1.75										
C214	18EE46A	OP-AMP&LIC	2.5	2.5	2.25	2.5								1	1	1
C215	18EEL47	EM LAB-II	3	1		2					2			1	2	
C216	18EEL48	OP-AMP&LIC LAB	2.00	1.00	2.00						2.00	2.00	2.00	1.00	1.00	
C301	18EE51	M&E						2.33	2.25	2.00	2.50	2.25	3.00	2.75		
C302	18EE52	MC	3.00	3.00	3.00	2.75	2.50					2.00	2.50	2.25	2.00	
C303	18EE53	PE	3.00	3.00	2.00	2.00									2.00	
C304	18EE54	S&S	3.00	2.50												
C305	18EE55	EMD	3.00	2.50												
C306	18EE56	HVE	3.00	2.75												1.00
C307	18EEL57	MC LAB	3.00	2.50	2.75	1.50	2.50	1.00	0.00	0.00	3.00	3.00	0.00	2.00	0.00	2.00
C308	18EEL58	PE LAB	3.00	1.00		2.00					2.00			1.00	2.00	
C309	18EE61	CS	3.00	3.00		3.00	3.00								2.00	

C310	18EE62	PSA-I	2.25	2.75											2.00	
C311	18EE63	DSP	2.50	2.25		3.00									3.00	
C312	18EE643	CAED	3.00	2.75	2.25		2.00	1.00		1.25	2.00			2.00		0.00
C313	18ME651	NCES	1.75	1.75	2.00			1.25	1.25	1.25				1.25	1.00	
C314	18EEL66	CS LAB	2.75	2.25	2.25	2.50	2.25	0.00	0.00	0.00	1.75	0.00	2.00	2.25	0.00	2.00
C315	18EEL67	DSP LAB	2.50	2.25	2.50	0.00	2.00	0.00	2.00	0.00	1.00	0.00	0.00	2.00	2.50	0.00
C316	18EMP68	MINI PRPJECT	3.00	3.00	3.00		3.00	2.50		3.00	3.00	3.00	3.00	3.00	3.00	3.00
C401	18EE71	PSA-2	3.00	3.00		2.00		2.00	2.00		2.00	2.00	2.00	2.00		
C402	18EE72	PSP	2.75	3.00	2.00							2.00		2.00	2.00	
C403	18EE732	MNST	3.00	2.75	1.50	1.00		2.00	2.00			2.50		2.00	0.00	2.00
C404	18EE742	UEP	3.00	2.75	2.00											2.75
C405	18CS752	PAP	3.00	3.00	3.00	3.00	3.00									
C406	18EEL76	PSS LAB	3.00	3.00							2.00	2.00	1.50		2.00	
C407	18EEL77	R&HVE	3.00	1.00	3.00	2.00		2.00	1.75		2.00	2.00				2.00
C408	18EEP78	PROJECT WORK-I+PROJECT WORK SEMINAR	2.00	2.00					3.00	3.00	3.00	3.00	3.00	3.00		

C409	18EE81	PSOC	3.00	2.00	1.00										1.00	2.00
C410	18EE822	EEC	2.00	2.00	2.00	1.00	1.00	1.00						1.00		
C411	18EEI85	Internship/ Professional practice		3.00	3.00		2.00					3.00	3.00	3.00		
C412	18EEP83	Project work phase-II			3.00	3.00	3.00	3.00	3.00	1.50	1.50	1.50	1.50	2.00	3.00	3.00
C413	18EES84	Seminar	3.00	3.00						3.00	3.00	3.00	3.00	3.00	0.00	0.00
Average			2.76	2.46	2.31	2.12	2.39	1.58	1.83	1.50	2.15	2.06	2.04	1.89	1.66	1.60

Table:3.1.3.Program level Course PO & PSO matrix of all course

3.2. Attainment of Course Outcomes (50)

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

In the Outcome Based Education (OBE), assessment is done through one or more processes, carried out by the institution, that identify, collect and prepare data to evaluate the achievement of course outcomes (COs).

CO Assessment Processes

Assessment tools are categorized into two methods to assess the course outcomes: Direct methods and indirect methods:

Direct methods display the student's knowledge and skills from their performance in Continuous Internal Evaluation Tests, Semester End Examination, Internships, Project works, Seminars and Assignments etc. These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning.

Indirect methods are Surveys such as Course Exit Survey and Self Assessment Report which reflect student's learning.

Direct and Indirect Methods for CO Assessment

Direct Assessment Methods		
Sl. No.	**Direct Assessment Method**	**Description**
1	**Continuous Internal Evaluation Test (CIE)**	It is a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. The Continuous Internal Evaluation marks in a course are based on three tests, generally conducted at the end of 5th, 10th and 14th week of each semester. It is a metric to continuously assess the attainment of course outcomes. Average of three test marks shall be the Continuous Internal Evaluation Marks for the relevant course.
2	**Assignment**	Assignment is a metric to mainly assess student's knowledge/skills/attitude with their capabilities.
3	**Lab Assessment Test**	Lab Assessment test is a metric to mainly assess student's practical knowledge with their designing capabilities. In the case of a Practical, the CIE marks shall be based on the conduction of experiment, laboratory journals/reports and one practical test at the end of semester.
4	**Semester End Examination (SEE)**	Semester End Examination (Theory or Practical) are the metric to assess whether all the course

5	**Practical Semester End Examination**	outcomes are attained or not with respect to course outcomes framed by the instructor. Semester end examination is more focused on attainment of course outcomes and uses a descriptive exam.
6	**Project Phase –I evaluation**	The CIE marks in the case of project work in the final year is based on the evaluation at the end of 7th semester by a committee consisting of the Head of the Department, Coordinators and two Senior Faculty members of the Department, one of whom shall be the Project guide.
7	**Seminar**	The CIE marks in the case of Seminar, Internship and project work in the final year is based on the evaluation at the end of 8th semester by a committee consisting of the Head of the Department, Coordinators and two Senior Faculty members of the Department, one of whom shall be the Project / Seminar guide.
8	**Project Work**	
9	**Internship**	
10	**Project Work Viva-Voce**	Viva-Voce examination of Project work is conducted batch-wise at the end of 8th semester.
11	**Internship Viva-Voce**	Viva-Voce examination of Internship is conducted batch-wise at the end of 8th semester.
Indirect Assessment Methods		
1	**Course Exit Survey(CES)**	Collect information from the students to assess the course outcomes of the course at the end of the semester.
2	**Self Assessment Report(SAR)**	Collect information from the students to assess the knowledge gained about the course at the end of the semester.

Table 3.2.1.A: Direct and Indirect Methods for CO Assessment

Course Outcome Assessment methodology, tools and frequency of use for direct and indirect method

Direct Assessment Methods						
Sl No	**Assessment Method**	**Assessment frequency**	**Maximum Marks**	**Assessment Tool**	**Incharge**	**Reviewer**
1	Continuous Internal Evaluation Test* (CIE)	At the end of 5th, 10th and 14th week of each semester	30	Student's Performance in CIE booklets.	Course owner	CC PAC
2	Assignment	Before/After Conduction of CIE Test	10	Student's Performance in Assignment assessment booklets.	Course owner	CC
3	Lab Assessment Test	At the end of the semester	40	Student's performance in conducting experiments and journal writing.	Course owner	CC PAC
4	Semester End Examination*	At the end of the semester	60	Student's performance in university exam.	University Evaluators	
5	Laboratory Semester End Examination	At the end of the semester	60	Student's performance in conducting experiments during university exam.	University Evaluators	
6	Project Phase –I evaluation	During the 7th semester	100	Rubrics	Project Guide/ Project Coordinator	PAC PC/HOD
7	Seminar	During the 8th semester	100	Rubrics	Seminar Guide/Seminar Coordinator	PAC PC/HOD
8	Project Work	During the 8th semester	40	Rubrics	Project Guide/ Project Coordinator	PAC PC/HOD

9	Internship	During the 8th semester	40	Rubrics	Project Guide/ Project Coordinator	PAC PC/HOD
10	Project Work Viva-voce	At the end of the 8th semester	60	Student's performance in university exam	University Evaluators	
11	Internship Viva-voce	At the end of the 8th semester	60	Student's performance in university exam	University Evaluators	
Indirect Assessment Methods						
1	Course Exit Survey	At the end of the semester	--	Student survey	Course Owner	CC
2	Self Assessment Report	At the end of the semester	--	Students Knowledge Assessment	Course Owner	CC

Table 3.2.1.B: Course Outcome Assessment methodology, tools and frequency of use for direct and indirect method

Course Outcome Assessment Process

The process of Course Outcome Assessment is shown in the below figure 3.2.1

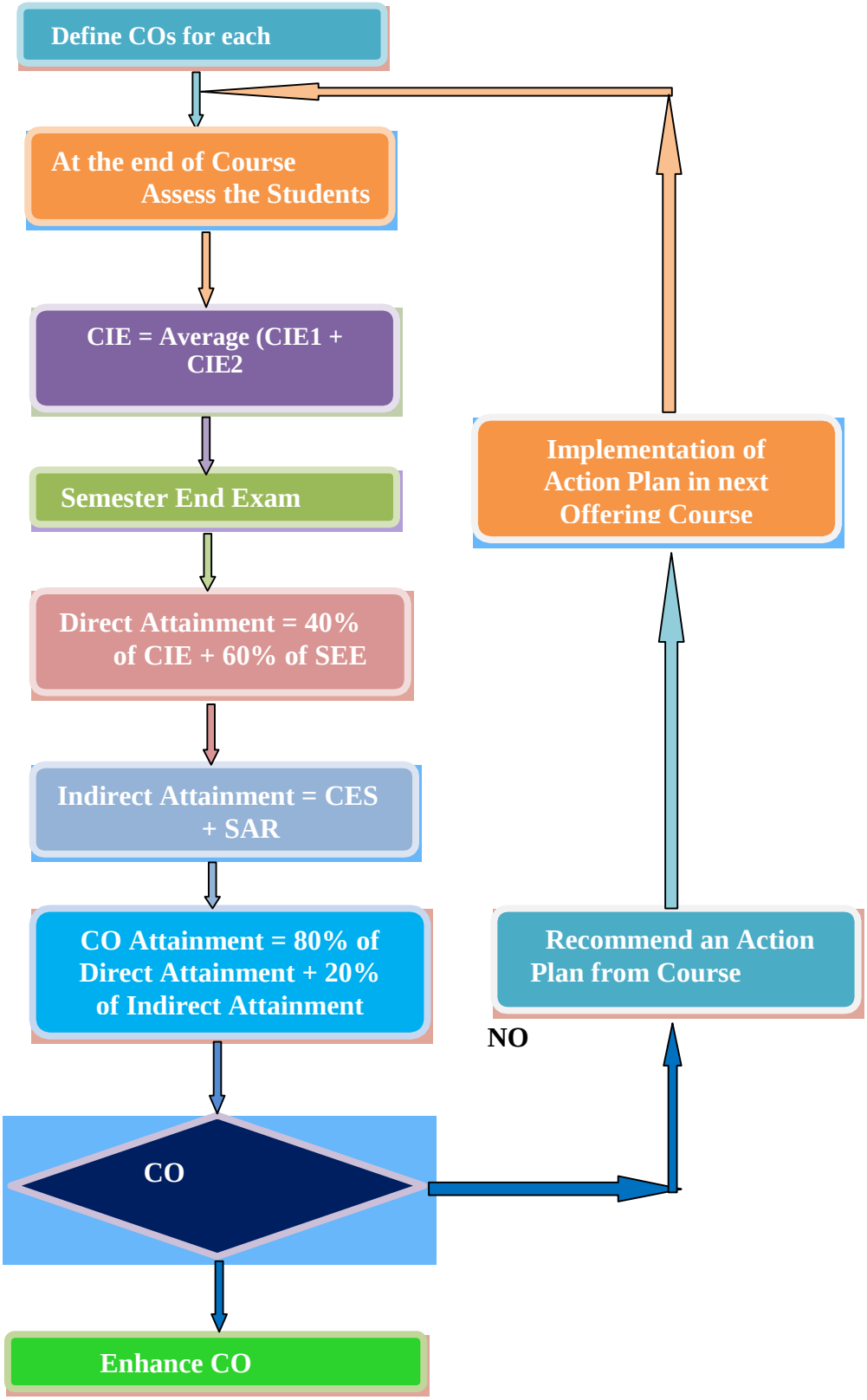


Fig 3.2.1: Course Outcome AssessmentProcess

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

Measuring CO Attainment through Internal Assessments:

Attainment Levels Vs Target

Attainment Level 1: 60% Students scoring more than **60%** marks out of maximum marks.

Attainment Level 2: 70% Students scoring more than **60%** marks out of maximum marks.

Attainment Level 3: 80% Students scoring more than **60%** marks out of maximum marks.

Measuring CO Attainment through Semester End Examination:

Attainment Levels Vs Target

Attainment Level 1: 60% Students scoring more than **40%** marks out of maximum marks.

Attainment Level 2: 70% Students scoring more than **40%** marks out of maximum marks.

Attainment Level 3: 80% Students scoring more than **40%** marks out of maximum marks.

CO Attainment has been calculated with **60%** weightage to Semester End Examination and **40%** weightage to Continuous Internal Evaluation.

Final CO Attainment has been calculated with **80%** weightage to Direct Attainment and **20%** weightage to Indirect Attainment (using Survey)

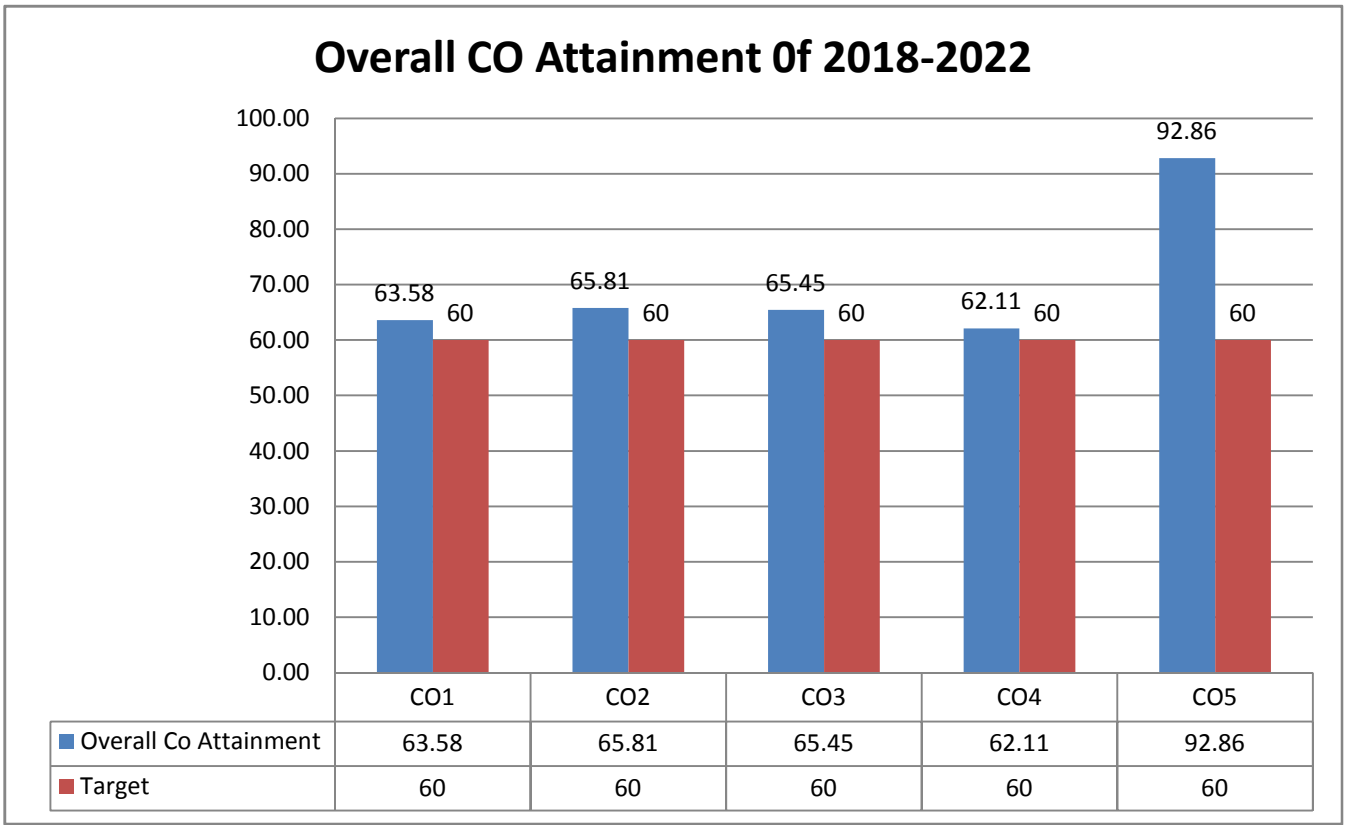
CO Direct Attainment						
2018-2022 outgoing BATCH consolidated						
Index	**Course**	**CO1**	**CO2**	**CO3**	**CO4**	**CO5**
1st year						
C103 /119	**18ELE13/23**	**70.10**	**64.89**	**61.46**	**57.98**	
C107 /123	**18ELEL17/27**	**67.64**	**60.98**	**72.64**	**68.47**	
3rd semester						
C201	18MAT31	**78.88**	**83.04**	**84.76**	**88.6**	**88.6**
C201	18MAT31	**75.61**	**80.92**	**86**	**86**	**83**
C202	18EE32	**74.72**	**80.74**	**82.79**	**79.79**	

C202	18EE32	50.77	51.03	50.46	54.03	
C203	18EE33	75.26	72.1	74.42	70.15	
C204	18EE34	27.39	44.06	42.19	27.65	
C205	18EE35	56.07	58.02	62.45	59.91	
C206	18EE36	60.92	60.19	63.73	66.45	
C207	18EEL37	67.91	67.91	67.91	64.82	
C208	18EEL38	52.87	52.87	52.87	56.93	
4th semester						
C209	18MAT41	93.68	96.34	99.75	99.61	99.61
C209	18MAT41	93.59	96.27	99.78	99.67	99.67
C210	18EE42	64.6	53.69	62.45	65.19	
C211	18EE43	63.28	77.98	83.46	76.1	
C212	18EE44	72.3	71.94	88.89	60	
C213	18EE45	80.03	73.78	71.81	69.03	
C214	18EE46A	47.38	71.22	71.05	48.85	
C214	18EE46B	35.86	87.31	54.27	36.4	
C215	18EEL47	49.07	49.07	49.07	49.07	
C216	18EEL48	54.17	58.33	58.33	58.33	
5th semester						
C301	18EE51	70.67	72.96	69.9	75.01	
C302	18EE52	39.56	40.84	45.26	36.44	
C303	18EE53	48.22	45.12	41.98	37.99	
C304	18EE54	36.73	38.77	39.9	37.59	
C305	18EE552	43.92	45.77	48.3	45.99	
C306	18EE563	75.03	74.93	56.89	63.34	
C307	18EEL57	58.57	61.34	69.18	72.78	

C308	18EEL58	66.13	66.13	66.13	66.13	
6th semester						
C309	18EE61	86.64	75.18	88.02	82.62	
C310	18EE62	77.72	74.64	88.89	60	
C311	18EE63	74.08	59.87	82.32	69.2	
C312	18EE64	67.86	59.88	67.86	63.87	
C313	18EE651	50.66	45.11	45.08	40.3	
C314	18EE662	95.24	100	100	100	
C315	18EEL67	41.6	60.8	54.86	70.4	
C316	18EEL68	33.83	43.5	41.89	41.08	
7th semester						
C401	18EE71	26.09	26.09	26.7	20.54	
C402	18EE72	76.52	64.45	76.26	73.77	
C403	18EE73	61.3	68.94	64.18	58.8	
C404	18EE742	51.28	61.63	55.97	50.95	
C405	18EE752	95.47	95.8	94.32	85.21	
C406	18EEL76	77.17	75.03	64.31	77.17	
C407	18EEL77	58.97	58.97	58.97	55.87	
C408	18EEP78	100	100	0	0	
8th semester						
C409	18EE81	52.1	69.45	70.34	62.17	
C410	18EE822	46.89	46.71	46.85	42.2	
C411	18EEP83	74.29	74.29	74.29	74.29	
C412	18EEI85	74.73	74.57	74.60	74.76	
C413	18EES86	100.00	99.69	99.79	100.00	
AVERAGE		64.18	66.53	65.76	62.38	92.72
TARGET		60	60	60	60	60

	CO1	CO2	CO3	CO4	CO5
Direct Attainment	64.18	66.53	65.76	62.38	92.72
Direct & Indirect Attainment	61.18	62.92	64.20	61.03	93.43
80% Of Direct Attainmet	51.34	53.22	52.61	49.90	74.18
20% Of Direct &Indirect Attainmet	12.24	12.58	12.84	12.21	18.69
Overall Co Attainment	63.58	65.81	65.45	62.11	92.86
Target	60	60	60	60	60

Table 3.2.2.B Course Attainment of I to VIII semester 2018-2022 batch



3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

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

PO Assessment Tools

Assessment tools are categorized into direct and indirect methods to assess the Program Outcomes and Program specific Outcomes.

Direct methods display the student's knowledge and skills from their performance in the Continuous Internal Assessment Tests, Semester End Examination, Internship, Projects, Seminars and Assignments etc, these methods provide a sample of what students know and/or can do and provide strong evidence of student learning.

Indirect methods are Surveys such as Course Exit Survey, Program Exit Survey and Workshop/Seminar/Invited Talk which reflect student's learning.

PO Direct Assessment Methods

PO Direct Assessment Methods		
Sl. No.	**Direct Assessment Method**	**Description**
1	**Continuous Internal Evaluation Test (CIE)**	It is a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. The Continuous Internal Evaluation marks in a course are based on three tests, generally conducted at the end of 5th, 10th and 14th week of each semester. It is a metric to continuously assess the attainment of course outcomes. Average of three test marks shall be the Continuous Internal Evaluation Marks for the relevant course
2	**Assignment**	Assignment isametric to mainlyassessstudent's knowledge/skills/attitude with their capabilities.

3	**Lab Assessment Test**	Lab Assessment test is a metric to mainly assess student's practical knowledge with their designing capabilities.In the case of a Practical, the CIE marks shall be based on the conduction of experiment, laboratory journals/reports and one practical test at the end of semester.
4	**Semester End Examination (SEE)**	Semester end examination (Theory or Practical) are the metric to assess whether all the course outcomes are attained or not with respect to course outcomes framed by the instructor. Semester end examination is more focused on attainment of course outcomes and uses a descriptive exam.
5	**Practical Semester End Examination**	
6	**Project Phase –I evaluation**	The CIE marks in the case of project work in the final year is based on the evaluation at the end of 7th semester by a committee consisting of the Head of the Department, Coordinators and two Senior Faculty members of the Department, one of whom shall be the Project guide.
7	**Seminar**	The CIE marks in the case of Seminar, Internship and project work in the final year is based on the evaluation at the end of 8th semester by a committee consisting of the Head of the Department, Coordinators and two Senior Faculty members of the Department, one of whom shall be the Project / Seminar guide.
8	**Project Work**	
9	**Internship**	
10	**Project Work Viva-Voce**	
11	**Internship Viva-Voce**	Viva-Voce examination of Internship is conducted batch-wise at the end of 8th semester.

Table 3.3.1.A: PO Direct Assessment Methods

PO Indirect Assessment Methods

PO Indirect Assessment Methods		
Sl No	**Indirect Assessment Method**	**Description**
1.	**Program Exit Survey (PES)**	Collect the feedback about the program at the time of graduation.
2.	**Course Exit Survey (CES)& Self-Assessment Report (SAR)**	Collect information from the students to assess the learning outcomes and knowledge gained about the course at the end of the semester.
3.	**Workshop/Seminar/Invited Talk (WS/S/IT)**	Conduct Workshop/Seminar/Invited Talk and assess the student knowledge gained during the semester.

Table 3.3.1.B: PO Indirect Assessment Methods

Program Outcome Assessment methodology, tools and frequency of use for direct and indirect method is described in the Table 3.1.3.C

PO Assessment Methodology, tools and frequency of use for direct and indirect method

Direct Attainment Methods						
Sl No	**Assessment Method**	**Assessment frequency**	**Maximum Marks**	**Assessment Tool**	**In-charge**	**Reviewer**
1	**Continuous Internal Evaluation Test***	At the end of 5th, 10th and 14th week of each semester	30	Student's Performancein internal assessment booklets.	Course owner	CC PAC
2	**Assignment**	Before/After Conduction of CIE Test	10	Student's Performancein Assignment assessment booklets.	Course owner	CC
3	**Lab Assessment Test**	At the end of the semester	40	Student's performance in conducting experiments and journal writing.	Course owner	CC PAC

4	**Semester End Examination***	At the end of the semester	60	Student's performance in university exams.	University Evaluators	
5	**Practical Semester Examination**	At the end of the semester	60	Student's performance in conducting experiments during	University Evaluators	
6	**Project Phase –I evaluation**	During the 7th semester	40	Rubrics	Project Guide/ Project Coordinator	
7	**Seminar**	During the 8th semester	100	Rubrics	Seminar Guide/Seminar Coordinator	PAC PC/HOD
8	**Project Work**	During the 8th semester	40	Rubrics	Project Guide/ Project Coordinator	PAC PC/HOD
9	**Internship**	During the 8th semester	40	Rubrics	Project Guide/ Project Coordinator	PAC PC/HOD
10	**Project Work Viva-voce**	At the end of the 8th semester	60	Student's performance in university exams	University Evaluators	
11	**Internship Viva-voce**	At the end of the 8th semester	60	Student's performance in university exam	University Evaluators	

Table 3.3.1.C:Indirect Assessment Methods

Indirect Attainment Methods					
Sl No	**Assessment Method**	**Assessment frequency**	**Assessment Tool**	**Incharge**	**Reviewer**
1.	**Program Exit Survey**	Annually	Exit report from graduates	Alumni Association Committee (AAC)	PAC
2.	**Course Exit Survey& Self-Assessment Report**	Semester end	Student survey Student Knowledge	Course Owner	CC PAC
3.	**Workshop/Seminar/Invited Talk**	During the semester	Exit surveys	Workshop Coordinator	PAC

Table 3.3.1.D:Indirect Assessment Methods

Process for Assessing Program Outcomes

The process of Program Outcome Assessment is shown in the below figure 3.3.1

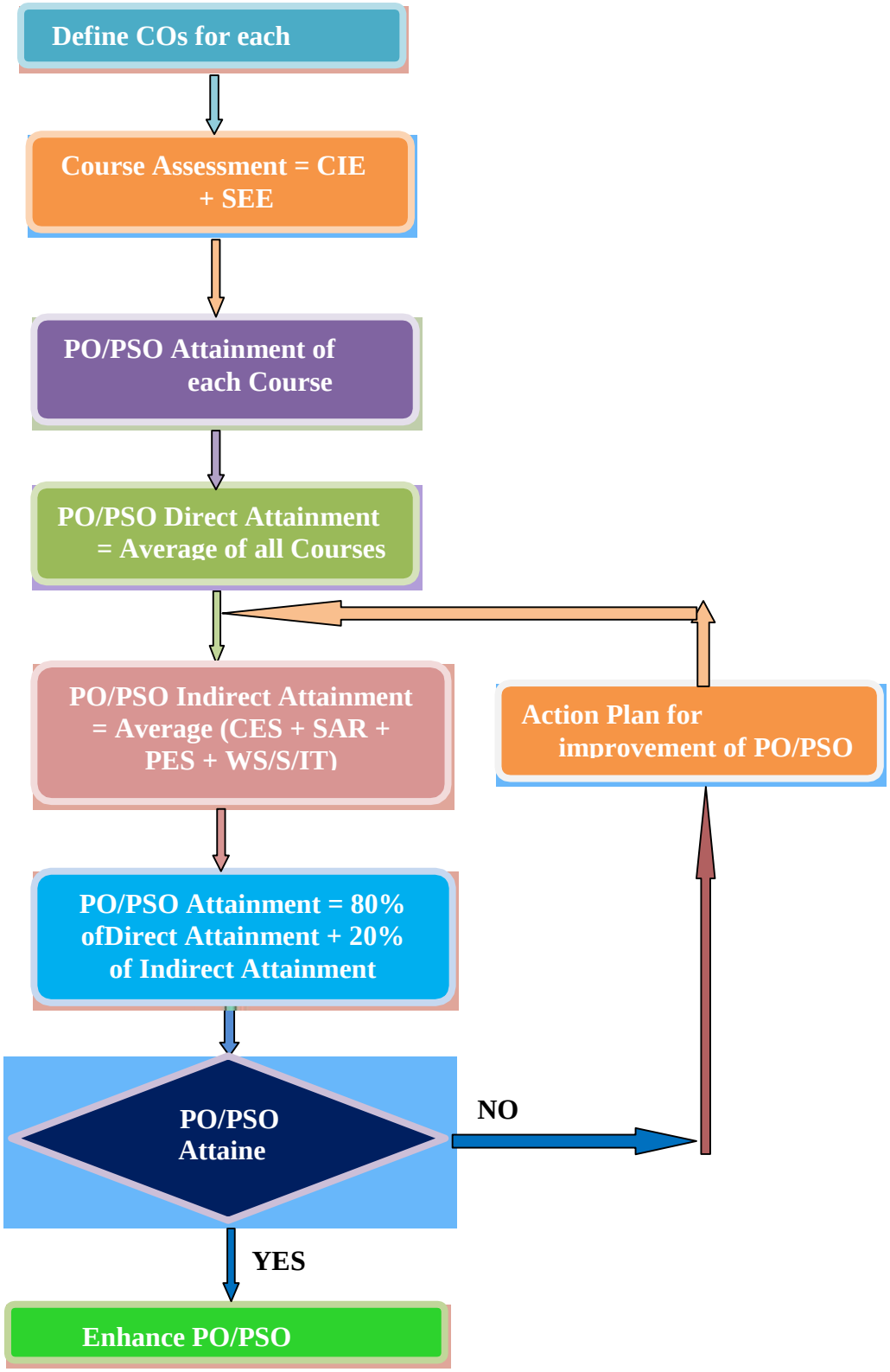


Fig 3.3.1: Process of Program Outcome Assessment

3.3.2. Provide results of evaluation of each PO and PSO (40)

Results of evaluation of each PO &PSO (2021 -2022 passed out batch)

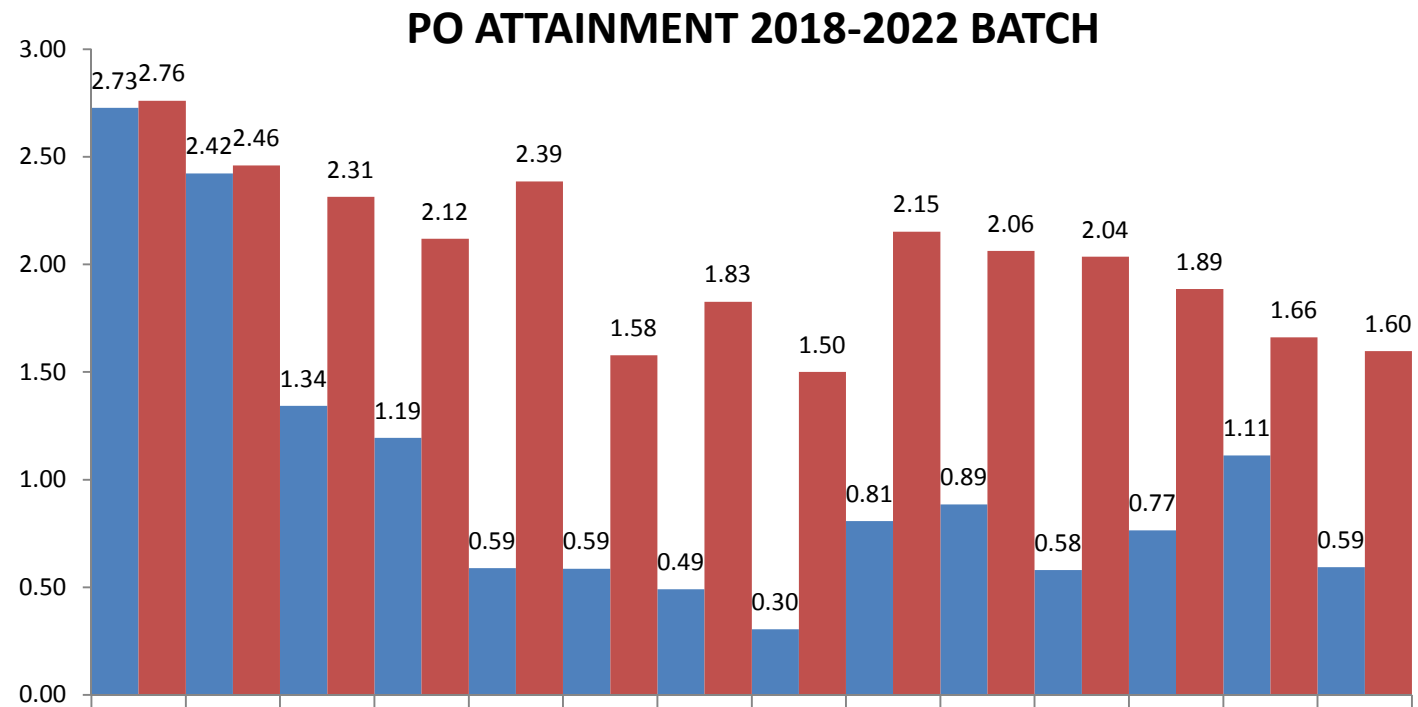
PO & PSO DIRECT ATTAINMENT

CO	CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C103 /119	**18ELE13/23**	1.33	1.57												
C107 /123	**18ELE17/27**	2.47	2.47							1.97	1.94				
C201	18MAT31	2.54	2.41												
C201	18MAT31	2.41	2.41											0.00	0.00
C202	18EE32	2.60	2.60		2.60									1.73	
C202	18EE32	1.86	1.83	1.22										1.24	
C203	18EE33	2.51	2.00	1.80											1.83
C204	18EE34	1.35	1.35	1.22	1.35									0.54	0.54
C205	18EE35	1.96	2.36	2.17										1.58	0.79
C205	18EE36	2.26	2.18	1.45										1.51	
C206	18EE36	1.81	1.79	1.19	2.01									1.21	
C207	18EEL37	3.06	1.02	3.06	2.04		2.04	1.78		2.04	2.04	2.04	1.02		2.04
C208	18EEL38	2.93	1.95	1.22		0.98				1.95			0.98	1.95	0.98
C209	18MAT41	2.93	2.93												
C209	18MAT41	2.93	2.93												
C209	18EE42	2.52	1.68	1.39				2.49			1.68			1.68	
C210	18EE42	2.64	1.76	1.47				2.64			1.76			1.76	
C211	18EE43	2.66	2.36		1.50									1.77	
C212	18EE44	2.13	2.59											1.88	
C213	18EE45	2.29	2.74		1.60										
C214	18EE46A	2.46	2.21	2.21	2.46								0.98	0.98	0.98
C214	18EE46B	2.21	2.21	2.02	2.21								0.86	0.86	0.86

C215	18EEL47	2.21	1.47		1.47					1.47			0.74	1.47	
C216	18EEL48	2.75	1.00	2.00	1.50					2.00	2.00	2.00	1.00	1.00	
C301	18EE51						1.67	2.63	1.44	1.94	1.62	2.16	1.99		
C302	18EE52	1.44	1.44	1.44	1.31	1.18					0.96	1.18	1.08	0.93	
C303	18EE53	1.56	1.56	1.50	1.03									1.04	
C304	18EE54	1.26	1.03		1.05										
C305	18EE55	1.51	1.25		2.02										
C306	18EE56	2.70	2.48		2.00										0.90
C307	18EEL57	2.62	2.19	2.40	1.31	2.19	1.25			2.62	2.62	1.00	1.75		1.75
C308	18EEL58	2.98	1.98		1.98	0.00				1.98			0.99	1.98	
C308	18EE61	2.51	2.51		2.52	2.52								1.67	
C309	18EE61	2.74	2.50		2.74	2.74								1.82	
C310	18EE62	2.18	2.50											1.93	
C311	18EE63	2.19	1.98		2.69									2.69	
C312	18EE643	2.87	2.55	2.16		1.92	1.65			1.20	1.92			1.92	
C313	18ME651	1.67	1.67	1.90			1.20	1.20	1.20				1.20	0.95	
C314	18EEL66	2.11	1.73	1.73	1.92	1.73				1.34		1.54	1.54		1.54
C315	18EEL67	1.45	1.31	1.45		1.16		1.16		0.58			0.00	1.45	
C316	18EMP68	3.00	2.00	3.00		3.00	2.50		3.00	3.00	3.00	3.00	3.00	3.00	3.00
C401	18EE71	0.99	0.99		1.23		1.85	0.63		0.65	0.66	0.66	0.66		
C402	18EE72	2.62	2.50	1.95			1.65				1.91		1.91	1.95	
C403	18EE732	2.73	2.50	1.37	1.52		1.82	1.82			2.28		1.82	0.00	1.82
C404	18EE742	1.26	1.17	2.30			2.25								1.15
C404	18EE742	1.78	1.64	1.53	2.00										1.64
C405	18CS752	2.86	2.65	2.56	2.56	2.78									
C406	18EEL76	2.89	2.89							2.23	1.93	1.45		1.93	
C407	18EEL77	2.51	0.84	2.51	1.68		1.68	1.47		1.68	1.68				1.68

C408	18EEP78	2.00	2.00		2.00		2.00	3.00	3.00	3.00	3.00	3.00	3.00		
C409	18EE81	2.62	1.74	1.50			1.65							0.89	1.73
C410	18EE822	1.92	1.92	1.92	1.52	0.96	0.96						0.96		
C411	18EEI85		2.00	3.00		2.00					3.00	3.00	3.00		
C412	18EEP83			**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**2.50**	**3.00**	**2.50**	**2.50**	**3.00**	**3.00**	**3.00**
C413	18EES84	3.00	2.00						3.00	3.00	3.00	3.00	3.00		
PO ATTAINMENT DIRECT		2.70	2.39	1.36	1.25	0.59	0.62	0.50	0.32	0.81	0.90	0.60	0.78	1.10	0.60
PO ATTAINMENT DIRECT AND INDITECT		2.84	2.54	1.29	0.99	0.57	0.46	0.47	0.24	0.80	0.84	0.49	0.69	1.17	0.59
PO ATTAINMENT DIRECT *0.8		2.16	1.92	1.08	1.00	0.48	0.49	0.40	0.26	0.65	0.72	0.48	0.63	0.88	0.48
PO ATTAINMENT DIRECT AND INDITECT *0.2		0.57	0.51	0.26	0.20	0.11	0.09	0.09	0.05	0.16	0.17	0.10	0.14	0.23	0.12
PO ATTAINMENT(PO ATTAINMENT DIRECT *0.8+PO ATTAINMENT DIRECT AND INDITECT *0.2)		2.73	2.42	1.34	1.19	0.59	0.59	0.49	0.30	0.81	0.89	0.58	0.77	1.11	0.59
TARGET ATTAINMENT		2.76	2.46	2.31	2.12	2.39	1.58	1.83	1.50	2.15	2.06	2.04	1.89	1.66	1.60

Table 3.3.2:PO & PSO Attainment



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
PO ATTAINMENT(PO ATTAINMENT DIRECT *0.8+PO ATTAINMENT DIRECT AND INDITECT *0.2)	2.73	2.42	1.34	1.19	0.59	0.59	0.49	0.30	0.81	0.89	0.58	0.77	1.11	0.59
TARGET ATTAINMENT	2.76	2.46	2.31	2.12	2.39	1.58	1.83	1.50	2.15	2.06	2.04	1.89	1.66	1.60

CRITERION-4

CRITERION 4	Students Performance	150

Table 4.1: Students admitted in the Program

Item	2021-22 (CAY)	2020-21 (CAYm1)	2019-20 (CAYm2)	2018-19 (CAY*m*3)	2017-18 (CAY*m*4)	2016-17 (CAY*m*5)	2015-16 (CAY*m*6)	2014-15 (CAY*m7*)
Sanctioned intake of the program (*N*)	120	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 (*N*1)	50	36	54	68	73	100	99	115
Number of students admitted in 2nd year in the same batch via lateral entry (*N*2)	--	94	84	70	66	46	59	39
Separate division (*N3)*		--	--	--	--	--	--	--
Total number of students admitted in the programme (N1+N2+N3)	50	130	138	138	139	146	158	154

Table 4.2: Students Successfully Graduated In Stipulated time Period

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study			
		I Year	II Year	III Year	IV Year
2021-22(CAY)	50+88+00=138	21	--	--	--
2020-21(CAY)	36+94+00 = 130	28	17+21=38	--	--
2019-20(CAYm1)	54+84+00 = 138	40	30+26=56	24+17=41	--
2018-19 (CAYm2)	68+70+00 = 138	40	35+24=59	31+11=42	27+11=38
2017-18 (CAYm3)	73+66+00 = 139	38	30+12=42	29+11=40	29+10=39
2016-17 (LYG)	100+46+00 = 146	36	20+4=24	20+4=24	19+4=23
2015-16 (LYG*m1*)	99+59+00 = 158	45	25+15=40	25+14=39	24+12=36

Table 4.3: Number of Students Successfully Graduated

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated (With Backlog + Without Backlog)			
		I Year	II Year	III Year	IV Year
2021-22(CAY)	50+NA+00=50	27+21=48			
2020-21 (CAYm1)	36+94+00 = 130	08+28=36	86+38=124	-	-
2019-20 (CAYm2)	54+84+00 = 138	14+40=54	77+56=133	92+41=133	-
2018-19 (CAYm3)	68+70+00 = 138	21+40=61	68+59=127	84+42=126	88+38=126
2017-18 (LYG)	73+66+00 = 139	24+38=62	57+42=99	59+40=99	53+39=92
2016-17(LYG*m1*)	100+46+00 = 146	46+36=82	77+24=101	77+24=101	77+23=100
2015-16(LYG*m2*)	99+59+00 = 158	34+45=79	67+40=107	63+39=102	58+36=94

4.1	Enrolment Ratio	20

Table 4.4: Students Enrolment Ratio

Academic year of admission	N (From Table 4.1)	N1 (From Table 4.1)	Enrolment Ratio=(N1/N)*100
2021-22(CAY)	120	50	41.66
2020-21 (CAY*m*1)	120	36	30.00
2019-20 (CAY *m*2)	120	54	45.00
Average Enrolment = 38.88%			

4.2	Success Rate in the stipulated period of the program	40

4.2.1 Success rate without backlogs in any semester/year of study

Table 4.5: Success rate without backlogs

Item	2018-19	2017-18	2016-17
Number of students admitted in the corresponding First Year + admitted in 2ndyear via lateral entry and separate division, if applicable (X)	138	139	146
Number of students who have graduated without backlogs in the stipulated period (Y)	38	39	23
Success Index (SI) = Y/X	0.28	0.28	0.16
Average SI	0.24		

4.2.2. Success rate in stipulated period (15)

Table 4.6: Success rate in stipulated period

Item	2018-19	2017-18	2016-17
Number of students admitted in the corresponding First Year + admitted in 2ndyear via lateral entry and separate division, if applicable (X)	138	139	146
Number of students who have graduated (Y)	126	92	100
Success Index (SI) =(Y/X)	0.913	0.661	0.685
Average SI	0.753		

4.3 Academic Performance in Third Year (15)

Table 4.7: Academic Performance in Third Year

Academic Performance index	2019-20	2018-19	2017-18
Mean of the percentage of marks of all successful students in Third Year/10 (X)	6.85	6.73	7.08
Total no. of successful students (Y)	133	125	99
Total no. of students appeared in the examination (Z)	133	127	99
API = x* (Y/Z)	6.85	6.58	7.08
Average API = (AP1 + AP2 + AP3)/3	6.84		

4.4. Academic Performance in Second Year (15)

Table 4.8: Academic Performance in Second Year

Academic Performance	2020-21	2019-20	2018-19
Mean of CGPA or Mean Percentage of all successful student(X)	5.19	6.80	6.42
Total no. of successful students (Y)	124	133	127
Total no. of students appeared in the examination (Z)	130	136	131
API = X* (Y/Z)	4.93	6.59	6.13
Average API = (AP1 + AP2 + AP3)/3	5.88		

4.5. Placement, Higher Studies and Entrepreneurship (40)

Item	2021-22	2020-21	2019-20
Total No. of Final Year Students (N)	126	99	103
No. of students placed in companies or Government Sector(x)	59	47	57
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.)(y)	00	04	04
No. of students turned entrepreneur in engineering/technology(z)	--	--	--
x + y + z =	59	51	61
Placement Index : (x + y + z)/N	0.47	0.52	0.59
Average placement= (P1 + P2 + P3)/3	0.527		

Table 4.9: Placement, Higher Studies and Entrepreneurship

Details of Placement 2021-22

SI No.	NAME OF THE STUDENT	USN	DISCIPLINE	Year of Passing	ON/OFF CAMPUS	EMPLOYEE NAME	APPOINTMENT NO.
1	A RAJSHEKHAR	3VC18EE001	EEE	2021-22	ON CAMPUS	SKOLAR	SKLR2022-214
2	AISHWARYA UM	3VC18EE003	EEE	2021-22	ON CAMPUS	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	TN/61482/2022
3	AKASHA G	3VC18EE006	EEE	2021-22	ON CAMPUS	MSYS TECHNOLOGIES	27TH MARCH 2022
4	AMITH H	3VC18EE008	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3939
5	B SHRAVANI	3VC18EE010	EEE	2021-22	ON CAMPUS	INTELLIPAAT	28TH APR-2022
6	BHARATHI K	3VC18EE011	EEE	2021-22	ON CAMPUS	HCL TECHNOLOGIES LTD	15TH NOV 2022
7	CHAYA BAI P	3VC18EE012	EEE	2021-22	ON CAMPUS	INFOSYS	

8	D MANJULA	3VC18EE013	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3943
9	DHARANI T	3VC18EE015	EEE	2021-22	ON CAMPUS	CAPGEMINI	1639308
10	G DEEPTHI	3VC18EE016	EEE	2021-22	ON CAMPUS	CGI	Oct-22
11	PAVAN KUMAR K	3VC18EE020	EEE	2021-22	ON CAMPUS	TANTRAGYAN SOLUTIONS	TS/22-23/PO/T/001
12	KANEEZ FATHIMA RAZVI	3VC18EE021	EEE	2021-22	ON CAMPUS	ROBOSOFT TECHNOLOGIES	23-Sep-22
13	KARTHIGOUDA MALIPATIL	3VC18EE022	EEE	2021-22	ON CAMPUS	CGI	Oct-22
14	L SUDHEER	3VC18EE024	EEE	2021-22	ON CAMPUS	NATIONAL PAYMENT CORPORATION OF INDIA	NBBL/2022-23/HR/0426
15	LAKSHMI C	3VC18EE026	EEE	2021-22	ON CAMPUS	IBM	11-Nov-22
16	MANJUSRI N V	3VC18EE029	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3956
17	MEGANA P L	3VC18EE030	EEE	2021-22	ON CAMPUS	INFOSYS	HRD/3T/1003105006/22-23

18	MUSKAAN M	3VC18EE032	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3959
19	NIKITHA	3VC18EE036	EEE	2021-22	ON CAMPUS	CSS CORP	07-Jan-22
20	NIHA TASLEEM	3VC18EE037	EEE	2021-22	ON CAMPUS	CSS CORP	SKLR22-206
21	NIVEDITHA M P	3VC18EE038	EEE	2021-22	ON CAMPUS	MICROLAND	322379
22	BINDU MAHADEVI	3VC18EE039	EEE	2021-22	ON CAMPUS	REVATURE	F4F0EB99BB53-4875-9646
23	PAVAN KUMAR G	3VC18EE041	EEE	2021-22	ON CAMPUS	NTT DATA	6TH MAY 2022
24	RAJESWARI B BALIGERI	3VC18EE046	EEE	2021-22	ON CAMPUS	TEACHNOOK	TN4425
25	RUHEE TABASSUM	3VC18EE048	EEE	2021-22	ON CAMPUS	6D TECHNOLOGIES	14TH MAR 2022
26	SANIA KOUSER	3VC18EE050	EEE	2021-22	ON CAMPUS	MINDTREE	22-Apr-22
27	SHIVANAGAMMA	3VC18EE054	EEE	2021-22	ON CAMPUS	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	TN/59097/2022

28	SIRISHA B R	3VC18EE056	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3974
29	SUHAIL S	3VC18EE057	EEE	2021-22	ON CAMPUS	CAPGEMINI	1733419
30	SULTAN SAFI	3VC18EE058	EEE	2021-22	ON CAMPUS	TEACHNOOK	TN4424
31	SAYED IRFAN ALI	3VC18EE060	EEE	2021-22	ON CAMPUS	6D TECHNOLOGIES	25TH FEB 2022
32	VENKATESH N S	3VC18EE067	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3982
33	SOUMYA SHREE K	3VC18EE069	EEE	2021-22	ON CAMPUS	ATOS COMMUNICATION	03-Aug-22
34	A K JEELAN	3VC19EE400	EEE	2021-22	ON CAMPUS	ROBO SOFT TECHNOLOGIES	RT1/EEI/2122/0922
35	AISHWARYA K M	3VC19EE402	EEE	2021-22	ON CAMPUS	NTT DATA	6TH MAY 2022
36	ARUN KUMARA B	3VC19EE406	EEE	2021-22	ON CAMPUS	JINDAL SAW LTD	1ST SEP 2022/JSL/HR/2022
37	GENIGERA ASHOK	3VC19EE416	EEE	2021-22	ON CAMPUS	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	TN/64798/2022

38	GIRIMALLANA GOUDA K	3VC19EE417	EEE	2021-22	ON CAMPUS	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	TN/64838/2022
39	HAJUN BEE	3VC19EE419	EEE	2021-22	ON CAMPUS	JARO EDUCATION	25TH MAR 2022
40	HEENA H	3VC19EE420	EEE	2021-22	ON CAMPUS	TCS	TCSL/DT20218336567/BANG
41	IMAM HUSSAIN	3VC19EE421	EEE	2021-22	ON CAMPUS	HCL TECHNOLOGIES LTD	13-Sep-22
42	K NAGASHREE	3VC19EE423	EEE	2021-22	ON CAMPUS	TEACHNOOK	TN4396
43	VENKATESH BABU	3VC19EE424	EEE	2021-22	ON CAMPUS	WIPRO TECHNOLOGIES	31-Mar-22
44	MANJU N	3VC19EE432	EEE	2021-22	ON CAMPUS	CGI	30TH SEP 2022
45	MANJUNATH D	3VC19EE433	EEE	2021-22	ON CAMPUS	CGI	30TH SEP 2022
46	MD JUNAID AHAMED	3VC19EE434	EEE	2021-22	ON CAMPUS	CGI	30TH SEP 2022
47	MOHAMMAD MUZAMMIL M	3VC19EE435	EEE	2021-22	ON CAMPUS	TEACHNOOK	

48	MD FAYAZ	3VC19EE436	EEE	2021-22	ON CAMPUS	INFOSYS	20-Jun-22
49	MOHAMMED SALMAAN	3VC19EE437	EEE	2021-22	ON CAMPUS	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	TN/64805/2022
50	MOHAMMED TAHSEEN RAZA	3VC19EE438	EEE	2021-22	ON CAMPUS	BRIGOSHA	Jul-22
51	NAGANAGOUDA M	3VC19EE441	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3961
52	NIKITHA RANI	3VC19EE444	EEE	2021-22	ON CAMPUS	WIPRO TECHNOLOGIES	02-Apr-22
53	RAJU H S	3VC19EE450	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3966
54	SHAIK WASIFA FAROOQ	3VC19EE453	EEE	2021-22	ON CAMPUS	TEACHNOOK	TN4387
55	SHANAWAZ FATHIMA P	3VC19EE454	EEE	2021-22	ON CAMPUS	BRIGOSHA	Jul-22
56	SHOBA.M	3VC19EE457	EEE	2021-22	ON CAMPUS	PROLIFICS	Jul-22
57	SIDDARTH P	3VC19EE458	EEE	2021-22	ON CAMPUS	TERRA LOGIC	1ST DEC 2022

58	TANUJA D P	3VC19EE460	EEE	2021-22	ON CAMPUS	MPHASIS	MPHTH_CD2022-3977
59	YASHWANTH KUMAR B	3VC19EE466	EEE	2021-22	ON CAMPUS	TERRA LOGIC	

Details of Placement 2020-21

SL.NO	NAME	USN	DESCIPLINE	Year of Passing	ON/OFF CAMPUS	COMPANY	Appointment No.
1	SUMALATHA	3VC17EE063	EEE	2020-21	ON CAMPUS	ACCENTURE	5th OCT 2021
2	THIPPANA GOUDA B	3VC17EE066	EEE	2020-21	ON CAMPUS	ACCENTURE	14th July 2021
3	RAGHAVENDRA H	3VC18EE439	EEE	2020-21	ON CAMPUS	ALCHEMY TECHSOL INDIA	19th Nov 2021
4	H R ANIL KUMAR	3VC17EE021	EEE	2020-21	ON CAMPUS	ALLSTATE SOLUTIONS PVT LTD	13th Jan 2022
5	SOMASHEKAR	3VC17EE057	EEE	2020-21	ON CAMPUS	ANMERKUNG SOLUTIONS PVT. LTD.	13-12-2021
6	SAMEERA SULTANA	3VC17EE050	EEE	2020-21	ON CAMPUS	BYJU'S	05th Oct 2021
7	ASHWINI KUMARI GN	3VC17EE011	EEE	2020-21	ON CAMPUS	COGNIZANT	18973961
8	B	3VC17EE015	EEE	2020-21	ON CAMPUS	COGNIZANT	18969409

	KOTRESHWARI						
9	SOFIYA BANU	3VC17EE056	EEE	2020-21	OFF CAMPUS	COGNIZANT	18022295
10	MALLIKARJUNA GOUDA N	3VC18EE428	EEE	2020-21	ON CAMPUS	COGNIZANT	18974198
11	CHANDANA PATIL	3VC17EE017	EEE	2020-21	ON CAMPUS	DXC	11-17-2021
12	VEDA GADAG	3VC17EE069	EEE	2020-21	ON CAMPUS	DXC	3rd Sep 2021
13	KOTRU GOUDA GM	3VC17EE032	EEE	2020-21	ON CAMPUS	ELINS SWITCH BORADS	21st Nov 2021
14	MAHESH KUMAR M	3VC18EE426	EEE	2020-21	ON CAMPUS	ELINS SWITCH BORADS	13-12-2021
15	G M ARPITA	3VC17EE020	EEE	2020-21	ON CAMPUS	IBM	19th Oct 2021
16	JAYALAKSHMI B K	3VC17EE025	EEE	2020-21	ON CAMPUS	IBM	6154709
17	SANJEEVAKUMAR	3VC18EE448	EEE	2020-21	ON CAMPUS	IN TIME TECH VISION SOFT PVT LTD	29th March 2022
18	ISHARATH FATHIMA	3VC17EE024	EEE	2020-21	ON CAMPUS	INFOSYS	HRD/3T/1002988527/21-22

19	NARASIMHA NAYAKA B	3VC17EE041	EEE	2020-21	ON CAMPUS	INMOVIDU	21st June 2021
20	VIJAYARAJ L SANGAVI	3VC17EE072	EEE	2020-21	ON CAMPUS	INMOVIDU	21st June 2021
21	SHIVANANDA B	3VC18EE451	EEE	2020-21	ON CAMPUS	INMOVIDU	21st June 2021
22	TALAVARA BASAVARAJA	3VC18EE455	EEE	2020-21	ON CAMPUS	INMOVIDU	21st June 2021
23	SACHIN KUMAR.B	3VC17EE074	EEE	2020-21	ON CAMPUS	JSW	22nd July 2021
24	VEENA R	3VC17EE070	EEE	2020-21	ON CAMPUS	KPIT	28-10-2021
25	MANASA B	3VC18EE429	EEE	2020-21	ON CAMPUS	L & T TECHNOLOGY SERVICES	LTTS/MYSORE/HR/298658
26	FARHANA NASIR BASHA	3VC17EE019	EEE	2020-21	ON CAMPUS	MPHASIS	03rd Nov 2021
27	MANOJ KUMAR KV	3VC17EE030	EEE	2020-21	ON CAMPUS	MPHASIS	2nd Dec 2021
28	POORNIMA CHITRAGAR	3VC17EE043	EEE	2020-21	ON CAMPUS	NTT DATA	5th OCT 2021
29	SUKEERTHI S	3VC17EE049	EEE	2020-21	ON CAMPUS	NTT DATA	3rd Sep 2021

30	ABDUL SHAREEF D	3VC18EE400	EEE	2020-21	ON CAMPUS	OLA ELECTRIC	07-01-2022
31	NANDISH KAMINAL	3VC17EE039	EEE	2020-21	ON CAMPUS	TCS	TCSL/DT20206841416/BANGALORE
32	DILIP KUMAR K	3VC18EE411	EEE	2020-21	ON CAMPUS	TCS	TCSL/DT20218648737/HYD
33	LAVANYA L G	3VC17EE034	EEE	2020-21	ON CAMPUS	TCS	TCSL/DT20229928918/LUCKNOW
34	GHOUSE PEER	3VC18EE415	EEE	2020-21	ON CAMPUS	TCS	2nd March 2022
35	AJITH T	3VC17EE003	EEE	2020-21	ON CAMPUS	U.ST	UST/19409811/378476
36	ARPITHA G	3VC17EE007	EEE	2020-21	ON CAMPUS	VERZEO	SKLR744
37	JEEVAN VIKAS B	3VC17EE027	EEE	2020-21	ON CAMPUS	VERZEO	SKLR786
38	MOHAMMED SHAMS TABRAIZ	3VC17EE036	EEE	2020-21	ON CAMPUS	VERZEO	SKLR765
39	SHREYA N KULKARNI	3VC17EE053	EEE	2020-21	ON CAMPUS	VERZEO	SKLR780
40	SHRUTI	3VC17EE054	EEE	2020-21	ON CAMPUS	VERZEO	SKLR782
41	SRUSTI NP	3VC17EE061	EEE	2020-21	ON CAMPUS	VERZEO	SKLR793
42	SWATHI L S	3VC17EE064	EEE	2020-21	ON CAMPUS	VERZEO	SKLR771

43	MAHESH KUMAR M	3VC18EE425	EEE	2020-21	ON CAMPUS	VERZEO	SKLR735
44	THIRUMALA D	3VC18EE458	EEE	2020-21	ON CAMPUS	VERZEO	SKLR781
45	HINDUMATHI D	3VC17EE023	EEE	2020-21	ON CAMPUS	WIPRO TECHNOLOGIES	11th Jan 2022
46	MUBEEN TAJ T K	3VC17EE038	EEE	2020-21	ON CAMPUS	WIPRO TECHNOLOGIES	15th Feb 2022
47	PARVEZ SHAIK B M	3VC18EE436	EEE	2020-21	ON CAMPUS	JINDAL SAW	JSL/HR/22

Higher Studies 2020-21

Sl. No.	NAME OF THE STUDENT	USN	NAME OF THE COLLEGE/UNIVERSITY	SPECIALIZATION
1	Vineeth Kumar	3VC17EE073	Manipal Academy Higher Education	M.Tech-Power Electronics and Drives
2	Siri Rodda PRabhakar	3VC17EE055	Ernst-Abbe-Hochschule Jena University of Applied Sciences, Jena	Master's programme of Scientific Instrumentation
3	Narsimha Nayak	3VC17EE041	Universty of Hertforrdshire, London	MSc Data Science
4	Vijayraj L Sangavi	3VC17EE072	Pune	M.Tech

Details of Placement 2019-20

SL.NO	NAME	USN	DESCIPLINE	Year of Passing	ON/OFF CAMPUS	COMPANY	Appointment No.
1	PRAMOD B	3VC16EE059	EEE	2019-20	ON CAMPUS	INFOSYS	HRD/3T/1000815217/20-21
2	R CHANDRA SEKHAR	3VC16EE060	EEE	2019-20	ON CAMPUS	INFOSYS	HRD/3T/1000814973/20-21
3	AVINASH B M	3VC16EE009	EEE	2019-20	ON CAMPUS	INFOSYS	HRD/3T/1003597718/21-22
4	MADIHA FARHEEN	3VC16EE033	EEE	2019-20	ON CAMPUS	COGNIZANT	CANDIDATE ID: 14301407
5	SAHANA K	3VC16EE068	EEE	2019-20	ON CAMPUS	COGNIZANT	CANDIDATE ID: 14301343
6	BASAVARAJ P N	3VC16EE012	EEE	2019-20	ON CAMPUS	SLK SOFTWARE SERVICES	02-20-20202
7	RUKSAR BEGUM T K	3VC16EE065	EEE	2019-20	ON CAMPUS	SLK SOFTWARE SERVICES	02-20-20202
8	ANJALI G	3VC17EE403	EEE	2019-	ON	SLK SOFTWARE	02-20-20202

				20	CAMPUS	SERVICES	
9	AASHIKA A	3VC16EE001	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
10	AKASH A	3VC16EE003	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
11	RAVISHANKAR P	3VC16EE064	EEE	2019-20	ON CAMPUS	JMAN DIGITAL SERVICE PVT LTD	JMD/CH/2021-22/008
12	STELLA	3VC16EE081	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
13	SUNDEEP MS	3VC16EE086	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
14	VIDYA SHREE	3VC16EE098	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
15	VINOD KUMAR	3VC16EE099	EEE	2019-20	ON CAMPUS	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	MAY 3,2020
16	SONIA D	3VC16EE079	EEE	2019-20	ON CAMPUS	KPIT	Employee ID:00145242
17	PRASHANT	3VC16EE056	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027074
18	VEERESH E	3VC16EE096	EEE	2019-	ON	FREENKART	Offer Letter ID: 80027055

				20	CAMPUS		
19	ANAND PAUL K	3VC17EE400	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027059
20	MAGHDAD KHAN JAFFARI	3VC17EE419	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027067
21	VIVEKANANDA SWAMY H S	3VC17EE445	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027078
22	KISHORE KUMAR MARKAL	3VC16EE026	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027279
23	MANJUNATH C N	3VC16EE037	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027280
24	SAI ARATHI M	3VC16EE069	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027287
25	SHEIKSHA VALI	3VC17EE437	EEE	2019-20	ON CAMPUS	FREENKART	Offer Letter ID: 80027079
26	LATIF UNNISA	3VC16EE029	EEE	2019-20	ON CAMPUS	SMART BRAINS	17-06-2020
27	SYEDA ZIYA FATHIMA	3VC16EE088	EEE	2019-20	ON CAMPUS	SMART BRAINS	17-06-2020

28	POOJA G	3VC16EE055	EEE	2019-20	ON CAMPUS	SLK SOFTWARE SOLUTIONS	03-14-2021
29	ZEBA TASNEEM S	3VC16EE100	EEE	2019-20	ON CAMPUS	DELOITTE	March 3, 2022
30	RAVALI G	3VC16EE062	EEE	2019-20	ON CAMPUS	NTT DATA SERVICES	20-04-2021
31	VARSHINI B	3VC16EE092	EEE	2019-20	ON CAMPUS	NTT DATA SERVICES	20-04-2021
32	SANJAY KUMAR N R	3VC16EE071	EEE	2019-20	ON CAMPUS	DELOITTE	03-02-2021
33	AJJAIAH KC	3VC16EE002	EEE	2019-20	ON CAMPUS	MAVERIC SYSTEMS	15-07-2021
34	SALMAN FAIZEL SAIT	3VC16EE070	EEE	2019-20	ON CAMPUS	TCS	TCSL/DT20207212906/14 56523/BANGALORE
35	SHRIKANTH D	3VC17EE439	EEE	2019-20	OFF CAMPUS	APOLLO POWER SYSTEM	APS/BLR/20-21
36	SACHIN KOUTI	3VC16EE067	EEE	2019-20	OFF CAMPUS	Z-K TECO BIOMETRIC INDIA PVT. LTD.	18-03-2021
37	S SHRAVANI	3VC17EE434	EEE	2019-20	OFF CAMPUS	WISTRON	E-code:MI21020293

38	SUMA D	3VC16EE084	EEE	2019-20	OFF CAMPUS	GE BE PVT LTD	01-Mar-21
39	KAJAVALI LATHIYAR	3VC17EE416	EEE	2019-20	OFF CAMPUS	SUZLON	AEL/LOC-SUZLON-KA/2021/55
40	MUSHRATH ARIFA	3VC17EE425	EEE	2019-20	OFF CAMPUS	NTT DATA SERVICES	22nd Oct 2021
41	NETARAVATI K	3VC17EE427	EEE	2019-20	OFF CAMPUS	SLK SOFTWARE SOLUTIONS	SLK94220
42	ASHWINI T	3VC17EE405	EEE	2019-20	OFF CAMPUS	DIYA SYSTEMS	30th JAN 2020
43	B VARAPRASAD	3VC16EE094	EEE	2019-20	OFF CAMPUS	VIRTUSA	04-30-2021
44	NIRANJAN E	3VC16EE046	EEE	2019-20	OFF CAMPUS	EMMVEE PHOTOVOLTAIC POWER PRIVATE LTD	EMMVEE/HRD/Trainee/11626/2020
45	SANTOSH KUMAR H	3VC16EE072	EEE	2019-20	OFF CAMPUS	EMMVEE PHOTOVOLTAIC POWER PRIVATE LTD	EMMVEE/HRD/Trainee/12079/2021
46	ARSHA K	3VC16EE007	EEE	2019-20	OFF CAMPUS	TEMENOS INDIA PRIVATE LIMITED	Emp No:26249

47	ASHA BEE	3VC16EE008	EEE	2019-20	OFF CAMPUS	WIPRO	17th FEB 2022
48	CHANNA BASAVA G	3VC16EE013	EEE	2019-20	OFF CAMPUS	COGNIZANT	CANDIDATE ID: 20412583
49	ANIL KUMAR REDDY B	3VC16EE006	EEE	2019-20	OFF CAMPUS	BYJU'S	26th JAN 2022
50	DILIP KUMAR T C	3VC17EE410	EEE	2019-20	OFF CAMPUS	BYJU'S	03rd March 2022
51	RAJASHEKAR M	3VC17EE431	EEE	2019-20	OFF CAMPUS	TCS	TCSL/DT20229831510/HYD
52	S M SHARATH KUMAR	3VC17EE433	EEE	2019-20	OFF CAMPUS	SREE SAASTHA ENGINEERING COMPANY	11-06-2021
53	KODAL ASHWINI	3VC16EE027	EEE	2019-20	OFF CAMPUS	WARTENS	4th August 2021
54	SHRAVAN KUMAR G M	3VC16EE076	EEE	2019-20	OFF CAMPUS	TEAM LEASE SKILLS UNIVERSITY	TR10353763
55	SUBHASH	3VC16EE082	EEE	2019-20	OFF CAMPUS	SNEHA GLASSICS TUFF	14th oct 2020
56	SHRUTHI M	3VC16EE077	EEE	2019-20	OFF CAMPUS	NMDC LTD	21-10-2021

57	T SHWETHA	3VV16EE091	EEE	2019-20	OFF CAMPUS	TECHNICAL TRAINING INSTITUTE HAL	3488/902824

Higher Studies 2019-20

Sl. No.	NAME OF THE STUDENT	USN	NAME OF THE COLLEGE/UNIVERSITY	SPECIALIZATION
1	POOJA D	3VC16EE054	Dr Ambedkar Institute of Technology, Bangalore	POWER ELECTRONICS
2	SNEHA B	3VC16EE011	OXFORD COLLEGE OF ENGINEERING	POWER ELECTRONICS
3	KARISHMA JM	3VC16EE024	OXFORD COLLEGE OF ENGINEERING	POWER ELECTRONICS
4	STELLA M S	3VC16EE081	BMS Enineering College, Bangalore	POWER ELECTRONICS

Details of Placement 2018-19

SL.NO	NAME	USN	DESCIPLINE	Year of Passing	ON/OFF CAMPUS	COMPANY	Appointment No.
1	NISCHITHA G M	3VC15EE061	EEE	2018-19	ON CAMPUS	TCS	TCSL/CT20182536157/BANGALORE
2	BHARATHI K	3VC15EE015	EEE	2018-19	ON CAMPUS	TCS	TCSL/CT20182417161/BANGALORE
3	CHANDANA S DHONGADE	3VC15EE017	EEE	2018-19	ON CAMPUS	TCS	TCSL/CT20182417193/BANGALORE
4	SAIMA SABREEN	3VC15EE077	EEE	2018-19	ON CAMPUS	VEE TECHNOLOGIES	20-Sep-19
5	SYED SIMRAN	3VC15EE092	EEE	2018-19	ON CAMPUS	VEE TECHNOLOGIES	20-Sep-19
6	RAJA T R	3VC15EE069	EEE	2018-19	ON CAMPUS	TASMAI AUTOMATION	NOV/DEC 2019
7	HUMERA FATHIMA	3VC15EE037	EEE	2018-19	ON CAMPUS	INFOSYS	HRD/3T/1002987437/20-21
8	MEGHA BALLARI	3VC15EE054	EEE	2018-19	ON CAMPUS	INFOSYS	HRD/3T/19-20/13079023

9	JAYASIMHA D	3VC15EE042	EEE	2018-19	ON CAMPUS	SHRI RAM	ReF no:CAN050222
10	BASAVARAJ P	3VC15EE062	EEE	2018-19	ON CAMPUS	UNIVERSAL EDUCATION	UE\BLR\18-19\516
11	MAHALAKSHMI K	3VC15EE050	EEE	2018-19	ON CAMPUS	ACCENTURE	20th DEC 2019
12	JAYASHREE R	3VC15EE041	EEE	2018-19	ON CAMPUS	UNIVERSAL EDUCATION	UE\BLR\18-19\522
13	SRI KAVYA G	3VC15EE030	EEE	2018-19	ON CAMPUS	VEE TECHNOLOGIES CORE COMP	20-Sep-19
14	MOUNIKA B	3VC16EE430	EEE	2018-19	ON CAMPUS	VEE TECHNOLOGIES CORE COMP	20-Sep-19
15	SINDHU B	3VC16EE449	EEE	2018-19	ON CAMPUS	VEE TECHNOLOGIES CORE COMP	20-Sep-19
16	SAMEENA ERAM	3vc15EE079	EEE	2018-19	ON CAMPUS	24[7]	15-Jul-19
17	RUKSAR FARHAT S	3VC15EE072	EEE	2018-19	ON CAMPUS	JSW(CORE)	JSWSL/VJNR//HR/APPT-TR/L8T/638/2019-20
18	TAISEEN KAUSAR K	3VC15EE093	EEE	2018-19	ON CAMPUS	JSW(CORE)	JSWSL/VJNR/HR/L8T/0639/2019-20

19	DHEERAJ J	3VC15EE023	EEE	2018-19	ON CAMPUS	DXC-Technology	August 29,2020
20	HARIKUMAR C	3VC15EE034	EEE	2018-19	OFF CAMPUS	BROADBRIDGE	JULY 13,2020
21	J PRABHU SAI	3VC15EE039	EEE	2018-19	OFF CAMPUS	APTS – Admin –Cyber Security	File No.ITC51-17023(34)/3/2020-CA
22	SUDHAKAR BK	3VC15EE009	EEE	2018-19	OFF CAMPUS	CIPLA INDIA Ltd	OFFERE ID:60269-214178-197608
23	DEVERAJA	3VC15EE020	EEE	2018-19	OFF CAMPUS	CIPLA INDIA Ltd	OFFERE ID:60269-214178-197613
24	SAMEULLA	3VC16EE441	EEE	2018-19	OFF CAMPUS	CIPLA INDIA Ltd	OFFERE ID:60269-214178-197614
25	B SUNDER GANESH	3VC16EE403	EEE	2018-19	OFF CAMPUS	CIPLA INDIA Ltd	OFFERE ID:60269-214178-197609
26	SIRISHA G	3VC15EE086	EEE	2018-19	OFF CAMPUS	UNIVVA BUSINESS SOLUTIONS PVT. LTD.	February 14, 2021
27	PRAGNA M	3VC15EE065	EEE	2018-19	OFF CAMPUS	UNIVVA BUSINESS SOLUTIONS PVT. LTD.	February 14, 2021
28	A SHASHIDHAR	3VC15EE002	EEE	2018-19	OFF CAMPUS	UNIVVA BUSINESS SOLUTIONS PVT. LTD.	February 14, 2021

29	S VINAYA KUMAR	3VC15EE073	EEE	2018-19	OFF CAMPUS	PIXEL SOFTECH Pvt. Ltd.	PSPL/AP/21-22/900
30	R RUDRAMUNI	3VC16EE437	EEE	2018-19	OFF CAMPUS	WISTRON TECH,KOLAR	Emp ID.: M120106337
31	LEHA C	3VC15EE047	EEE	2018-19	OFF CAMPUS	VOGO AUTOMOTIVE PVT. LTD.	2nd DEC 2019
32	FEEROZ KHAN	3VC15EE025	EEE	2018-19	OFF CAMPUS	MAHINDRA INSURANCE BRROKERS	EMP. CODE : 27003194
33	SAI KRISHNA K	3VC15EE076	EEE	2018-19	OFF CAMPUS	MAHINDRA INSURANCE BRROKERS	EMP. CODE : 27003196
34	MANJUNATH K	3VC15EE051	EEE	2018-19	OFF CAMPUS	MAHINDRA INSURANCE BRROKERS	EMP. CODE : 27003198
35	AAYESHA H	3VC15EE008	EEE	2018-19	OFF CAMPUS	BROADBRIDGE	13th July 2020
36	SINDUJA MN	3VC15EE085	EEE	2018-19	OFF CAMPUS	BROADBRIDGE	13th July 2020
37	NAGA BHARATHI K	3VC15EE059	EEE	2018-19	OFF CAMPUS	MICROLAND	246377
38	SAGAR BASHETTY	3VC15EE075	EEE	2018-19	OFF CAMPUS	ARYAKI LABS	09th Feb 2021

39	BANNARAM	3VC15EE012	EEE	2018-19	OFF CAMPUS	POLICY BAZAR INSURANCE BROKER PVT LTD	PW20573
40	SHIVAKUMAR K H	3VC15EE083	EEE	2018-19	OFF CAMPUS	REMO SOFTWARE	2nd March 2020
41	GOUTHAMI D	3VC15EE032	EEE	2018-19	OFF CAMPUS	KPTCL	28th June 2021
42	ASMA B	3VC15EE007	EEE	2018-19	OFF CAMPUS	SOURCE ONE MANAGEMENT SERVICES PVT LTD	09t August 2021

Higher Studies 2018-19

Sl. No.	NAME OF THE STUDENT	USN	NAME OF THE COLLEGE/UNIVERSITY	SPECIALIZATION
1	POOJA.KALAL	3VC15EE063	UVCE,BANGALORE	POWER ELECTRONICS
2	SWAPNA.K	3VC15EE091	UBDT COLLEGE OF ENGG, DAVANGERE	POWER SYSTEM ENGINEERING
3	KAVYA D	3VC16EE415	BMS COLLEGE OF ENGINEERING	POWER ELECTRONICS

4.6	**Professional Activities and Organizing events**	**20**

4.6.1	**Professional Societies / Chapters and organizing Engineering events**

ISTE Professional Body

The **International Society for Technology in Education (ISTE)** is an international advocacy organization that seeks to"transformteaching and learning" through technology and adherence to the ISTE Standards.

- The Indian Society for Technical Education is a national, professional, non-profit making Society registered under the Societies Registration Actof 1860.
- The major objective of ISTE is to **formulate the general goals & responsibilities of technical education**. To adjust curriculum & educationalprocesses to changing conditions. To develop effective teachers & educational administrators. To improve instructional methods & practices &administrativeusages.
- The major objective of the ISTE is to assist and contribute in the production and development of top quality professional engineers andtechnicians needed by the industries and other organizations. Being the only national organization of educators in the field of Engineering andTechnology, ISTE effectively contributes in various missions of the Union Government. The Ministry of Human Resource Development, CTE /DST / MIT / State Governments are well associated with the ISTE for programs relating to technical education. The Headquarters of ISTE is located at New Delhi.

Major Benefits of becoming an ISTE Member

1. A Member of a National Professional Organization.
2. Joinanacademicfraternityofover50,000 strong professionals.
3. Preferencetoattendshort-termtrainingprogrammesforacademicexcellenceandtobecomeeligibleforcareeradvancementopportunities.
4. Bi-monthly Newsletter.
5. Quarterly Indian Journal of Technical Education (at concessional rates).
6. QuarterlyInternationalJournalofEngineeringEducationbyAmericanSocietyofEngineeringEducation(ASEE),USA(atconcessional rates).
7. Eligible to apply for various national level awards.
8. PublicationsforSelfDevelopment,InstitutionDevelopment,etc.(atconcessionalrates)
9. Eligible to participate in Chapter Level, Section Level and National Level Conferences, Workshops and other activities of your academic interest ,etc.

IETE Professional Body

The Institution of Electronics and Telecommunication Engineers (IETE) is India's leading recognized professional society devoted to the advancement of Science and Technology of Electronics, Telecommunication & IT. Founded in 1953. The IETE is the National Apex Professional body of Electronics and Telecommunication, Computer Science and IT Professionals. It serves more than 1,25,000 members (including Corporate, Student and ISF members) through various 63 Centres, spread all over India and abroad.

The IETE focuses on advancement of the Science and Technology of Electronics, Telecommunication, Computers, Information Technology and related areas. Towards this end the Institution promotes and conducts basic engineering and continuing technical education programmes for human resource development.

The IETE conducts both the Graduate ship (AMIETE) Examination in Electronics and Telecommunication Engineering, Computer Science & Engineering and Information Technology streams and Diploma (DIPIETE) Examination in Electronics & Telecommunication and Computer Science & Engineering streams. A pass in AMIETE Examination is recognised by Government of India for the purposes of recruitment to superior posts and services under the Central Government while a pass in Diploma Level (DIPIETE) Examination is recognised by the Ministry of HRD, Govt. of India for the purpose of employment to posts & services under the Central Government in the appropriate field.

IEEE Student Chapter

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE and its members inspire a global community through its highly cited publications, conferences, technology standards, and professional and educational activities.

IEEE members can access information on local events and activities by signing in to IEEE Collaborate, an integrated multi-functional platform and global network of technology-focused professionals, leveraging IEEE's extensive knowledge base and community of thought-leaders. Once signed in, users can:

- Network with other technology professionals
- Establish a professional profile highlighting your accomplishments
- Join and participate in discussions on various technical interests
- Create a group to share and collaborate on projects
- Discover IEEE events and activities throughout the world

Table 4.9: Events carried out under ISTE student chapter

Sl.No	Event name	Date
1	**Awareness program on Energy conservation**	24th DEC 2022
2	**Plantation Drive: Each one –Plant one**	20th -22nd DEC 2022
3	**"Guidance on job opportunities in IT Industry"**	25/09/2021
4	**Industry Adoption and Readiness**	21/08/2021
5	**My Professional Journey**	01/08/2021
6	**Life Skills**	31/07/2021
7	**Two days workshop for students "Industrial Safety Measures and Regulations"**	26/04/2019
8	**Carries Guidance on Higher Studies**	02/02/2019
9	**Higher Studies Awareness Program**	11/02/2019
10	**Motivational Talk**	22/02/2018
11	**Hands on Experience to Electrical and Electronics Engineering Lab Skills**	16th& 17th FEB 2018
12	**C-Programming Training**	30/07/2018 to 01/08/2018

IEEE – RYMEC Student Chapter

Inauguration of IEEE-RYMEC Student chapter

IEEE-RYMEC Student Members

Table4.10: Events carried out under IEEE - RYMEC student chapter

Sl.No	Event	Event name	Date
1	National Science Day-2K22	i. Invited Talk ii. Awareness Program iii. Poster Presentation iv. Online Quiz Competition  	28/02/2022
2	Webinar	"Getting Started with Embedded Systems"	31/01/2022
3	Webinar	IEEE Bangalore section, Mangalore subsection, Automation in Electronics Engineering	28/02/2021

Table4.11: EVENTS ORGANISED IN THE DEPARTMENT FOR THE ACADEMIC YEAR 2021-22

Sl.No	Event	Event name	Date
1	Invited talk	**Invited talk by EEE Alumni**	21/08/2022
2	Workshop	**Three days workshop on Programmable Logic Controllers and SCADA**	23rd-25th Feb 2022
3	Webinar	**Webinar on carrier opportunities after BE**	24th Dec 2022
4	Workshop	**Student Induction Program for 3rd sem students**	23rd -30th Nov 2022
5	Technical	**Three days technical, cultural and competitive event(VIDYUTSAV-2K22)**	16-18 Jun 2022
6	Student Chapter	**State Level IEEE Project Symposium**	17th Jun 2022

Table4.12:EVENTS ORGANISED IN THE DEPARTMENT FOR THE ACADEMIC YEAR 2020-21

Sl.No	Event	Event name	Date
1	Invited talk	**Invited talk by EEE Alumni**	21/07/2021
2	Conference	**2nd international conference on emerging trends in engineering, science and management**	7th -8th July 2021
3	Webinar	**Technical session on GATE**	05/06/2021
4	Webinar	**Drones and artificial intelligence**	15/05/2021
5	Webinar	**Inter Personal skills**	17/12/2020
6	Webinar	**Control of Electrical Machines**	01/09/2020

Table 4.13: EVENTS ORGANISED IN THE DEPARTMENT FOR THE ACADEMIC YEAR 2019-20

Sl.No	Event	Event name	Date
1	Webinar	Webinar on **"How to crack GATE and other competitive exams in first attempt"**	02/07/2020
2	Webinar	Webinar on **"Creative design on adobe Photoshop and illustrator"**	24/06/2020
3	Webinar	Webinar on **"Dynamic analysis and control of rotor bearings"**	30/06/2020
4	Workshop	Two days workshop on **"Hands on session on advanced microcontroller"**	27/02/2020 & 28/02/2020
5	Workshop	Awareness program on **"Demand side management and safety precautions on electric shock"**	04/10/2019 & 05/10/2019
6	Technical Talk	**"Emerging trends in Industries"**	17/09/2019
7	BOOT CAMP	**NAIN Centre conducted BOOT CAMP for students**	29/08/2019
8	Workshop	**International Student Exchange Program on Young Ambassador Program on Design Thinking**	01/08/2019
9	Seminar	**"Industrial and Process Automation"**	25th and 26th September 2019

4.6.2	Publication of technical magazines, newsletters, etc.	05

The Department published newsletter in the year 2021-22 and the newsletter will be published yearly.

Volume - 7, Issue - 1 & 2

NEWSLETTER@RYMEC 2021-22

Department of Electrical And Electronics Engineering

Vision of the Department

To Produce Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Electrical & Electronics Engineers and Entrepreneurs.

Mission of the Department

M1	To impart quality education in Electrical & Electronics Engineering.
M2	To establish a continuous Industry-Institute Interaction, participation and collaboration to inculcate skilled Electrical & Electronics Engineers.
M3	To build human values with social responsibilities, entrepreneur skills and professional ethics among the Electrical & Electronics Engineers.
M4	To focus on innovation and development of technologies by engaging in wide range of research areas in Electrical & Electronics Engineering.

Programme Educational Objectives (PEO's)

PEO's	PEO STATEMENT
PEO1	Graduates will have successful professional career with employment in various industrial and government sectors, both at national and international level endowed with competence and ethical acumen.
PEO2	Graduates will have ability to pursue higher education and career in multi disciplinary areas involving core engineering subjects with appropriate solutions to social and environmental issues.
PEO3	Graduates will have capacity for lifelong learning with engaging technologies in academics, as an entrepreneur or in research and development.

Programme Specific Outcomes PSO's)

PSO's	PEO STATEMENT
PSO1	Apply fundamental knowledge to identify, formulate, design and investigate various problems of electrical and electronics circuits, power electronics and power systems.
PSO2	Apply modern software tools for design simulation and analysis of electrical systems to engage in lifelong learning and to successfully adapt in multidisciplinary environment.

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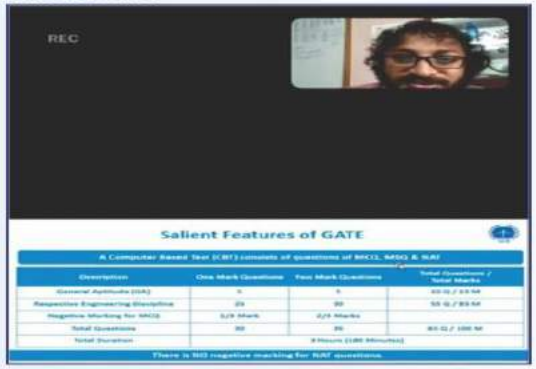
Workshops/Seminars Conducted

A three-day workshop on "Programmable Logic Controllers and SCADA" Was held from 23-2-2022 - 25-2-2022. Mr. Pawan Kumar and Mr. Anginayulu, from Live wire software Solutions attended as resource persons. 85 Electrical students attended the program.

Webinar on "Career Opportunities after BE" organized on 24.12.2021. Mr. S M Trinath, ACE Engineering Acadamy delivered a lecture.



Student Induction Program:

EEE department organized SIP for 3rdsem students23/11/21 to 30/11/2022

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Industrial Visit

Final year students of EEE department visited "Supa Power House and Kaiga Power Plant" during 07/04/2022 to 10/04/2022.

Graduation Day 2022

RYMEC-EEE Department organized Graduation day for 2022 Passed out Students

Technical Event"Vidyutsav 2K22":

Electrical and Electronics Engineering department organized three days technical, cultural and competitive event "Vidyutsav 2K22" From 16th to 18th June 2022.

16th June 2022: Inauguration of Vidyutsav 2K22 and E Bike Rally

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17th June 2022: Project Exhibition

Paper Publications

1. Dr. S Kotresh "Arduino Based solar tracking and cleaning system" JETIR ISSN : 2349-5162) Volume 9 Issue 7, July-2022.
2. Dr.U.M.Netravati "solar powered street light illumination control by PIR sensor" JETIR (ISSN : 2349-5162) Volume 9 Issue 6 , June-2022.
3. Dr.U.M.Netravati "Solar Piezo Hybrid Power Charging System" IJRAMT ISSN (Online): 2582-7839 Issue 02/06/2022.
4. Dr.U.M.Netravati "Electricity Saver Smart Street Light" JETIR ISSN : 2349-5162) Volume 9 Issue 6 , June-2022.
5. Dr.B.Doddabasavanagouda "MOBILE SIGNAL JAMMER" JETIR(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022.
6. Dr.B.Doddabasavanagouda "IoT based Automated Siren using Solar Power" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022 DOI: 10.48175/IJARSCT-5304.
7. Mrs.AnusuyaPatil "Electrical Vehicle Garbage Carrier" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022 DOI: 10.48175/IJARSCT-5343.
8. Dr.K Raghavendra Prasad "IOT Based transformer monitoring by using Arduino and esp8266" IJCESR ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022.
9. Dr.K Raghavendra Prasad "Wireless Charging of an Electric Vehicle using Solar and Wind" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022 DOI: 10.48175/IJARSCT-5328.
10. Mr.Hanumantha Rao A "PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION" IJCESR ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022.
11. Mr.Elia Sundaram "Three Phase Lamp load" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022. DOI: 10.48175/IJARSCT-5366.
12. Mr.Shambulinagana Gouda "IoT Based Smart StreeT Light Empowered by Piezoelectric Sensors" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022. DOI: 10.48175/IJARSCT-5362.
13. Mr.Shambulinagana Gouda "Home automation using Blynk" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022 DOI: 10.48175/IJARSCT-5362.

14. Mrs.Kumuda.B "Solar PiezoHybrid Power Charging System" IJRAMT ISSN (Online): 2582-7839 Issue 02/06/2022.
15. Mrs.Kumuda.B "RFID BASED PETROL PUMP AUTOMATION SYSTEM" JETIR ISSN:2349-5162 VOL 9 ISSUE 6, JUNE-2022.
16. Mrs.Gayathri J "SMART ROAD SAFETY AND VEHICLE ACCIDENT PREVETION FOR MOUNTAIN ROADS" JETIR ISSN:2349-5162 June 2022, Volume 9, Issue 7.
17. Mrs.Gayathri J "IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE" JETIR ISSN:2349-5162 June 2022, Volume 9, Issue 7.
18. Mr.AladalliSharanabasappa "Automatic Monitoring of Deforestation using Arduino" IJARSCT ISSN (Online) 2581-9429. Volume 2, Issue 9, June 2022. DOI: 10.48175/IJARSCT-5342.
19. Mr.VinaykumarHavinal "Solar Based IOT controlled EV" IRJET e-ISSN:2395-0056 p-ISSN:2395-0072 Volume 9, Issue 4, APRIL 2022.
20. Mr.Linganagouda R "Smart Electric Cart for Vegetable Vendors" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 1, July 2022.
21. Mr.Linganagouda R "Electric Street Cart with Covid-19 Protocol" IJARSCT SSN (Online) 2581-9429 Volume 2, Issue 9, June 2022.
22. Mr.U Shantha Kumar "Computerized Sliding Door opening and closing using Microcontroller" JETIR (ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6.
23. Mr.U Shantha Kumar " Low Cost Solar Powered Electric Vehicle for Milk Vendor" JETIR (ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6.
24. Mr.Hanumantha Reddy &MrRajashekarK "Fire Fighting Robotic Machine" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022. DOI: 10.48175/IJARSCT-5493
25. Mr.Hanumantha Reddy &MrRajashekarK "Generating The Organic Fertilizer From The Bio-Degradable Waste" JETIR (ISSN : 2349-5162) Volume 9 Issue 6 , June-2022.
26. Mrs.Deepa B "Electrical Vehicle Garbage Carrier" IJARSCT ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022. DOI: 10.48175/IJARSCT-5343.
27. Mr.Rajashekar K "LINE MAN SAFETY USING FINGERPRINT BASED CIRCUIT BREAKER" IJCESR ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022.
28. Mr.Ravi kumar H M "SOLAR BASED VACCUM FLOOR CLEANER" JETIR. (ISSN-2349-5162) June 2022, Volume 9, Issue 6.
29. Mr.Ravi kumar H M "Smart office during post covid-19 world" JETIR (ISSN-2349-5162) June 2022, Volume 9, Issue 7.
30. Mr.Diwakar B "Electronic Jacket for women safety" IJCESR ISSN: 2394-0697 VOL IX, Issue VI 2022.
31. Mr.Diwakar B "Device Load monitoring with Programming meter for energy audit" IJARSCT ISSN (Online) 2395-1052 Volume 8, Issue 6, June 2022.

Faculty Interaction with outside world:

1. Dr. S Kotresh delivered a lecture as Resource person on "Non-linear EGG Signal Processing" through online ATAL FDP organized by Medical Electronics Department Dr. AIT, Bengaluru.
2. Dr. S Kotresh attended as a JURY MEMBER for "Shakthistaavara-2021 (Virtual Project Exhibition)" organized by GSSS Institute of Engineering & Technology for Women.
3. Dr. S Kotresh delivered a lecture as Resource person on "Futuristic Innovations of Solar Energy" through online AICTE sponsored FDP organized by Sanjay Gandhi Polytechnic

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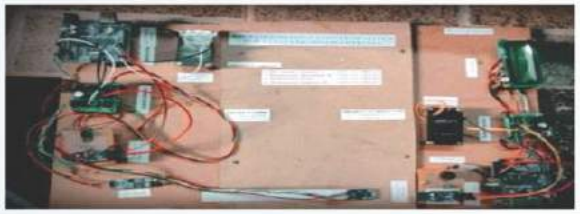
Innovative Projectsdeveloped by our 8th sem students:

Student Achievements

Mr. Amaresh K, Mr. Venkatesh N S, Mr. Dayanad S L and Mr.Rahul S of 8thsem students are developed a Project Model Titled "Low Cost Solar Powered Electric Bike" Under the guidance of Mr.UShantha Kumar Assistant Professor EEE Dept. Bagged 1st Prize in PRAKALP 2022-State Level IEEE Project Symposium organized by RYMEC, Ballari.

Mr. Md Junaid Ahamed, Mr.Mohammad Muzammil, Mr.MohammedFayaz and Mr.MohammedSalmaan D of 8th sem students developed a Project Model Titled "Based Message Conveyor system for Paralytic/Disabled People" Under the guidance of Mrs.Gayathri J Professor EEE Dept. Bagged 2nd Prize in PRAKALP 2022-State Level IEEE Project Symposium organized by RYMEC, Ballari.



4.6.3	Participation in inter-institute events by students of the program of study	10

Department students participated in inter-Institute events and co-curricular activities.

Participation of the students in inter-institute co-curricular events

Table 4.14: Academic year: 2021-22

Sl.NO	Name	Event Name	Venue	Date & Year
1	Sai Vamshi	Vedio making, MANDARA	RYMEC,BALLARI	2022
	M GHANA SHYAM	Barclays Lifeskills Programme	GTT Foundatiob-RYMEC	JAN 12TH 2022
2	Adarsha J	C-programming for beginners	online	16th Jan 2022
3	Arun SV	Java basics and Java programming	KODNEST,ONLINE	31st DEC 2022
4	Arun SV	E-Start UP Karnataka	KITS	SEP 2022
5	GURUNITHIN	Memory Game	RYMEC,BALLARI	2022
6	AYESHA MUSKAN	ELOCUATION & GROUP DISCUSSION	RYMEC,BALLARI	2022
7	AYESHA MUSKAN	CREATIVE ARTS ,RANGOLI	RYMEC,BALLARI	2022

8	ADARSHA J	QUIZ COMPETETITION,IEEE STUDENT BRANCH	RYMEC BALLARI	28TH FEB 2022
9	ADARSHA J	DRONES AND ARTIFICAL INTELLIGENCE	RYMEC BALLARI	15TH MAY 2021
10	ADARSHA J	PYTHON VOCATIONAL COURSE	RYMEC BALLARI	9TH-23RD SEP 2021
11	DEEPIKA AR	HAR GHAR TIRANGA	RYMEC BALLARI	15TH AUG 2022
12	H PRASHANTH	Inter Collegiate Zonal Tournament VTU	PDIT HOSPETE	17TH-18TH NOV 2022
13	H PRASHANTH	Inter Collegiate Zonal Tournament VTU	SJCIT CHIKKABALPURA	27TH-30TH JUN 2022
14	ARUN SV	HYBRID ELECTRIC VECHILE TECHNOLOGY	ONLINE	20TH JAN 2022
15	K PAWAN	INTER ZONE/SINGLE ZONE TOURNAMENT ,VTU	RYMEC ,BALLARI	14TH-21ST JUNE 2022
16	SAI GANESH	INTER ZONE/SINGLE ZONE TOURNAMENT ,VTU	RYMEC ,BALLARI	14TH-21ST JUNE 2022
17	AMARESH	STATE LEVEL IEEE PROJECT SYMPOSIUM-PRAKALP(1ST PRIZE)	RYMEC ,BALLARI	17th Jun 2022
18	DAYANAND L	STATE LEVEL IEEE PROJECT SYMPOSIUM-PRAKALP(1ST PRIZE)	RYMEC ,BALLARI	17th Jun 2022
19	VENKATESH N	STATE LEVEL IEEE PROJECT SYMPOSIUM-PRAKALP(1ST PRIZE)	RYMEC ,BALLARI	17th Jun 2022
20	RAHUL S	STATE LEVEL IEEE PROJECT SYMPOSIUM-PRAKALP(1ST PRIZE)	RYMEC ,BALLARI	17th Jun 2022

Table 4.16: Academic year: 2020-21

Sl.NO	Name	Event Name	Venue	Date & Year
1	KEERTHANA M	Participated in the event Aabhivyakthi of VIDARA - 2021	RYMEC Bellary	2021
2	SAIMA SABRIN	" Of Flowers and little Deaths" (certification of publication)	Priun Publications	2021
3	PRIYANKA C	Webinar on "Laterl Thinking approaches for problem solving"	RYMEC Bellary	06-08-2020
4	Jayalakshmi B K	National Level Project Symposium	GNDEC, BIDAR	23-24 JULY 2021

Table 4.15: Academic year: 2019-20

Sl.NO	Name	Event Name	Venue	Date & Year
1	SANJAY KUMAR N R	Webinar on "Block chain for IOT"	PDIT, Hosapete	20th June 2020
2	NIRANJAN E	Webinar on "Emerging Trends in data analytics"	PDIT, Hosapete	9th June 2020
3	PRASHANT	Webinar on "Post COVID Employment scenario opportunities & challenges"	PDIT, Hosapete	08th july 2020
4	VIDYA SHREE	VIDARA 2020 in Prashnamale Quiz	RYMEC Bellary	26th& 27th November 2020

5	Thirumala D	VTU zone level basketball tournament	PDIT, Hosapete	11th December 2021
6	Anusha G	LEAD Leadership Programme	Deshpande Foundation, Hubballi	12th to 18th December 2020
7	SAIMA SABRIN	STATE LEVEL PROJECT EXHIBITION 2K19 & CODE=ATHON	RYMEC,BALLARI	APRIL-2019
8	CHANDANA S DHONGADE	STATE LEVEL PROJECT EXHIBITION 2K19 & CODE=ATHON	RYMEC,BALLARI	APRIL-2019
9	M GHANA SHYAM	E-Step Startup Bootcamp	K-tech- RYMEC	29-08-2019
10	RAGHAVENDRA S	Webinar on “PSOC”	Oxford Engineering College Bangalore	09-07-2020 To 10-07-2020
11	RAGHAVENDRA S	Webinar on “How to crack GATE”	RYMEC Bellary	02-07-2020
12	PRIYANKA C	Webinar on “How to crack GATE”	RYMEC Bellary	02-07-2020
13	RAGHAVENDRA S	Webinar on “DYNAMIC ANALYSIS AND CONTROL OF ROTOR BEARINGS ”	RYMEC Bellary	30-06-2020
14	NIRANJAN H G	QIP- Electric Power Grid Modernization	NIE Mysuru	20 to 24th july 2020

Table 4.16: Academic year: 2018-19

Sl.NO	Name	Title of the Event	Organized by	Date
1	SRIVIDYA K NIKITHA KS	INNOVISION-2019 State level Technical Project Exhibition	PDIT, Hosapete	03rd April 2019
2	PRASHANT	Inter-Collegiate Zonal Tournament	PDIT, Hosapete- VTU	2018-19
3	SUMA D	VTU Rest of Bangalore Zone women's volleyball	NMAMIT NITTE	1 7th to 19th March 2019
4	SUSHMITA G	VTU Kalburgi Zone women table tennis	Shetty IT Kalburgi	3rd and 4th September 2018
5	NAVYA	VTU Kalburgi Zone shuttle badminton for women	GNDEC Bidar	27th& 28th August 2018
6	SAIMA SABRIN	MANDARA(CHESS)	RYMEC BALLARI	2018-19
7	SAIMA SABRIN	MANDARA(PHOTOGRAPHY)	RYMEC,BALLARI	2018-19
8	WASIM KHAN	VOLLEY BALL COMPETATION(DISTRICT LEVEL)	PRE-UNIVERSITY BOARD,KARNATAKA	OCT-2018
9	WASIM KHAN	STATE LEVEL COMPETATION- (Volley ball)	PRE-UNIVERSITY BOARD,KARNATAKA	2018
10	CHANDANA S DHONGADE	Academic Excellence	RYMEC Ballari	2018-2019
11	CHANDANA S DHONGADE	MANDARA- QUIZ	RYMEC Ballari	2018-2019
12	CHANDANA S DHONGADE	MANDARA- DEBATE	RYMEC Ballari	2018-2019

Table 4.17: Academic year: 2017-18

Sl.NO	Name	Title of the Event	Organized by	Date
1	SOUMYA K	VTU Kalburgi Zone Kho-Kho game	RYMEC Ballari	6th& 7th April 2018
2	CHANDANA S DHONGADE	MANDARA- DEBATE	RYMEC Ballari	2017-2018
3	CHANDANA S DHONGADE	Academic Excellence	RYMEC Ballari	2017-2018
4	CHANDANA S DHONGADE	NATIONAL LEVEL MANAGEMENT FEST	RYMEC, BALLARI	22-FEB-2017
5	CHANDANA S DHONGADE	NATIONWIDE COMPETITATION ON LEGAL RIGHTS OF WOMEN	RYMEC ,BALLARI	15-NOV -2017
6	WASIM KHAN	STATE LEVEL VOLLEYBALL TOURNAMENT	DEPT OF PRE UNIVERSITY , MYSURU	OCT-2017(26th-28th)
7	SAIMA SABRIN	NATIONAL LEVEL MANAGEMENT FEST	RYMEC, BALLARI	22-FEB-2017
8	SAIMA SABRIN	MANDARA - PAINTING	RYMEC,BALLARI	2017-2018
9	SAIMA SABRIN	NATIONWIDE COMPETITATION ON LEGAL RIGHTS OF WOMEN	RYMEC ,BALLARI	15-NOV -2017
10	ISHRATH FATHIMA	Nation wide competition on “Legal Rights of Women”	RYMEC,BALLARI	15th Nov 2017
11	SAIMA SABRIN	C2CTS1Xs18: Technical Skills	IIT BOMBAY)ONLINE)	20th FEB to 19TH March 2018
12	WASIM KHAN	STATE LEVEL VOLLEYBALL TOURNAMENT	DEPT OF PRE UNIVERSITY , SGT-BALLARI	SEP-2017(09th & 10th)

Table 4.18:The list of papers Published /Presented by Students for the AY2021-22

Sl. No.	Name of the Student	Title of the Paper	Name of the journal	Remarks
1	L Sudheer	Arduino Based solar tracking and cleaning system	JETIR	ISSN : 2349-5162) Volume 9 Issue 7, July-2022
2	GENIGERA ASHOK (L)	Arduino Based solar tracking and cleaning system	JETIR	ISSN : 2349-5162) Volume 9 Issue 7, July-2022
3	SANDEEP B M	Arduino Based solar tracking and cleaning system	JETIR	ISSN : 2349-5162) Volume 9 Issue 7, July-2022
4	CHANNADASARA RAMACHARI	Arduino Based solar tracking and cleaning system	JETIR	ISSN : 2349-5162) Volume 9 Issue 7, July-2022
5	DODDABASAVA T M	Arduino Based solar tracking and cleaning system	JETIR	ISSN : 2349-5162) Volume 9 Issue 7, July-2022
6	GIRI MALLANA GOUDA K	solar powered street light illumination control by PIR sensor	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
7	AISHWARYA K M	solar powered street light illumination control by PIR sensor	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
8	AMITH KUMAR J N	solar powered street light illumination control by PIR sensor	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022

9	K.VENKATESH BABU	solar powered street light illumination control by PIR sensor	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
10	B M SHAIKGOUSIYA FARHEEN	Electricity Saver Smart Street Light	JETIR	ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
11	NIHA TASLEEM	Electricity Saver Smart Street Light	JETIR	ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
12	SHARMAS BEE	Electricity Saver Smart Street Light	JETIR	ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
13	SYEDA SABA FIRDOUS	Electricity Saver Smart Street Light	JETIR	ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
14	N P LOKESH	MOBILE SIGNAL JAMMER	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
15	BASAVARAJESHWARI A	MOBILE SIGNAL JAMMER	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
16	CHARULATHA G M	MOBILE SIGNAL JAMMER	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022

17	KOMALA N	MOBILE SIGNAL JAMMER	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
18	RAJU H S	Solar Piezo Hybrid Power Charging System	IJRAMT	ISSN (Online): 2582-7839 Issue 02/06/2022
19	PRAVEEN KUMAR U	Solar Piezo Hybrid Power Charging System	IJRAMT	ISSN (Online): 2582-7839 Issue 02/06/2022
20	SHIVARAM V	Solar Piezo Hybrid Power Charging System	IJRAMT	ISSN (Online): 2582-7839 Issue 02/06/2022
21	YASHAVANTHA KUMAR B	Solar Piezo Hybrid Power Charging System	IJRAMT	ISSN (Online): 2582-7839 Issue 02/06/2022
22	RUHEE TABASSUM	IoT based Automated Siren using Solar Power	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
23	BHARATHI K	IoT based Automated Siren using Solar Power	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
24	CHAYA BAI P	IoT based Automated Siren using Solar Power	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022

25	NEKITHA	IoT based Automated Siren using Solar Power	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
26	PHANIDHARA SHEELI	Electrical Vehicle Garbage Carrier	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
27	PAVAN KALYAN S	Electrical Vehicle Garbage Carrier	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
28	Manjunath D	Electrical Vehicle Garbage Carrier	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
29	G DEEPTHI	IOT Based transformer monitoring by using Arduino and esp8266	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
30	DIKSHITHA	IOT Based transformer monitoring by using Arduino and esp8266	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
31	GANESHA	IOT Based transformer monitoring by using Arduino and esp8266	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
32	HEENA H	IOT Based transformer monitoring by using Arduino and esp8266	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
33	KARTHIKGOUDA MALIPATIL	Wireless Charging of an Electric Vehicle using	IJARSCT	ISSN (Online) 2581-9429

		Solar and Wind		Volume 2, Issue 9, June 2022
34	AJAY M K	Wireless Charging of an Electric Vehicle using Solar and Wind	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
35	AKASHA G	Wireless Charging of an Electric Vehicle using Solar and Wind	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
36	AMITH H	Wireless Charging of an Electric Vehicle using Solar and Wind	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
37	Pooja B R	PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
38	Hanjun Bee	PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
39	Shilpa R	PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022

40	Shoba M	PROTECTION OF CROPS AND PROPER USAGE OF RAIN WATER USING SATELLITE COMMUNICATION AND WIRELESS SENSOR NETWORK AND WILD ANIMAL DETECTION	(IJCESR)	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022
41	RAJESHWARI B BALIGER	Three Phase Lamp load	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
42		IoT Based Smart StreeT Light Empowered by Piezoelectric Sensors	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
43	MUSKAAN M	Home automation using Blynk	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
44	SYEDA HAFIZA BEGUM	Home automation using Blynk	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
45	MADHU SHREE E	Home automation using Blynk	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
46	JAYASHREE BAI	Home automation using Blynk	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
47	D MANJULA	RFID BASED PETROL PUMP AUTOMATION SYSTEM	JETIR	ISSN:2349-5162 VOL 9 ISSUE 6, JUNE-2022

48	LAKSHMI C	RFID BASED PETROL PUMP AUTOMATION SYSTEM	JETIR	ISSN:2349-5162 VOL 9 ISSUE 6, JUNE-2022
49	SIRISHA B R	RFID BASED PETROL PUMP AUTOMATION SYSTEM	JETIR	ISSN:2349-5162 VOL 9 ISSUE 6, JUNE-2022
50	TRIVENI	RFID BASED PETROL PUMP AUTOMATION SYSTEM	JETIR	ISSN:2349-5162 VOL 9 ISSUE 6, JUNE-2022
51	SANIA KOUSER	SMART ROAD SAFETY AND VEHICLE ACCIDENT PREVETION FOR MOUNTAIN ROADS	JETIR	(ISSN-2349-5162) JULY 2022, Volume 9, Issue 6
52	SOUNDHARYA RATHOD H	SMART ROAD SAFETY AND VEHICLE ACCIDENT PREVETION FOR MOUNTAIN ROADS	JETIR	(ISSN-2349-5162) JULY 2022, Volume 9, Issue 6
53	KHADEEJA MEERAS	SMART ROAD SAFETY AND VEHICLE ACCIDENT PREVETION FOR	JETIR	(ISSN-2349-5162) JULY 2022, Volume 9, Issue 6

		MOUNTAIN ROADS		
54	MEHTAB AFREE G	SMART ROAD SAFETY AND VEHICLE ACCIDENT PREVETION FOR MOUNTAIN ROADS	JETIR	(ISSN-2349-5162) JULY 2022, Volume 9, Issue 6
55	MD JUNAID AHAMED	IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE	JETIR	ISSN:2349-5162 June 2022, Volume 9, Issue 7
56	MOHAMMAD MUZAMMIL M	IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE	JETIR	ISSN:2349-5162 June 2022, Volume 9, Issue 7
57	MOHAMMED FAYAZ	IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE	JETIR	ISSN:2349-5162 June 2022, Volume 9, Issue 7
58	MOHAMMED SALMAAN D L	IOT BASED MESSAGE CONVEYOR SYSTEM FOR PARALYTIC/DISABLED PEOPLE	JETIR	ISSN:2349-5162 June 2022, Volume 9, Issue 7
59	AISHWARYA UM	Automatic Monitoring of Deforestation using Arduino	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022

61	B SHRAVANI	Automatic Monitoring of Deforestation using Arduino	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
62	DHARANI T	Automatic Monitoring of Deforestation using Arduino	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
63	MEGANA P L	Automatic Monitoring of Deforestation using Arduino	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
64	K NAGASHREE	Solar Based IOT controlled EV	IRJET	e-ISSN:2395-0056 p-ISSN:2395-0072 Volume 9, Issue 4, APRIL 2022
65	GOUTAM PATIL	Solar Based IOT controlled EV	IRJET	e-ISSN:2395-0056 p-ISSN:2395-0072 Volume 9, Issue 4, APRIL 2022
66	L NEERAJA	Solar Based IOT controlled EV	IRJET	e-ISSN:2395-0056 p-ISSN:2395-0072 Volume 9, Issue 4, APRIL 2022
67	SHABBEER MYAGERI	Solar Based IOT controlled EV	IRJET	e-ISSN:2395-0056

				p-ISSN:2395-0072 Volume 9, Issue 4, APRIL 2022
68	RANJITHA N (L)	Electric Street Cart with Covid-19 Protocol	IJARSCT	SSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
69	MANJUSRI N V	Electric Street Cart with Covid-19 Protocol	IJARSCT	SSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
70	N SANGEETHA	Electric Street Cart with Covid-19 Protocol	IJARSCT	SSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
71	SHANTHAMMA K	Electric Street Cart with Covid-19 Protocol	IJARSCT	SSN (Online) 2581-9429 Volume 2, Issue 9, June 2022
72	LAKSHMI V	Computerized Sliding Door opening and closing using Microcontroller	JETIR	(ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6
73	AMIT SUBRAYA BHANDARI	Computerized Sliding Door opening and closing using Microcontroller	JETIR	(ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6
74	ARUNKUMARA B	Computerized Sliding Door opening and closing using Microcontroller	JETIR	(ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6

75	MALLANAGOWDA J	Computerized Sliding Door opening and closing using Microcontroller	JETIR	(ISSN-2349-5162) © 2022 JETIR June 2022, Volume 9, Issue 6
76	A RAJSHEKHAR	Generating The Organic Fertilizer From The Bio-Degradable Waste	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
77	K PAVANKUMAR	Generating The Organic Fertilizer From The Bio-Degradable Waste	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
78	NIVEDITHA M P	Generating The Organic Fertilizer From The Bio-Degradable Waste	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
79	TEJASHWINI P	Generating The Organic Fertilizer From The Bio-Degradable Waste	JETIR	(ISSN : 2349-5162) Volume 9 Issue 6 , June-2022
80	G T GANESH (L)	Fire Fighting Robotic Machine	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022
81	SHAIK WASIFA FAROOQ	Fire Fighting Robotic Machine	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022
82	SIDDARTHA P	Fire Fighting Robotic Machine	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022

83	UPENDRA BHANDARI	Fire Fighting Robotic Machine	IJARSCT	ISSN (Online) 2581-9429 Volume 2, Issue 2, June 2022
84	KANEEZ FATHIMA	"SOLAR BASED VACCUM FLOOR CLEANER"	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 6
85	P BINDU MAHADEVI	"SOLAR BASED VACCUM FLOOR CLEANER"	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 6
86	SHIVANAGAMMA	"SOLAR BASED VACCUM FLOOR CLEANER"	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 6
87	SOUMYA SRI	"SOLAR BASED VACCUM FLOOR CLEANER"	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 6
88	Thippeswamy B.V	Smart office during post covid-19 world	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 7
89	N Ganesh	Smart office during post covid-19 world	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 7
90	Wasim Akram	Smart office during post covid-19 world	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 7

91	Yuvaraja G	Smart office during post covid-19 world	JETIR	(ISSN-2349-5162) June 2022, Volume 9, Issue 7
92	IMAM HUSSAIN	Electronic Jacket for women safety	IJCESR	ISSN:2394-0697 VOL IX, Issue VI 2022
93	A K JEELAN	Electronic Jacket for women safety	IJCESR	ISSN:2394-0697 VOL IX, Issue VI 2022
94	MOHAMMED TAHSEEN RAZA	Electronic Jacket for women safety	IJCESR	ISSN:2394-0697 VOL IX, Issue VI 2022
95	SHANAWAZ FATHIMA P	Electronic Jacket for women safety	IJCESR	ISSN:2394-0697 VOL IX, Issue VI 2022

Table 4.19:The list of papers Published /Presented by Students for the AY2020-21

Sl. No.	NameoftheStudent	Titleof thePaper	Remarks
1	Mythri M	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
2	Arpitha G	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
3	Kotrugouda GM	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION :JULY 2021
4	Veeresh B	Smart solar weed cutter and pesticide sprayer	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION :JULY 2021
5	UMA	IOT based photovoltatic green tree	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
6	Mounika N	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
7	Srusti N P	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021
8	Thirumala D	IOT based smart highway management system	JETIR.VOL8 ISSN23495162 ISSN : -2349-5162 PUBLICATION JULY 2021

9	Shiva satish	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
10	Mallikrujuna gouda N	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
11	C priyanka	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
12	L G lavanya	RFID based women safety system	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
13	Jayalakshmi B K	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
14	Ishrath Fathima	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
15	Ghouse Peer	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
16	Jyothi Prabha L.G	Automated waste segregator	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021
17	Ajith T	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021

18	Akshya kumar	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION :JULY 2021
19	Abhishek	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021
20	Hanumantha	Technical requirements and fabrication procedure of 3phase distribution board	JETIR VOL:8 Issue 7 ISSN : -2349-5162 PUBLICATION JULY 2021
21	Kishor kumar M	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
22	Nitesh m	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 20201
23	Avinash B M	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
24	Hanumanthappa	Solar Powered Automated Siren Using Arduino Uno	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
25	Suma latha	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : july 2021 ISSN:2349-5162

26	Nandish k	Automated water Management system using arduino	JETIR.VOL8 Publication : july 2021 ISSN:2349-5162
27	Veeena r	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : july 2021 ISSN:2349-5162
28	Abdul razaq M	Automated water Management system using arduino	JETIR.VOL8 Issue 7 Publication : : july 2021 ISSN:2349-5162 Impact factor 7.95 i
29	Niranjan E	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
30	Latif unnisea	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
31	Niveditha N	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020
32	Jagadesh k b	Protection Scheme for HV sphere gap arrangements	IRJET VOL:7 Issue 8 ISSN : -2395-0056 PUBLICATION AUG 2020

Table 4.20:The list of papers Published /Presented by Students for the Academic Year:2019-20

Sl. No.	NameoftheStudent	Titleof thePaper	Remarks
1	Gowri priya J	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	Manjunath C N	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	GeethaLakshmi	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
	Channabasava G	IoT based Monitoring & Controlling of Hydroponics	IJRSET VOL :8 ISSN :2321-9653 PUBLICATION JULY 2020ISSSUE VII Impact factor :5.87
2	Madiha Farheen	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
	Arsha K	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :

	Jaipal H	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
	Basavaraj P	IOT BASED INTELLIGENT DOMOTIC SYSTEM USING ARDUINO ESP32	IRJET VOL :7 ISSN 2395-0072 PUBLICATIO MAY 2020 ISSUE5 Impact factor :7.587N :
3	Varun Kumar	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87
	Meghana	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87
	Harsha K M	Automated Bio –organic Fertilizer Generating unit	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION :30/05/2020 Impact factor :5.87
4	Rukhsar begum	Robotic Arm Control Using Arduino	Journal emerging technologies and invoative research ISSN :2349-5162 PUBLICATION: 08/06/2020 Impact factor :5.87

5	Upendra kumar	Automatice railway gate control and track Fault Detection system	International journal of advance research in electrical and electronics and engineering ISSN :2320-3765 PUBLICATION: june 2020 Impact factor :7.122
6	Sujay IJ	Solar powered automatic irrigation system using soil moisture sensor	IRJET VOL :7 ISSN 2395-0072 PUBLICATION MAY 2020 ISSUE5 Impact factor :7.527N
7	Sanjay kumar	Energy conservation using Arduino &PZEM -004T	IRJET VOL :7 ISSN 2395-0072 PUBLICATION JUNE 2020 ISSUE5 Impact factor :7.527N
8	Kishore kumkar Markal	Solar Powered Automated Siren using Arduino UNO	IRJET VOL :7 ISSN 2395-0072 PUBLICATION August 2020 ISSUE5 Impact factor :7.527N
9	Kodal ashwini	Blind guide stick using GPS and GSM module	IJCRT VOL:8 ISSN:2320-2882 PUBLICATION: JUNE 2020 ISSUE:6 IMPACT FACTOR:7.9
10	Anjali G	Automatic flood gate and food control system with power generation using ARDUINO UNO	IRJET VOL:7 ISSN:2395-0072 PUBLICATION: JUNE 2020 ISSUE:6 IMPACT FACTOR:7.529
11	Niranjana H G	“ELECTRICPOWER GRID MODERNISATION: TRENDS, CHALLENGES AND OPPORTUNITIES”	PUBLICATION:TEQIP-3 JULY-2020

Table 4.21: The list of papers Published /Presented by Students for the Academic Year:2018-19

Sl. No.	NameoftheStudent	Titleof thePaper	Remarks
1.	Farheen Sultana	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019-
2.	Firdous Jahan	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
3.	Shabana Banu	**Net Metering**	ijraset : 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
4.	Devaraja	**Net Metering**	ijraset ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887 Volume 7 Issue IV, Apr 2019
5.	Pooja Kalal	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
6.	K. Pratibha	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
7.	Pooja M Agnihotri	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
8.	Bhanushree. T	Smart Power Source Selector using GSM	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019

9.	Nischitha G M	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
10.	Sirisha N	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
11.	Veeresha K	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
12.	Kamaxi	Wireless Transformer Parameter Measurement and Protection	Ijraset ISSN: 2321-9653 Volume 7, Issue III, March 2019
13.	Chandana S Dhongade	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
14.	K H Shivakumar	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
15.	Saima Sabrin	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
16.	Jayasimha D	DTMF Controller based Home Automation without using Microcontroller	IJSTE - International Journal of Science Technology & Engineering | Volume 5 | Issue 10 | April 2019 ISSN (online): 2349-784X
17.	Gouthami.D	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
18.	Ganjigara Srikavya	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
19.	Swapna.K	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4

			Publication Date: 4/24/2019
20.	Likhita	IOT Based Home Automation	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
21.	RUDRA MUNI	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I431183 Published in: Volume : 5, Issue : 4 Publication Date: 4/24/2019
22.	Sirisha G	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
23.	Kavya D	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
24.	.Sree Prabhu Datta P N	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
25.	Prashanth G	AUTOMATIC RATIONING SYSTEM USING RFID AND GSM	Paper ID: IJSARTV5I531385 Published in: Volume : 5, Issue : 5 Publication Date: 5/9/2019
26.	SAIMA SABRIN	DTMF CONTROLLER BASED HOME AUTOMATION WITHOUT USING MICROCONTROLLER	PUBLICATION: IJSTE APRIL-2019 VOLUME 5, ISSUE 10

Table 4.22:The list of papers Published /Presented by Students for the Academic Year:2017-18

Sl. No.	NameoftheStudent	Titleof thePaper	Remarks
1.	Basava Prerana.P	A New Approach to Natural Language Programming For Process Control	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
2.	Bheemashankar	Energy Conservation and Industrial Safety	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
3.	Bharath.C	Energy Conservation and Industrial Safety	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
4.	Bharathi.K	Sound Dampening Device Using Attenuator	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
5.	K. Saima Sabrin	Sound Dampening Device Using Attenuator	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
6.	Keerthisree	Sound Dampening Device Using Attenuator	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
7.	A.Shashidhar	Sound Dampening Device Using Attenuator	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

8.	Gachi Lavanya	Wireless Power Transfer for Vehicles	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
9.	Farheen Sulthana M	Wireless Power Transfer for Vehicles	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
10.	Panduranga G	Wireless Power Transfer for Vehicles	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
11.	Bounesh	Wireless Power Transfer for Vehicles	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
12.	Dheeraj. J	Thermo Electric Dish Power	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
13.	Syeda Simran,	Thermo Electric Dish Power	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
14.	Shivakumar .K.H,	Thermo Electric Dish Power	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
15.	Umme Nusrath	Thermo Electric Dish Power	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
16.	Sindhuja H M	Display of Underground Cable Fault Distance over Internet (Iot) Of Things Using Gsm	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

17.	Devendramma C	Display of Underground Cable Fault Distance over Internet (Iot) Of Things Using Gsm	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
18.	Ashwini B	Display of Underground Cable Fault Distance over Internet (Iot) Of Things Using Gsm	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
19.	Shashikala K	Display of Underground Cable Fault Distance over Internet (Iot) Of Things Using Gsm	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
20.	Elisha .P. Cletus	A Smart System Connecting E-Health Sensor and Cloud	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
21.	Bala Krishna .K	A Smart System Connecting E-Health Sensor and Cloud	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
22.	Vani .A	A Smart System Connecting E-Health Sensor and Cloud	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
23.	Supraja .N	A Smart System Connecting E-Health Sensor and Cloud	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
24.	Gouthami.D,	Induction Generator for Pico Hydro Generation	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
25.	Monika.B,	Induction Generator for Pico Hydro Generation	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

26.	Divya.P,	Induction Generator for Pico Hydro Generation	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
27.	Keerthana.M	Induction Generator for Pico Hydro Generation	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
28.	Harish S	Speed Control of Brushless Dc (Bldc) Motor Using Infrared Ray (IR) Sensor of Controllers	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
29.	H Sushma	Speed Control of Brushless Dc (Bldc) Motor Using Infrared Ray (IR) Sensor of Controllers	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
30.	Geetha K K	Speed Control of Brushless Dc (Bldc) Motor Using Infrared Ray (IR) Sensor of Controllers	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
31.	H Pavan	Speed Control of Brushless Dc (Bldc) Motor Using Infrared Ray (IR) Sensor of Controllers	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
32.	Rabiya,	Clean Electricity	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
33.	Shubha.Y.M,	Clean Electricity	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
34.	Venkatesh.M,	Clean Electricity	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

35.	Sujay naik.M.S	Clean Electricity	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
36.	Ramya shree.P,	Automatic Rain Water Harvesting and Electrical Power Generation Using Solar Panel in Agriculture Fields	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
37.	Praveen kumar	Automatic Rain Water Harvesting and Electrical Power Generation Using Solar Panel in Agriculture Fields	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
38.	Rekha.A.M,	Energy Management and Control System for Hybrid Wind-Solar Energy System with a Battery Storage	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
39.	Roopa.A.M,	Energy Management and Control System for Hybrid Wind-Solar Energy System with a Battery Storage	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
40.	Tiriveedala Roja,	Energy Management and Control System for Hybrid Wind-Solar Energy System with a Battery Storage	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
41.	Megha.M.K	Energy Management and Control System for Hybrid Wind-Solar Energy System with a Battery Storage	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
42.	Urukundappa .C	Wireless Transmission System to Active Loads	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
43.	Manjunath. B	Wireless Transmission System to Active Loads	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

44.	Sonia K.J	Wireless Transmission System to Active Loads	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
45.	Sushma. G	Wireless Transmission System to Active Loads	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
46.	Sudha M R,	Nano Leaves Application in Intelliegent Wirless Street Ligthing System	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
47.	Sindhu Nayaka A N	Nano Leaves Application in Intelliegent Wirless Street Ligthing System	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
48.	Renukamma	Nano Leaves Application in Intelliegent Wirless Street Ligthing System	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
49.	Ganjigara srikavya	Internet of Things:Smart Things	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
50.	Naga Bharathi .k	Internet of Things:Smart Things	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
51.	Taiseen Kausar.K	Internet of Things:Smart Things	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
52.	Leha.c	Internet of Things:Smart Things	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018

53.	K.Reshma Begum	Internet of Things:Smart Things	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
54.	Varsha G	Child Rescue System Againist Open Bore Well in India	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
55.	Vijay B Itigi	Child Rescue System Againist Open Bore Well in India	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
56.	Tasleem	Transformer Health Condition Monitoring Through GSM Technology	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
57.	Rizwana.Shaik	Transformer Health Condition Monitoring Through GSM Technology	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
58.	Tasmiya Rahil.V	Transformer Health Condition Monitoring Through GSM Technology	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
59.	Shailaja.V	Transformer Health Condition Monitoring Through GSM Technology	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
60.	Syed Seema Anjum	Prediction of Breast Cancer Using a Supervised Learning Approach	IJRRA.VOL8 ISSN : 2349-7688 PUBLICATION APRIL 2018
63	Kavya shree G	Women safety security system using GSM & GPS	IJSETR.VOL7 ISSUE 06 ISSN : 2319-8885 PUBLICATION JUNE 2018

64	Kavitha N	Women safety security system using GSM & GPS	IJSETR.VOL7 ISSUE 06 ISSN : 2319-8885 PUBLICATION JUNE 2018
65	Manasa Devi. Y	Women safety security system using GSM & GPS	IJSETR.VOL7 ISSUE 06 ISSN : 2319-8885 PUBLICATION JUNE 2018
66	Patil Rudra Gowda	Women safety security system using GSM & GPS	IJSETR.VOL7 ISSUE 06 ISSN : 2319-8885 PUBLICATION JUNE 2018

Table4.23: Achievements of Students

Sl.No.	Name of the Student	Events	Organizedby
1	Ms. Meghana M	Selected for KSCST & sponsered project for AY 2020-21	KSCST
2	Mr.Varun P	Selected for KSCST & sponsered project AY 2020-21	KSCST
3	Harsha K M	Selected for KSCST & sponsored project AY 2020-21	KSCST
4	M GHANASHYAM	Participated in K-TECH Innovation hub nain center at rymec ballari 29/09/2019	K-TECH Innovation hub Dept of ITBT Govt of Karnataka

5	M GHANASHYAM	Completed BARCLAYSLIFESKILLS PROGRAMME	GTT FOUNDATION
6	RAGHAVENDRA S	Participated in technical education quality improvement programme (TWQIP-III)HELD FROM JULY 06-10, 2020	NATIONAL INSTITUTEOF ENGINEERING,MYSURU
7	Nitesh M	Secured 3rd position in virtual event in the PATENT FOCUS AREAS FOR GREEN FUTURE	Karnataka state Council for Science &technology ,CIPAM GOVERNMENT OF INDIA
8	Mahammad Rafi	Selected for sponsored project by New Age Innovation Network (NAIN)	New Age Innovation Network (NAIN) GOVERNMENT OF INDIA
9	Ms. Meghana M	Selected for sponsored project by New Age Innovation Network (NAIN)	New Age Innovation Network (NAIN) GOVERNMENT OF INDIA
10	Mr. K V Manoj kumar	Selected for KSCST & Awarded asBEST project of the year	Karnataka state Council for Science &technology

11	Mr. Mohammad moieiz ahemad	by KSCST 44th Series	
12	Ajay kumar C		
13	Mr. Akash S		
14	Jeevan vikas B	Selected for vtu Sponser project	VTU
15	B Divya	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
16	Ashwini Mahesh Gowda	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
17	Nikhil A G	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
18	Shashidhar K R	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
19	Ashwini Mahesh Gowda	First Prize In Technical Paper Presentation On “Multi-Tasking Induction Motor	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
20	B Divya	First Prize In Script- Mania	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali

21	Ashwini Mahesh Gowda	First Prize In Script- Mania	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
22	Nikhil A G	First Prize In Script- Mania	Advitiya-17 Two Days National Level Students Technical Fest On 6th And 7th October 2017 In K L E Institute Of Technology Hubbali
23	Sudhakar B	Participated	VTU Inter College Cricket Tournment Kalaburgi Zone (Men's)
24	Thimmana Gouda	Participated	VTU Inter Coleege Cricket Tournment Kalaburgi Zone (Men's)
25	Akshay Kumar	Participated	VTU Inter Coleege Cricket Tournment Kalaburgi Zone (Men's)
26	Karthik K	Winners	100 Years Event Of VV Sangha Volley Ball (Boys)
27	Rajashekhar	Winners	100 Years Event Of VV Sangha Volley Ball (Boys)
28	Swathi	Winners	100 Years Event Of VV Sangha Volley Ball (Girls)
29	Rajashekhar	Winners	Basket Ball Zonal Level

CRITERION-5

5. Faculty Information and Contribution (200)

CAY 2021-22

SL.NO	Name of the faculty member	Qualification			Association With The Institution	Designation	Date on which Designated as professor /Associate professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of leaving (In case currently Associated is ("No")	Nature of Association (Regular /Contract)
		Degree (highest degree)	University	year of attaining higher qualification							Research paper publications	Ph.D Guidance	Faculty Receiving Ph.D during the Assessment Years		
1	Dr.S Kotresh	Ph.D, ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Professor	1/12/2020	20/2/2006	EEE	Bio medical Instrumentation	1	2			
2	Dr.U.M.Netravati	Ph.D, ME/M.Tech	JJTU Jhunjun	28/2/2017	Y	Professor	15/5/2017	15/5/2017	EEE	Electrical & Electronics Engg	4	0		Y	REGULAR
3	Dr.B.Doddabasavanagoud	Ph.D, ME/M.Tech	JNTU ,Anantapur	27/2/2019	Y	Professor	1/12/2019	19/9/1991	EEE	Electronics and Communication	3	0		Y	REGULAR
4	Dr.K Raghavendra Prasad	Ph.D, ME/M.Tech	SSUT SEHORE	06.06.2022	Y	Associate professor	1/12/2012	18/4/2001	EEE	Computer science Engineering	2	0	06.06.2022	Y	REGULAR
5	AnusuyaPatil	ME/M.Tech	Gulbarga University	23/1/1995	Y	Assistant Professor		24/10/1994	EEE	Power Electronics	2	0		Y	REGULAR

6	Gururaj K K	ME/M.Tech	Jadaupur University	24/12/1999	Y	Assistant Professor		2/7/1999	EEE	Control Systems	0	0		Y	REGULAR
7	Hanumantha Rao A	ME/M.Tech	Mangalore university	01.02.1997	Y	Assistant Professor		10/8/2006	EEE	Power & Energy system	1	0		Y	REGULAR
8	EliaSundaram H M	ME/M.Tech	VTU, Belagavi	10/2/2009	Y	Assistant Professor		11/1/2018	EEE	Power system Engineering	1	0		Y	REGULAR
9	Dr.Shambulinagana Gouda	Ph.D, ME/M.Tech	SSUT SEHORE	06.06.2022	Y	Assistant Professor		27/8/2007	EEE	Electrical Engineering	3	0	06.06.2022	Y	REGULAR
10	Kumuda.B	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	2	0		Y	REGULAR
11	Gayathri J	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	2	0		Y	REGULAR
12	Aladalli Sharanabasappa	ME/M.Tech	VTU, Belagavi	18/4/2011	Y	Assistant Professor		22/8/2012	EEE	Digital Electronics	1	0		Y	REGULAR
13	VinaykumarHavinal	ME/M.Tech	VTU, Belagavi	08.04.2012	Y	Assistant professor		26/6/2012	EEE	MECS	1	0		Y	REGULAR
14	Linganagouda R	ME/M.Tech	VTU, Belagavi	5/4/2013	Y	Assistant Professor		27/7/2012	EEE	Power and Energy systems	2	0		Y	REGULAR
15	U Shantha Kumar	ME/M.Tech	JNTU ,Anantapur	2/1/2014	Y	Assistant Professor		9/1/2013	EEE	Power Electronics	2	0		Y	REGULAR
16	Hanumantha reddy	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		8/8/2014	EEE	Power Electronics	4	0		Y	REGULAR
17	Rajashekar k	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		2/8/2014	EEE	Digital Electronics	4	0		Y	REGULAR
18	Deepa B	ME/M.Tech	VTU, Belagavi	9/5/2015	Y	Assistant Professor		1/8/2014	EEE	Digital Electronics	3	0		Y	REGULAR
19	Ravi kumar H M	ME/M.Tech	VTU, Belagavi	21/1/2017	Y	Assistant Professor		10/4/2017	EEE	Power Electronics	2	0		Y	REGULAR
20	Amrutha GE	ME/M.Tech	PES University	12/8/2017	Y	Assistant professor		11/9/2017	EEE	Power Electronics drives and Energy system	0	0		Y	REGULAR

21	Diwakar B	ME/M.Tech	VTU, Belagavi	9/1/2018	Y	Assistant professor		1/8/2018	EEE	Power Electronics	1	0		Y	REGULAR
22	A.Meenakshi	ME/M.Tech	JNTU ,Anantapur	27/12/2012	Y	Assistant Professor		1/2/2017	EEE	Electrical Power System	0	0		Y	REGULAR
23	G.K.Sharmila	ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Assistant professor		1/4/2019	EEE	Computer Science Engineering	0	0		Y	REGULAR
24	R.Manjunatha	ME/M.Tech	VTU, Belagavi	27/4/2015	Y	Assistant Professor		1/2/2017	EEE	Computer Science Engineering	0	0		Y	REGULAR
25	Gangadhar J	ME/M.Tech	VTU, Belagavi	1/3/2021	Y	Assistant Professor		2/8/2021	EEE	computer applications industrial drives	1	0		Y	REGULAR

CAY 2020-2021

SL.NO	Name of the faculty member	Qualification			Association With The Institution	Designation	Date on which Designated as professor /Associate professor	Date of Joining the Institution	Department	Specialization	Academic Research			Date of leaving (In case currently Associated is (''No") Currently Associated (Y/N)	Nature of Association (Regular /Contract)
		Degree (highest degree)	University	year of attaining higher qualification							Research paper publications	Ph.D Guidance	Faculty Receiving Ph.D during the Assessment Years		
1	Dr.S Kotresh	Ph.D, ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Professor	1/12/2020	20/2/2006	EEE	Bio medical Instrumentation	1	0		Y	REGULAR
2	Dr.U.M.Netravati	Ph.D, ME/M.Tech	JJTU Jhunjhun	28/2/2017	Y	Professor	15/5/2017	15/5/2017	EEE	Electrical & Electronics Engg	2	0		Y	REGULAR
3	Dr.B.Doddabasavanagoud	Ph.D, ME/M.Tech	JNTU ,Anantapur	27/2/2019	Y	Professor	1/12/2019	19/9/1991	EEE	Electronics and Communication	0	0		Y	REGULAR
4	K Raghavendra Prasad	ME/M.Tech	JNTU ,Anantapur	22/01/1996	Y	Associate professor	1/12/2012	18/4/2001	EEE	Computer science Engineering	1	0		Y	REGULAR
5	AnusuyaPatil	ME/M.Tech	Gulbaraga University	23/1/1995	Y	Assistant Professor		24/10/1994	EEE	Power Electronics	1	0		Y	REGULAR
6	Gururaj K K	ME/M.Tech	Jadaupur University	24/12/1999	Y	Assistant Professor		2/7/1999	EEE	Control Systems	0	0		Y	REGULAR
7	Hanumantha Rao A	ME/M.Tech	Mangalore university	01.02.1997	Y	Assistant Professor		10/8/2006	EEE	Power & Energy system	1	0		Y	REGULAR

8	EliaSundaram H M	ME/M.Tech	VTU, Belagavi	10/2/2009	Y	Assistant Professor		11/1/2018	EEE	Power system Engineering	0	0		Y	REGULAR
9	Shambulinagana Gouda	ME/M.Tech	VTU, Belagavi	3/12/2008	Y	Assistant Professor		27/8/2007	EEE	Electrical Engineering	1	0		Y	REGULAR
10	Kumuda.B	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	0	0		Y	REGULAR
11	Gayathri J	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	0	0		Y	REGULAR
12	Aladalli Sharanabasappa	ME/M.Tech	VTU, Belagavi	18/4/2011	Y	Assistant Professor		22/8/2012	EEE	Digital Electronics	3	0		Y	REGULAR
13	VinaykumarHavinal	ME/M.Tech	VTU, Belagavi	08.04.2012	Y	Assistant professor		26/6/2012	EEE	MECS	0	0		Y	REGULAR
14	Linganagouda R	ME/M.Tech	VTU, Belagavi	5/4/2013	Y	Assistant Professor		27/7/2012	EEE	Power and Energy systems	2	0		Y	REGULAR
15	U Shantha Kumar	ME/M.Tech	JNTU ,Anantapur	2/1/2014	Y	Assistant Professor		9/1/2013	EEE	Power Electronics	1	0		Y	REGULAR
16	Hanumantha reddy	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		8/8/2014	EEE	Power Electronics	0	0		Y	REGULAR
17	Rajashekar k	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		2/8/2014	EEE	Digital Electronics	0	0		Y	REGULAR
18	Deepa B	ME/M.Tech	VTU, Belagavi	9/5/2015	Y	Assistant Professor		1/8/2014	EEE	Digital Electronics	0	0		Y	REGULAR
19	Ravi kumar H M	ME/M.Tech	VTU, Belagavi	21/1/2017	Y	Assistant Professor		10/4/2017	EEE	Power Electronics	1	0		Y	REGULAR
20	Shashidar R	ME/M.Tech	JNTU ,Hyderabad	9/11/2013	Y	Assistant Professor		8/4/2017	EEE	Power Electronics	0	0		Y	REGULAR
21	Amrutha GE	ME/M.Tech	PES University	12/8/2017	Y	Assistant professor		11/9/2017	EEE	Power Electronics drives and Energy system	0	0		Y	REGULAR
22	Prajna. U.R.	ME/M.Tech	VTU, Belagavi	5/5/2016	Y	Assistant professor		1/8/2018	EEE	Power & Energy System	0	0		Y	REGULAR
23	Diwakar B	ME/M.Tech	VTU, Belagavi	9/1/2018	Y	Assistant professor		1/8/2018	EEE	Power Electronics	0	0		Y	REGULAR

24	NavyashreeRokhade	ME/M.Tech	VTU, Belagavi	9/1/2018	Y	Assistant professor		1/8/2018	EEE	Power system	0	0		Y	REGULAR
25	Shivakumar I	ME/M.Tech	VTU, Belagavi	1/1/2018	Y	Assistant professor		1/8/2018	EEE	Power system	0	0		Y	REGULAR
26	A.Meenakshi	ME/M.Tech	JNTU ,Anantapur	27/12/2012	Y	Assistant Professor		1/2/2017	EEE	Electrical Power System	0	0		Y	REGULAR
27	G.K.Sharmila	ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Assistant professor		1/4/2019	EEE	Computer Science Engineering	0	0		Y	REGULAR
28	R.Manjunatha	ME/M.Tech	VTU, Belagavi	27/4/2015	Y	Assistant Professor		1/2/2017	EEE	Computer Science Engineering	0	0		Y	REGULAR

CAY 2019-2020

SL.NO	Name of the faculty member	Qualification			Association With The Institution	Designation	Date on which Designated as professor /Associate professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of leaving (In case currently Associated is ("No")	Nature of Association (Regular /Contract)
		Degree (highest degree)	University	year of attaining higher qualification							Research paper publications	ph.D Guidance	Faculty Receiving Ph.D during the Assessment Years		
1	Dr.S.B.Shivakunar	Ph.D, ME/M.Tech	VTU, Belagavi	10/2/2009	N	Professor	12/2/2018	12/2/2018	EEE	Power system	2	7		Y	REGULAR
2	Dr.U.M.Netravati	Ph.D, ME/M.Tech	JJTU Jhunjhun	28/2/2017	Y	Professor	15/5/2017	15/5/2017	EEE	Electrical & Electronics Engg	1	0		Y	REGULAR
3	Dr.B.Doddabasavanagoud	Ph.D, ME/M.Tech	JNTU ,Anantapur	27/2/2019	Y	Professor	1/12/2019	19/9/1991	EEE	Electronics and Communication	0	0		Y	REGULAR
4	Dr.S Kotresh	Ph.D, ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Associate professor	1/12/2020	20/2/2006	EEE	Bio medical Instrumentation	0	0		Y	REGULAR
5	K Raghavendra Prasad	ME/M.Tech	JNTU ,Anantapur	22/01/1996	Y	Associate professor	1/12/2012	18/4/2001	EEE	Computer science Engineering	0	0		Y	REGULAR
6	AnusuyaPatil	ME/M.Tech	GULBARGA UNIVERSITY	23/1/1995	Y	Assistant Professor		24/10/1994	EEE	Power Electronics	1	0		Y	REGULAR
7	Gururaj K K	ME/M.Tech	Jadaupur University	24/12/1999	Y	Assistant Professor		2/7/1999	EEE	Control Systems	0	0		Y	REGULAR
8	Hanumantha Rao A	ME/M.Tech	Mangalore university	01.02.1997	Y	Assistant Professor		10/8/2006	EEE	Power & Energy system	3	0		Y	REGULAR
9	EliaSundaram H M	ME/M.Tech	VTU, Belagavi	10/2/2009	Y	Assistant Professor		11/1/2018	EEE	Power system Engineering	0	0		Y	REGULAR
10	Shambulinagana Gouda	ME/M.Tech	VTU, Belagavi	3/12/2008	Y	Assistant Professor		27/8/2007	EEE	Electrical Engineering	0	0		Y	REGULAR

11	Kumuda.B	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	1	0		Y	REGULAR
12	Gayathri J	ME/M.Tech	VTU, Belagavi	8/4/2012	Y	Assistant Professor		16/8/2012	EEE	Digital Electronics	1	0		Y	REGULAR
13	Aladalli Sharanabasappa	ME/M.Tech	VTU, Belagavi	18/4/2011	Y	Assistant Professor		22/8/2012	EEE	Digital Electronics	0	0		Y	REGULAR
14	VinaykumarHavinal	ME/M.Tech	VTU, Belagavi	08.04.2012	Y	Assistant professor		26/6/2012	EEE	MECS	1	0		Y	REGULAR
15	Linganagouda R	ME/M.Tech	VTU, Belagavi	5/4/2013	Y	Assistant Professor		27/7/2012	EEE	Power and Energy systems	1	0		Y	REGULAR
16	U Shantha Kumar	ME/M.Tech	JNTU ,Anantapur	2/1/2014	Y	Assistant Professor		9/1/2013	EEE	Power Electronics	0	0		Y	REGULAR
17	Hanumantha reddy	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		8/8/2014	EEE	Power Electronics	2	0		Y	REGULAR
18	Rajashekar k	ME/M.Tech	VTU, Belagavi	3/5/2014	Y	Assistant Professor		2/8/2014	EEE	Digital Electronics	2	0		Y	REGULAR
19	Deepa B	ME/M.Tech	VTU, Belagavi	9/5/2015	Y	Assistant Professor		1/8/2014	EEE	Digital Electronics	1	0		Y	REGULAR
20	Ravi kumar H M	ME/M.Tech	VTU, Belagavi	21/1/2017	Y	Assistant Professor		10/4/2017	EEE	Power Electronics	1	0		Y	REGULAR
21	Shashidar R	ME/M.Tech	JNTU ,Hyderabad	9/11/2013	Y	Assistant Professor		8/4/2017	EEE	Power Electronics	0	0		Y	REGULAR
22	Amrutha GE	ME/M.Tech	PES University	12/8/2017	Y	Assistant professor		11/9/2017	EEE	Power Electronics drives and Energy system	1	0		Y	REGULAR
23	Prajna. U.R.	ME/M.Tech	VTU, Belagavi	5/5/2016	Y	Assistant professor		1/8/2018	EEE	Power & Energy System	0	0		Y	REGULAR
24	Diwakar B	ME/M.Tech	VTU, Belagavi	9/1/2018	Y	Assistant professor		1/8/2018	EEE	Power Electronics	1	0		Y	REGULAR
25	NavyashreeRokhade	ME/M.Tech	VTU, Belagavi	9/1/2018	Y	Assistant professor		1/8/2018	EEE	Power system		0		Y	REGULAR
26	Shivakumar I	ME/M.Tech	VTU, Belagavi	1/1/2018	Y	Assistant professor		1/8/2018	EEE	Power system	1	0		Y	REGULAR

27	A.Meenakshi	ME/M.Tech	JNTU ,Anantapur	27/12/2012	Y	Assistant Professor		1/2/2017	EEE	Electrical Power System	0	0		Y	REGULAR
28	G.K.Sharmila	ME/M.Tech	VTU, Belagavi	18/3/2019	Y	Assistant professor		1/4/2019	EEE	Computer Science Engineering	0	0		Y	REGULAR
29	R.Manjunatha	ME/M.Tech	VTU, Belagavi	27/4/2015	Y	Assistant Professor		1/2/2017	EEE	Computer Science Engineering	0	0		Y	REGULAR

5.1 Student-Faculty Ratio (SFR) (20)

No of UG programs in the Department (n) = **01**
No of PG programs in the Department (m) = 00

No. of Students in UG 2nd Year = u1
No. of Students in UG 3rd Year = u2
No. of Students in UG 4th Year = u3
No. of Students in PG 1st Year = p1
No. of Students in PG 2nd Year = p2

No. of Students = Sanctioned Intake + Actual admitted lateral entry students
(The above data to be provided considering all the UG and PG programs of the department)
S=Number of Students in the Department = UG1 + UG2 +… +UGn + PG1 + …PGn
F = Total Number of Faculty Members in the Department (excluding first year faculty)
Student Teacher Ratio (STR) = S / F

Year	**CAY 2021-22**	**CAY m1 2020-2021**	**CAYm2- 2019-2020**
No of students in UG 2nd year=u1	138*	138*	138*
No of students in UG 3rd year=u2	138*	138*	138*
No of students in UG 4th year=u3	138*	138*	138*
UG			
Total Number of Students in the Department(S)	S1=414	S2=414	S3=414
Total Number of faculty in the Department(F)	F1=23	F2=26	F3= 27
Student Faculty Ratio(SFR) Excluding First Year Faculty	**SFR1 = S1 / F1** **SFR1** = 414/23 **SFR1** = **18**	**SFR2 = S2 / F2** **SFR2** = 414/26 **SFR2** = **15.92**	**SFR3 = S3 / F3** **SFR3** = 414/27 **SFR3** = **15.33**
Average SFR Excluding First Year Faculty	**SFR = (SFR1 + SFR2 + SFR3) / 3** **SFR =16.41**		

Table 5.1 Student-Faculty Ratio (SFR)

*No. of Students = Sanctioned Intake + Actual Admitted lateral entry students

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

YEAR	S	F	Specified SFR	SFR = S/F
CAY-2021-22	414	23	20	18
CAYm1-2020-2021	414	26	20	15.92
CAYm2- 2019-2020	414	27	20	15.33
Average SFR for three assessment years				**16.41**

Excluding first year faculty

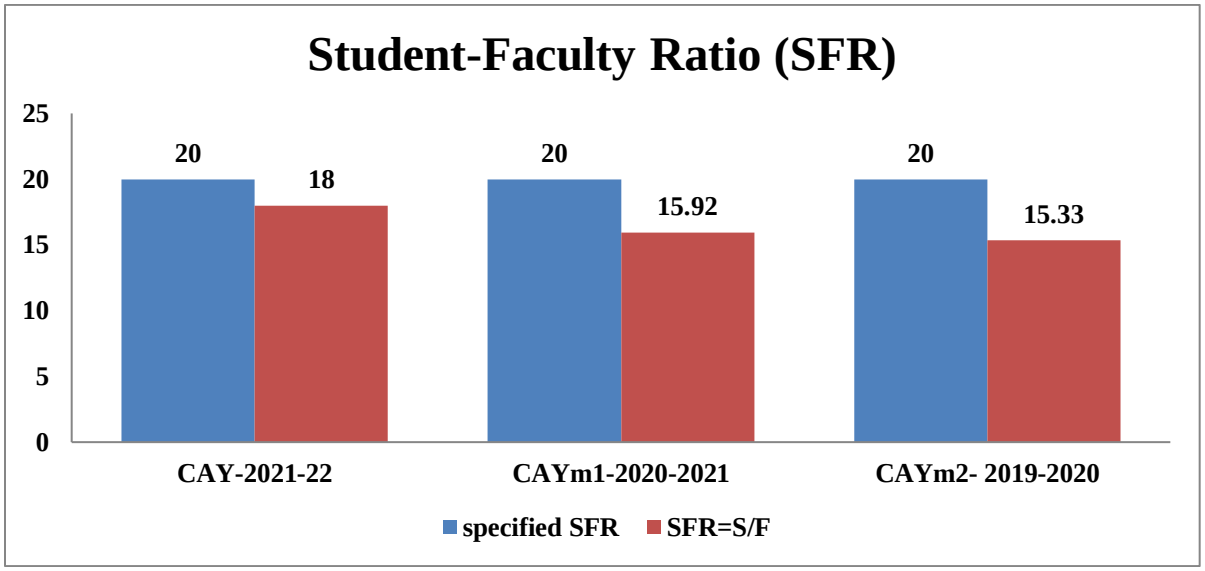


Fig. 5.1 Student-Faculty Ratio

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

	Total number of regular faculty in thedepartment	Total number of contractual faculty in the department
CAY(2021-22)	25	00
CAYm1(2020-21)	28	00
CAYm2(2019-20)	29	00

Table 5.1.1 Information about the regular and contractual faculty

5.2 Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

F1: Number of Professors required = 1/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of Students (N) as per Table B.5.1

F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of Students (N) as per Table B.5.1

F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of Students (N) as per Table B.5.1

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2021-22)	2	3	4	1	14	21
CAYm1(2020-21)	2	3	4	1	14	24
CAYm2(2019-20)	2	3	4	2	14	24
Average number	RF1=2	AF1=3	RF2=4	AF2=1.33	RF3=14	AF3= 23

Table B.5.2 Faculty Cadre Proportion

Cadre Ratio Marks: [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 :
[(1.5) + (0.1995) + (0.657)]*12.5=29.45 (Max=25.00)

5.3 Faculty Qualification (25)

FQ =2.5 x [(10X +4Y)/F)] where x is no. of regular faculty with Ph.D., Y is no. of regular faculty with M.Tech. F is no. of regular Faculty required to comply 20:1 Faculty Student ratio (no. of faculty and no. of students required are to be calculated as per Table B.5.1

Year	X -No. of regular faculty with Ph.D	Y-No. of regular faculty with M.Tech	F- No. of regular Faculty required to comply 20:1 Faculty Student ratio	FQ=2.5 * [(10X +4Y)/F)]
CAY(2021-22)	5	20	21	15.47
CAYm1(2020-21)	3	25	21	15.47
CAYm2(2019-20)	3	26	21	15.95
Average Assessment				**15.63**

Table B.5.3 Faculty Qualification

5.4 Faculty Retention (25)

Item	Marks
>=90% of required Faculty members retained during the period of assessmentkeeping CAY*m*2 as base year	25
>=75% of required Faculty members retained during the period of assessmentkeeping CAY*m*2 as base year	20
>=60% of required Faculty members retained during the period of assessmentkeeping CAY*m*2 as base year	15
>=50% of required Faculty members retained during the period of assessmentkeeping CAY*m*2 as base year	10
<50% of required Faculty members retained during the period of assessment keeping CAY*m*2 as base year	0

Table B.5.4 Faculty Retention

No of Regular faculty Members in (2019-20)CAYm2=29, (2020-21) CAYm1=28, CAY (2021-2022) =25

Description	CAYm 2019-20	CAYm 2020-21	CAY 2021-2022
No of Faculty Retained(x)	NA	28	23
Total No of Faculty Base Year:2019-20(y)	29	29	29
% of Faculty Retained(x/y)	NA	96.55	79.93
Average Retention ratio	**88.24**		

Table B.5.4a Faculty Retention Table

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

Innovative practices are introduced in "teaching and learning" to raise the curiosity of students in a wider domain to encourage them to increase the interaction in the classroom.

Following are the best and innovative practices undertaken by the faculty members for improving teaching and learning experience.

Power Point Presentations

Objectives: To enhance the overall comprehension of students and allow teachers to present their lessons in a more convenient way

Outcomes:

- It provides the ability to equip presentations with different types of media - including images, sounds, animations, and much more.
- This enhances the students' abilities to retain what is being taught, especially to those who are visual learners.
- Teachers can focus on the class and interact with the students instead of writing on aboard.

Student Seminars

Objectives: To enhance the overall comprehension of students and allow students to present their lessons in a more dynamic way

Outcomes:

- This best practice enhances the Listening and communicating abilities of students.
- Students learn time management skill and learn to deal with conflicting opinions arising within the classroom.

Industrial Visits

Objectives: To provide an exposure to students about the practical working environment in companies and industries.

Outcomes:

- Industrial visit is considered as one of the prime methods with an opportunity to learn practically through interaction, working methods and employment practices.
- It also provides a good opportunity for students to gain awareness about industrial practices and the new technologies adapted in those domains.

Online NPTEL / MOOC Courses

Objectives: It's a learning platform designed to provide educators, administrators and learners with a robust, secure and integrated system to create personalized learning platforms.

Outcomes:

- It is used for blended learning, distance education and as an improved e-learning practice.
- Online courses for educators, trainers and students to achieve learning goals.

Other online platforms

Some of the very popular online training communities like udemy; coursera also provides a platform to learn in various fields of latest technologies.

Sl.No	Innovation Methods	Type of Activity	Course	Outcome	Name of the Faculty
1	Course video lecture from e- learning Edusat program	Students will Listen to Lecture	ECA	Understanding of Subject in Online Platform	Dr S Kotresh
2	Course video lecture in YouTube	Students will Listen to Lecture	Microcontroller	Understanding of Subject in Online Platform	Mr.Aladalli sharanabasappa
3	Experimental Teaching learning, & Reflection (Online/offline)	Assignment Test	Electric motors	Performance & Evaluation. Knowledge, Skill & Altitude.	Dr S Kotresh
4	Subject related Quiz	MCQ	S&S	Realization of subject knowledge	Mr. Hanumatha reddy
5	Experimental learning	Experimentation	Electric motors	Making students to understand the Concepts	Mr.Diwakar
6	Quiz	Online Quiz	OBE	Able to make out where they are excellingor need more focus.	Mrs.Anusuya patil
7	Multimedia	PPT	CAED	Students able to understand concepts using different media elements.	MrLinganagouda
8	Course videos on Youtube channel	Youtube channel	Utilization of Electric power	Students will be able to access learning under at their convenience	Mr.Aladallisharan basappa
9	Quiz	Online Quiz	BE	Able to make out where they are excelling or need more focus.	Mr.Rajashekar k
10	Course video lecture in YouTube	Students will Listen to Lecture	Aptitude	Understanding of Subject in Online Platform	Mr. Shashidhar R
11	Online Teaching	Video Recordings in AZ Recorder	IDA	Students can Learn at their own Pace & when good connectivity in placement	Mr. Ravikumar H M
12	Group Discussion	Discussing & Presenting the Concepts	PGE	Self Learning& good Communication Skills, Problem analysis.	Mrs.Deepa B
13	Course video lecture in YouTube	Students will Listen to Lecture	BEEE	Understanding of Subject in Online Platform	Mr. Shashidhar R
14	Tactical Methods of Teaching	Industrial visit	Industrial Visit	know things practically through interaction, working methods and employment practices	Mr.Linganagoda R
15	Course video lecture in YouTube	Students will Listen to Lecture (whenever network is available in Remote areas)	CAED	Understanding of Subject in Online Platform	Mr.Aladalli sharanabasappa

Sl.No	Innovation Methods	Type of Activity	Course	Outcome	Name of the Faculty
16	Solving objective type questions	Discussion concepts	S&S	Skill realization of subject	Mr.Hanumantha reddy
17	Video lecture in YouTube, live classes through Zoom app	Students will Listen to Lecture	PGE	Understanding of Subject in Online Platform	Mr.Vinay kumar H
18	Course video lecture in YouTube	Students will Listen to Lecture	Control system	Understanding of Subject in Online Platform	Mr. Shashidhar R
19	PPT Presentation	Students will Listen to Lecture	OBE Process	Understanding of Subject in Online Platform	Mr.Hanumatha Rao
20	Working module /Demo module explanation	Demonstration of practical working of transformer	Power House	Realization in real time practice	Mr.Elia sundaram/Deepa B

Table B.5.5 Innovations by the Faculty in Teaching and Learning.

5.6 Faculty as participants in Faculty Development/Training Activities/STTPs (15)

A Faculty scores maximum five points for participation

- Participation in 2 to 5 days Faculty Development Program: 3 Points
- Participation>5 days Faculty Development Program: 5 point

Sl.No	Name of the Faculty	Max 5 per Faculty		
		CAYm 2020-21	CAYm1 2019-20	CAYm2 2018-19
1.	Dr.S.B. Shiva Kumar	-	-	3
2.	Dr.U.M..Netravati	5	3	3
3.	Dr.Doddabasavana goud		5	
3.	Mrs.Anusuya Patil	5	5	3
4.	Mr.K Raghavendra Prasad	5	-	-
5.	Dr.S Kotresh	5	5	3
6.	Mr.Gururaj K K	5	5	-
7.	Mr.Hanumantha Rao A	5	5	3
8.	Mr.EliaSundaram H M	-	-	3
9.	Mr.Shambulinagana Gouda	3	3	-
10.	Mrs.Kumuda.B	5	3	3
11.	Mrs.Gayathri J	5	5	3
12.	Mr.Aladalli Sharanabasappa	5	5	5

13.	Mr.VinayKumarHavinal	-	3	5
14.	Mr.Linganagouda R	5	5	3
15.	Mr.U Shantha Kumar	5	5	5
16.	Mr.Hanumantha Reddy	5	5	5
17.	Mr.Rajashekar k	5	3	3
18.	Mrs.Deepa B	5	3	3
19.	Mr.Girish K M	-	-	-
20.	Mr.Ravi kumar H M	5	5	5
21.	Mr.Shashidar R	5	-	5
22.	Mrs.Amrutha GE	-	5	5
23.	Mrs.Prajna U R	-	-	-
24.	Mr.Diwakar B	3	3	-
25.	Mr.Shivakumar I	-	3	5
sum.		**86**	**84**	**73**
RF=Number of Faculty required to complywith 20:1 Student-Faculty ratio asper5.1		21	21	21
Assessment=[3*(Sum/0.5 RF)]		24.57	24	20.85
AVG		23.14		
		Average Assessment over Three years(Marks limited to 15)		

Table B.5.6 Faculty as participants in Faculty Development/Training Activities/STTPs

5.7 Research and Development (30)

- Research Center has been established in the year 2018 under VTU Belgaum, the affiliated university.
- The research areas are in such domains as power systems, Bio-medical, power electronics, high voltage engineering and Control Systems of Electrical engineering discipline.
- Currently two research scholars are pursuing research in the research center.
- Exclusive R&D Lab is setup with state of art facilities such as high end computers (i-3 systems, Intel Optiplex 3020), printers, Internet facility along with Wi-Fi, Raspberry pi-3, Ardunio Boards, Interfacing Kits, Sensors, LCD Projector and has access to the E-resources namely IEEE, SPRINGER, VTU Consortium.
- The R&D lab is supported with the required software's and tools such as MATLAB, SciLab.

5.7.1 Academic Research (10)

Academic research includes research paper publications, Ph.D. guidance, and faculty receivingPh.D. during the assessment period.

- Number of quality publications in refereed/SCI Journals, citations, Books/Book Chapters etc. (6)
- Ph.D. guided /Ph.D. awarded during the assessment period while working in the institute (4)

1. **Number of quality publications**

AY	Journals	Conferences	Total
2017-18	**30**	**11**	**41**
2018-19	**14**	**01**	**15**
2019-20	**20**	**00**	**20**
2020-21	**17**	**00**	**17**
2021-22	**40**	**00**	**40**

Type of journal/publications	**No of papers/publications**				
	2017-18	**2018-19**	**2019-20**	**2020-21**	**2021-22**
UGC Approved International Journals	**30**	**14**	**19**	**14**	**39**
IEEE,SPRINGR,ELSVIER, SCOPUS INDEXED,WEB OF SCIENCE	**00**	**00**	**01**	**03**	**01**
International conference papers	**11**	**01**	**00**	**00**	**00**
Total year wise	**41**	**15**	**20**	**17**	**40**

Table B.5.7.1a Details of Number of quality publications

LIST OF PAPERS PUBLISHED IN NATIONAL/INTERNATIONAL CONFERENCES & JOURNALS BY FACULTY MEMBERS IN LAST THREE ACADEMIC YEARS

Sl.No.	Name of the Faculty	academic year	Title of Paper	Publication Citation	Paper link
1	Dr S Kotresh	2021-22	Aurdino based solar tracking and cleaning system	JETIR , ISSN:2349-5162,Volume 9, Issue 7, july 2022	https://www.jetir.org/view?paper=JETIR2207268
		2020-21	Save the Diesel during idling run over of locomotive using in industries	1006-6748 ISO7021-2008 Doi.org10.37896/HTL Vol-26, Issue-9 September-2020	http://www.gjstx-e.cn/gallery/65-sep2020.pdf
2	Dr. S B Shivakumar	2020-21	AC digital multifunction meter	ISSN-2321-9653 Volume 8 Issue VI June 2020	https://doi.org/10.22214/ijraset.2020.6186 https://www.ijraset.com/fileserve.php?FID=29491
		2019-20	Enhanced Evolutionary Computing Based Load Sensitive Hybrid RES	ISSN: 2277-3878, Volume-8 Issue-5, January 2020	https://www.ijrte.org/wp-content/uploads/papers/v8i5/E5716018520.pdf
		2018-19	Wireless transformer parameter measurement and protection	Issue III, Mar 2019- March 2019 IJRASET 2321-9653	https://www.ijraset.com/fileserve.php?FID=20937
		2017-18	Enhancement of Energy management System of Hybrid RES by HSS	ISO 3297:2007 Certified Vol. 5, Issue 9, September 2017	https://www.ijireeice.com/upload/2017/september-17/IJIREEICE%2023.pdf
		2017-18	Optimization of Hybrid RES using BPSO-PID based load sensitive EMS	ISSN (Print) : 2320 – 3765 ISSN (Online): 2278 – 8875 Website: www.ijareeie.com Vol. 6, Issue 9, September 2017	https://www.ijareeie.com/upload/2017/september/36_IJAREEIE%202.pdf
		2017-18	Optimization of Hybrid PV/Wind/Battery system using Adaptive Genetic Algorithm-PID Controller	IJETAE, UGC Approved, Volume 7, Issue 10, October 2017	https://www.ijetae.com/files/Volume7Issue10/IJETAE_1017_33.pdf
		2017-18	Evolutionary Algorithm based optimization of Hybrid Renewal Energy System	Volume 5, Issue 10, October 2017 ISSN 2321-5984	https://ipasj.org/IIJEE/Volume5Issue10/IIJEE-2017-10-12-2.pdf
		2017-18	FPA Based Power Quality	International Journal Of	http://www.ijerd.com/paper/vol13-issue10/Version-

			Improvement for Hybrid RES	Engineering Research And Development e-ISSN: 2278-067X, p-ISSN: 2278-800X, Volume 13, Issue 10 (October 2017), PP.31-44	2/C131023144.pdf
3	Dr. U M Netravati	**2022**	Solar powered street light illumination control by PIR sensor	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206A12.pdf
		2021-22	Electricity saver smart street light	ISSN: 2349-5162 Jun 2022, Volume 9, Issue 6	https://www.jetir.org/papers/JETIR2206A29.pdf
		2021-22	Smart solar weed cutter and pesticides sprayer	ISSN: 2349-5162 July 2021, Volume 8, Issue 7	https://www.jetir.org/papers/JETIR2107578.pdf
		2021-22	IOT Based Photo Voltaic Green Tree	Volume 8, issue 8, Aug 2021 ISSN -2349-5162	https://www.jetir.org/papers/JETIR2108091.pdf
		2020-21	singe phase AC digital multi role smart meter	ISSN- 2320-2882 IJCRT -Volume 8, Issue 6 June 2020	https://ijcrt.org/papers/IJCRT2006326.pdf
		2020-21	AC digital multifunction meter	ISSN-2321-9653 Volume 8 Issue VI June 2020	https://doi.org/10.22214/ijraset.2020.6186 https://www.ijraset.com/fileserve.php?FID=29491
		2019-20	Vehicular pollution in India and solution	IJDRBC ISSN-2005-4228	Vol. 11 No. 01 (2020): Vol 11 No 1 (2020)
		2018-19	A comparative study of different fuel cells	JETIR ,ISSN-2349-5162	https://www.jetir.org/view?paper=JETIRAL06018
		2017-18	Iot Based Smart Garbage And Waste Collection Bin	ISSN (Online) 2394-2320 Vol 5, Issue 4, April 2018	https://www.technoarete.org/common_abstract/pdf/IJ ERCSE/v5/i4/Ext_04798.pdf
		2017-18	WIRELESS DIGITAL NOTICE BOARD USING RASPBERRY PI	1. VOL. 7 NO. 2 (2018): VOLUME-07, ISSUE-02	https://ijact.joae.org/index.php/ijact/article/view/700
		2017-18	Wireless power transfer for vehicles	Conference /ICIIET April 2018	IFERP
		2017-18	Simple floor cleaning robot	Conference /ICIIET April 2018	IFERP
		2017-18	Microcontroller based charge controller for PV applications	Conference /ICIIET April 2018	IFERP
		2017-18	Wireless power transfer for vehicles	Conference /ICIIET April 2018	IFERP

		2017-18	Simple floor cleaning robot	Conference /ICIIET April 2018	IFERP
5	Dr Doddabasavana goud	**21-2022**	Iot based automated siran using solar power	IJARSCT ,ISSN-2581-9429, Issue 9,Volume-2 Jun 2022	https://ijarsct.co.in/Paper5304.pdf
		2020-21	Mobile signal jammer	JETIR , ISSN:2349-5162,Volume 9, Issue 6, june 2022	https://www.jetir.org/papers/JETIR2206941.pdf
			Solar Peizo Hybrid Power Charging System	ISSN (Online): 2582-7839, Volume 3, Issue 5, May 2022	file:///E:/STUDENT/IJRAMT_V3_I5_55.pdf
4	Ragavendra Prasad K	**2022**	IOT based transformer monitoring system using Arduino and ESP8266	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022	http://troindia.in/journal/ijcesr/vol9iss6/50-52.pdf
		2022	Wireless charging and electric vehicle using solar nd wind	IJARSCT,ISSN (Online) 2581-9429, Volume 2, Issue 9, June 2022	https://ijarsct.co.in/Paper5328.pdf
		2020-21	An Eagles view on different types of digital water making techniques	CONFERENCE 7th& 8thjuly 2021	IFERP
		2018-19	Design and development of data hiding using deep learning	JASRIAE ,ISSN-2230-7540, Volume16, Issue V April2019	http://ignited.in/I/a/211147
		2018-19	IoT Based Home Automation	IJSART ,ISSN-2395-1052, volume 05, Issue IV APRIL 2019	IFERP
		2017-18	A new Era of Generation Communication Technology	ISSN:2348-7550 Volume.05,issue 02 February-2017	https://1library.net/document/zkk333ez-a-new-era-of-fifth-generation-communication-technology.html
		2017-18	Non-Exhaustible Solar-Power Based Insecticide or Bio-fertilizer Sprayer for Use in Agronomics (With Bluetooth Enabled Control)	ISSN : 2248-9622, Vol. 7, Issue 3, (Part -6) March 2017, pp.77-81	https://www.ijera.com/papers/Vol7_issue3/Part-6/O0703067781.pdf
5	AnusuyaPatil	**2022**	Electric Vehicle Garbage carrier	IJARSCT ,ISSN-2581-9429, Issue 9,Volume-2 Jun 2022	https://ijarsct.co.in/Paper5343.pdf
		2022	Aurdino based solar tracking and cleaning system	JETIR , ISSN:2349-5162,Volume 9, Issue 7, july 2022	

		2020-21	Protection Scheme for HV sphere gap arrangements	EISSN:2395-0056 PISSN:2395-0072 Volume: 07 Issue: 08 | Aug 2020	https://www.irjet.net/archives/V7/i8/IRJET-V7I8119.pdf
		2019-20	Home Automation using PIR sensor &Arduino board	IJSART ISSN/ISBN:2395-1052 Volume5,issue 4inApril 2019	http://ijsart.com/Home/IssueDetail/30042
		2017-18	An Innovative Approach to Control Pesticide Sprayer Using Solar Based Bluetooth Device	Vol. 6, Issue 5, May 2017 ISSN (Print) : 2320 – 3765 ISSN (Online): 2278 – 8875	https://www.ijareeie.com/upload/2017/may/71_13_AN.pdf
6	Hanumantha Rao A	**2021-22**	Protection Of Crops And Proper Usage Of Rain Water Using Satellite Communication And Wireless Sensor Network And Wild Animal Detection	(IJCESR) ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, VOLUME-9, ISSUE-6, 2022	http://troindia.in/journal/ijcesr/vol9iss6/69-73.pdf
		2020-21	Implementation of OPF and LINEAR FUZZY controller in Power system load flow analysis	International Journal of Emerging Trends in Engineering Research, , 4019 – 4022 Volume 8. No. 7, July 2020	DOI:10.30534/ijeter/2020/174872020
		2019-20	A probabilistic approach for optimal power flow incorporating multiport systems	JISPS ISSN 1099-8047IF-6.0, Volume -18 issue -2 July 2019	UGC CARE LISTED
		2019-20	An optimized probabilistic approach for optimal economic dispatch , a case study of GESCOM	AIJREAS ISSN 2455-6300 Volume -5 issue -4 April 2020	http://publications.anveshanaindia.com/aijreas/aijreas-vol5-issue-4/ http://publications.anveshanaindia.com/wp-content/uploads/2021/07/AN-OPTIMIZED-PROBABILISTIC-APPROACH-FOR-OPTIMAL-ECONOMIC-DISPATCH-A-CASE-STUDY-OF-GESCOM-1.pdf
		2019-20	Load Flow analysis in3-M system using FACTS controller	IJAS T (SC0PUS INDEXED)Vol. 29, No.4, (2020), pp.5362-5371,2020	http://sersc.org/journals/index.php/IJAST/article/view/25976
		2018-19	Wireless Transformer Parameter Measurement and Protection	IJRASET ISSN-2321-9653, Issue III, Mar 2019	https://www.ijraset.com/fileserve.php?FID=20937
		2018-19	Real Time Monitoring of Transformer Using IOT	IJSART , ISSN: 2395-1052, MAY 2019 IFERP	https://www.iferp.in/digital-library/conference-proceedings/2018/12-iciiet%20book.pdf

		2017-18	Economic Dispatch using a simple Probabilistic method, a case study of Karnataka Grid	International Journal of Recent Research Aspects ISSN: 2349-7688, Special	https://www.ijrra.net/April2018/ConsComp2018_04.pdf
7	H M Elia sundram	**2021-22**	Three Phase lamp load	IJARSCT ,ISSN-2581-9429, Issue 9,Volume-2 Jun 2022	https://ijarsct.co.in/Paper5366.pdf
8	Shambulingana gouda	**2021-22**	IoT Based Smart Street Light Empowered by Piezoelectric Sensors	IJARSCT, ISSN (Online) 2581-9429 Volume 2, Issue 9, June 2022	https://ijarsct.co.in/Paper5362.pdf
		2022	Home Automation using Blink	IJARSCT ,ISSN-2581-9429, Issue 9,Volume-2 Jun 2022	https://ijarsct.co.in/Paper5352.pdf
		2021-22	Simulation and speed control of drives :controlling by applied voltage	Volume 6 Issue 2 , Feb -2022 ISSN: 2582-3930	http://ignited.in/p/211146
		2020-21	Simulation and speed control of Motor drives using space vector Modulation for three phase Induction Motor	ISSN-2250-3021 DOI-10.9790 Volume-10 issue 12 January 2021	http://iosrjen.org/Papers/vol10_issue12/Series-2/E1012022733.pdf
		2018-19	Three phase induction motor simulation and speed control of motor drives controlling the applied Vg	IGGINTED MINDS IJASRAE ,ISSN-2230-7540 Volume 16, Issue 4 in march 2019	http://ignited.in/I/a/211146
		2018-19	Three phase induction motor simulation and speed control of motor drives	IJASRAE ,ISSN-2230-7540, Volume 16, Issue 4 in march 2019	http://ipublisher.in/I/a/262825
		2018-19	PWM method of controlling of dc motor	SART,ISSN-2395-1052, Volume 5, Issue 4 in April 2019	http://ijsart.com/Home/IssueDetail/30074
9	Gayathri J	**2022**	IOT based message conveyer system for disabled people	JETIR , ISSN:2349-5162,Volume 9, Issue 7, july 2022	https://www.jetir.org/papers/JETIR2207233.pdf
		2022	smart road safety and vehicle accident preventation for mountain roads	JETIR , ISSN:2349-5162,Volume 9, Issue 6, jun 2022	https://www.jetir.org/papers/JETIR2206913.pdf
		2019-20	Automatic Railway Gate Control and Track Fault Detection System	IJAREEIE ISSN: 2278-8875 IF-7.122,Volume 9, Issue 6, June 2020	https://www.ijareeie.com/upload/2020/june/17_Automatic_NC.PDF
		2018-19	IOT based water purity monitoring system using	JETIR , ISSN:2349-5162,Volume 6, Issue 5, May	https://www.jetir.org/papers/JETIRCJ06034.pdf

			Arduino and GPRS	2019	
		2017-18	protection of crops and proper usage of rain water using IOT	ISSN: 2278- 8875 Volume 07 Issue 06, JUNE-2018	https://www.ijareeie.com/upload/2018/june/24_3_Protection_n.pdf
10	Kumuda B	**2022**	RFID based petrol pump automation system	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206165.pdf
		2022	Solar Piezo Hybrid power charging system	IJRAMT, ISSN: 2582-7839 Volume 02,Issue 6 ,june2022	file:///E:/STUDENT/IJRAMT_V3_I5_55.pdf
		2019-20	Auto Farming using Arduino.	IRJET ISSN: 2395-0056 Impact factor: 7.529 Volume 07,Issue 6 ,june2020	https://www.irjet.net/archives/V7/i6/IRJET-V7I612.pdf
		2017-18	Airport Baggage Conveyor and Voice notification using RFID technology	ISSN: 2320-3765Impact factor: 5.621 Volume 06 Issue 06, 2017	https://www.ijareeie.com/upload/2017/june/26_Revised%20Airport%20Baggage%20Conveyor%20and%20Voice%20notification%20using%20RFID%20Technology.pdf
		2017-18	Renewable Energy in Smart Buildings by managing green charge	ISSN: 2250-1371Impact factor: 7.122 Volume 7, Issue 6, 2017	http://ijesc.org/upload/74173613c22c2301bcf77077c421b0ab.Renewable%20Energy%20in%20Smart%20Buildings%20by%20Managing%20Green%20Charge.pdf
		2017-18	Implementation of Solar Water Pump controlled with four different times for power saving applications	ISSN: 2348-6406 Impact factor: 4.72 Volume 4, Issue 5, 2017	https://issuu.com/editorijaerd/docs/implementation_of_solar_water_pump_
		2017-18	Power Quality Perfection in a Nonlinear loaded electrical system by use of three phase active power filter	ISSN: 2321-9653 Impact factor: 6.887 Volume 5, Issue 6, 2017	https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1043.2049&rep=rep1&type=pdf
		2017-18	Voice operated control of AC motor	ISSN: 2348-6406 Impact factor: 5.71 Volume 5, Issue 5, 2018	IFERP

11	A.Sharanabasappa	**2022**	Automatic monitoring of Deforestation using Arduino	IJARSCT ISSN 2581-9429 Volume-2 issue 9 Jun 2022	https://ijarsct.co.in/Paper5342.pdf
		2020-21	Vector Control of Induction Motor Using Neural Networks Based Lookup Table for Reduced CMV"	Turkish Journal of Computer and Mathematics Education SCOPUS Indexed Journal Vol.12 No.10	DOI:10.17762/turcomat.v12i10.554 https://turcomat.org/index.php/turkbilmat/article/view/5541/4644
		2020-21	"Investigation of various Modulating Technique for Vector Controlled Induction Drives"	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, Volume-8, Issue-2, Feb 2021	http://troindia.in/journal/ijcesr/vol8iss2/1-3.pdf
		2020-21	Automated waste segregator	ISSN 2395-0056 Volume-8 issue 4 April 2021	https://www.irjet.net/archives/V8/i4/IRJET-V8I4778.pdf
		2017-18	A Webserver Based Agricultural Field Monitoring System"	Volume 5, Issue V, May 2017 DOI: 10.22214 ISSN: 2321-9653	https://www.cabdirect.org/cabdirect/abstract/20173357230
		2017-18	Accident Prevention System Using Eye Blink Sensor	Volume 04 Issue 05,May-2017 DOI: 10.22214 ISSN: 2321-9653	https://issuu.com/editorijaerd/docs/accident_prevention_system_using_eye
		2017-18	Generalized Scalar Approach for the Generation of Reduced Common Mode Voltage PWM Algorithms for indirect Vector Controlled Induction Motor Drive	ISSN(p): 2347-6982, ISSN(e): 2349-204X Volume-6, Issue-4, Apr.-2018, http://ijieee.org.in	http://pep.ijieee.org.in/journal_pdf/11-460-153059763725-31.pdf
		2017-18	Automatic Rain Water harvesting and Electrical Power Generation using Solar Panel in agriculture fields	ISSN: 2349-7688, Special Issue: Conscientious Computing Technologies, April 2018, pp. 116-118	https://www.ijrra.net/April2018/ConsComp2018_29.pdf
		2017-18	Energy conservation & Industrial safety	2018, 12th& 13th April -2018 ISSN (PRINT): 2393-8374 (ONLINE): 2394-0697	ICIIET, Bangalore
12	Lingana gouda R	**2021-22**	Smart electric cart for vegetable vendors	IJARSCT ISSN 2581-9429 Volume-2 issue 1 July 2022	https://ijarsct.co.in/Paper5755.pdf

		2022	Electric street cart with covid-19 Protocol	IJARSCT ISSN 2581-9429 Volume-2 issue 9 Jun 2022	https://ijarsct.co.in/Paper5351.pdf
		2020-21	"Investigation of various Modulating Technique for Vector Controlled Induction Drives	ISSN (PRINT): 2393-8374, (ONLINE): 2394-0697, Volume-8, Issue-2, Feb 2021	http://troindia.in/journal/ijcesr/vol8iss2/1-3.pdf
		2020-21	ANFIS Based AZSPWM Methods for reduction Common Mode Voltage in asynchronous Motor Drive.	Turkish Journal of Computer and Mathematics Education SCOPUS Indexed Journal Vol.12 No.10	DOI:10.17762/turcomat.v12i10.5541
		2019-20	Automatic Flood Gate and Flood Control System with Power Generation using ARDUINO UNO	(IRJET), ISSN: 2395-0072Volume: 07 Issue: 06 | June 2020	https://www.irjet.net/archives/V7/i6/IRJET-V7I61156.pdf
		2017-18	Generalized Scalar Approach for the Generation of Reduced Common Mode Voltage PWM Algorithms for indirect Vector Controlled Induction Motor Drive	ISSN(p): 2347-6982, ISSN(e): 2349-204X Volume-6, Issue-4, Apr.-2018, http://ijieee.org.in	http://pep.ijieee.org.in/journal_pdf/11-460-153059763725-31.pdf
13	Vinay Kumar H	**2022**	Solar based IOT controlled EV	IRJET, ISSN 2395-0072 VOLUME 9, issue 6 Apr-2022	https://www.irjet.net/archives/V9/i6/IRJET-V9I6556.pdf
		2019-20	Vehicle Detection and warning system using arduino at intersection crossing	IJRESM ISSN-2581-5792 Vol 3 Issue 5 May 2020	https://www.ijresm.com/Vol.3_2020/Vol3_Iss5_May20/IJRESM_V3_I5_315.pdf
		2017-18	IOT AND SCADA	IRJET Vol 4 National 2018	IFERP
14	U Shantha Kumar	**2022**	Computerized sliding door opening and closing using micro controller	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206815.pdf
		2022	Low cost solar powered electric vehicle for milk vendors	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206977.pdf
		2021-22	Technical Requirements and Fabrication Procedure of Three Phase Distribution board	Volume 8 Issue 8 , August - 2021 ISSN-2349-5162	https://www.jetir.org/papers/JETIR2107506.pdf
		2020-21	IOT based Monitoring and	IJRASET Volume8, Issue 7	DOI:10.22214/ijraset.2020.30457

			Controlling of Hydroponics	July 2020	
15	Hanumantha Reddy	**2022**	Lineman safety using finger print based circuit breaker	IJCESR, ISSN: 2393-8374 Volume 09,Issue 6 ,june2022	http://troindia.in/journal/ijcesr/vol9iss6/74-77.pdf
		2022	Automated waste conservation unit using residential waste	IJCESR, ISSN: 2393-8374 Volume 09,Issue 6 ,june2022	http://troindia.in/journal/ijcesr/vol9iss6/41-44.pdf
		2022	Fire fighting robotic machine	IJARSCT ISSN: 2581-9429 Volume 02,Issue 2 ,june2022	https://ijarsct.co.in/Paper5493.pdf
		2022	Generating organic fertilizers from the bio-degradable waste	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206057.pdf
		2019-20	Automated Bio-organic Fertilizer Generating Unit	JETIR ISSN : 2349-5162 Volume 7 Issue 5 , May 2020 |	https://www.jetir.org/papers/JETIR2005413.pdf
		2019-20	Robotic Arm Control Using Arduino	JETIR ISSN : 2349-5162 Volume 7 Issue 5 , May 2020	https://www.jetir.org/papers/JETIR2006065.pdf
		2018-19	Smart Power Source detector Using GSM	IJRASET, ISSN 2321-9653, Volume 7, Issue III,March 2019	https://www.ijraset.com/fileserve.php?FID=20929
		2017-18	Energy management and control systems for hybrid wind solar energy system with battery storage	ICIIET, ISBN-978-81-937041-4-1 12th to 13th April 2018	https://www.iferp.in/digital-library/conference-proceedings/2018/12-iciiet%20book.pdf
		2017-18	Thermo electric dish power	ISSN: 2349-7688, Special Issue: April 2018, pp. 80-83	https://www.ijrra.net/April2018/ConsComp2018_19.pdf
		2017-18	Internet of things	ISBN-978-81-937041-4-1 12th to 13th April 2018	https://www.iferp.in/digital-library/conference-proceedings/2018/12-iciiet%20book.pdf
16	Rajashekar k	**2022**	Automated waste conservation unit using residential waste	IJCESR, ISSN: 2393-8374 Volume 09,Issue 6 ,june2022	http://troindia.in/journal/ijcesr/vol9iss6/41-44.pdf
		2022	Fire fighting robotic machine	IJARSCT ISSN: 2581-9429 Volume 02,Issue 2 ,june2022	https://ijarsct.co.in/Paper5493.pdf
		2022	Generating organic fertilizers from the bio-degradable waste	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/papers/JETIR2206057.pdf
		2022	Lineman safety using finger print based circuit breaker	IJCESR, ISSN: 2393-8374 Volume 09,Issue 6 ,june2022	http://troindia.in/journal/ijcesr/vol9iss6/74-77.pdf
		2019-20	Automated Bio-organic Fertilizer Generating Unit	JETIR ISSN : 2349-5162 Volume 7 Issue 5 , May 2020 |	https://www.jetir.org/papers/JETIR2005413.pdf
		2019-20	Robotic Arm Control Using Arduino	JETIR ISSN : 2349-5162 Volume 7 Issue 5 , May 2020	https://www.jetir.org/papers/JETIR2006065.pdf

		2018-19	Smart Power Source Selector using GSM	IJRASET, ISSN 2321-9653, Volume 7, Issue III, March 2019	https://www.ijraset.com/fileserve.php?FID=20929
		2017-18	Electrical safety analyzer for bio medical equipment	Volume 5 Issue V, May 2017 IC Value: 45.98 ISSN: 2321-9653	https://www.ijraset.com/fileserve.php?FID=7700
		2017-18	Smart Grid infrastructure using hybrid network architecture	ICIIET 12-13th April 2018	https://www.ijraset.com/fileserve.php?FID=7700
17	Deepa B	**2021-22**	Electric Vehicle Garbage carrier	IJARSCT ,ISSN-2581-9429, Issue 9,Volume-2 Jun 2022	https://ijarsct.co.in/Paper5343.pdf
		2021-22	Applications of Battery Management System (BMS) in Sustainable Transportation: A Comprehensive Approach from Battery Modeling to Battery Integration to the Power Grid	World Electr. Veh. J. 2022, 13, 80. Article in World Electric Vehicle Journal · May 2022	https://doi.org/10.3390/wevj13050080
		2020-21	Analysis of micro grid integrated Photovoltaic powered Electrical Vehicle Charging Stations (EVCS) under different solar irradiation conditions in India: A way towards sustainable development and growth	Energy Reports , Elsevier Volume 7, Nov 2021	https://doi.org/10.1016/j.egyr.2021.10.103
			Micro Phasor Measurement unit (µPMU) in Smart Distribution Network –A Cyber Physical System, Algorithms for Intelligent System	Springer 978-981-16-7135-7 book chapter	https://doi.org/10.1007/978-981-16-7136-4_1
			Micro phasor measurement unit (uPMU) placement for maximum obserbility in smart distribution network	IEEE power Africa virtual conference 23-27 August 2021	DOI:10.1109/PowerAfrica52236.2021.9543234
		2019-20	Energy Consumption using Arduino and PZEM-004T	IRJET p-ISSN: 2395-0072,Volume 7 Issue 6 June2020	https://www.irjet.net/archives/V7/i6/IRJET-V7I6214.pdf

		2018-19	GSM based Distribution Network Automation With Transformer Surveillance for electric power lines	International Journal for Science and Advance Research in Technology, ISSN(online): 2395-1052, Volume 5, Issue 4 in April 2019	http://ijsart.com/Home/IssueDetail/29984
18	Ravi Kumar H M	**2021-22**	Solar based Vacuum Floor cleaner	JETIR, ISSN: 2349-5162 Volume 09,Issue 6 ,june2022	https://www.jetir.org/view?paper=JETIR2206139
		2021-22	Smart office during post covid-19 world	JETIR, ISSN: 2349-5162 Volume 09,Issue 7 ,july2022	https://www.jetir.org/view?paper=JETIR2207240
		2021-22	IOT based smart highway management system	Volume 8 Issue 8 , August - 2021 ISSN-2349-5162	https://www.jetir.org/papers/JETIR2108180.pdf
		2019-20	Blind Guide Stick Using Gps And Gsm Module	IJCRT ISSN:2320-2882 ,Volume: 07 Issue : 06/June 2020	https://www.irjet.net/archives/V7/i6/IRJET-V7I6811.pdf
			Blind Guide Stick Using Gps And Gsm Module	IRJET E-ISSN :2395-0056 Volume: 08 Issue : 06/June 2020	https://ijcrt.org/papers/IJCRT2006404.pdf
		2018-19	Net Metering	IJRASET ISSN: 2321-9653 Volume 7 Issue IV, Apr 2019-	https://www.ijraset.com/fileserve.php?FID=21974
		2017-18	Mat lab Simulation of BLDC Motor Drive SPV Array Fed Water Pumping System Employing Zeta Converter With Grid Connected	Vol-2 Issue-5 2017 IJARIIE-ISSN(O)-2395-4396	https://ijariie.com/AdminUploadPdf/MATLAB_SIMULATION_OF_BLDC_MOTOR_DRIVEN_SPV_ARRAY_FED_WATER_PUMPING_SYSTEM_EMPOLYING_ZETA_CONVERTER_WITH_GRID_CONNECTED_1557.pdf
		2017-18	A review of NBA Accreditation for Undergraduate Engineering Programmes	IJREAM ISSN : 2454-9150 Vol-04, Issue-06, Sep 2018	http://ijream.org/papers/IJREAMV04I0642065.pdf
19	Shivakumar I	**2020-21**	Solar Powered Automated Siren Using Arduino Uno	IRJET ISSN:2395-0072 Volume 7 August 2020	https://www.irjet.net/archives/V7/i8/IRJET-V7I8216.pdf
		2019-20	Fault Analysis of grid connected solar photovoltaic system	IRJET ISSN-2395-0056 Volume 7.Issue 2,February 2020	https://www.irjet.net/archives/V7/i2/IRJET-V7I295.pdf
20	Amrutha G E	**2019-20**	Solar Powered automatic	IRJET Volume 7	https://www.irjet.net/archives/V7/i7/IRJET-

			irrigation system using soil moisture sensor	June 2020 ISSN-2395-0072	V7I71018.pdf
		2018-19	Maximum power point tracking based solar charge controller	JETIR ISSN 2349-5162 Volume 5, Issue 7 in April 2018	https://www.jetir.org/papers/JETIR1807114.pdf
21	Diwakar B	**2021-22**	Electronic Jacket for women safety	IJCESR, ISSN: 2393-8374 Volume 09,Issue 6 ,june2022	https://www.irjet.net/archives/V4/i5/IRJET-V4I5170.pdf
		2019-20	IoT Based Intelligent Domestic System Using Arduino Esp32	IRJET ISSN 2395-0056 Volume-7,Month-05,Year-2020.	https://www.irjet.net/archives/V7/i5/IRJET-V7I5899.pdf
22	Navyashree Rokdae M	**2019-20**	Wavelet Transform Implementation to Differentiate Inrush of Recent Technology and Engineering	IJRTE ISSN-2277-3878 Volume -8 issue -5 Jan 2020	https://www.ijrte.org/portfolio-item/e6237018520/

Table B.5.7.1b Details of Faculty Contribution towards Research

2. Books/Book Chapters

Academic year:2021-22			
Sl.No.	**Name of the Author**	**Title of the Book Chapter**	**Publication Details (ISBN, Edition & Name Publication**
1	Mrs.Deepa B	Micro Phasor Measurement Unit (µPMU) in Smart Distribution Network: A Cyber Physical System	ISSN 2524-7565 ISSN 2524-7573 (electronic) Algorithms for Intelligent Systems ISBN 978-981-16-7135-7 ISBN 978-981-16-7136-4 (eBook) https://doi.org/10.1007/978-981-16-7136-4
2	Mr. K Raghavendra Prasad	Concepts of Block chain Technologies	ISBN -978-81-960902-2-7 AGPH Books
Academic year:2017-18			
Sl.No.	**Name of the Author**	**Title of the Book**	**Publication Details (ISBN, Edition & Name Publication**
1	Dr.S.B Shiva Kumar	Basic Electrical Engineering (Bar Code –Audio Book)	Tech Voyage LTD /978-93-5291-411-1

Table B.5.7.1c Details of Books/Book Chapters

3. Patents

Sl.No	Name of the Applicant	Application No.	Title of the Invention	Date of filing of application	Publication Date
01	Dr.K Raghavendra Prasad	202321000046	Artificial intelligence based approach for evaluating and reveling consumer in sights through visual analysis of social media images	02.01.2023	13.01.2023
02	Dr.K Raghavendra Prasad	202211075980	data science and AI Based Automatic medical report generation and classification of breast cancer along its stages	27.12.2022	06.01.2023

03	Dr.K Ragavendra Prasad	202211074750	IoT and Block chain integrated frame work for intelligent coustamised citizen identity management system for smart city infrastructure platform	23.12.2022	06.01.2023
04	Dr.U M Netravati	2020102666	Coupled Multi body Dynamic Approach On Directional Drilling System In Oil Rigs	11.10.2020	14.01.2021

Table B.5.7.1d Details of Patents

4. Research Guidance

SL.NO	Research Supervisors	Research Scholar	Research Center	University
1	Dr.S.B.Shivakumar	Mr. Shivakumar L N	VTU, RRC, Belagavi	VTU, Belagavi
		Mr. Sampath Kumar	VTU, RRC, Belagavi	VTU, Belagavi
		Mr. Dhanajay D	VTU, RRC, Belagavi	VTU, Belagavi
		Mr. Elia Sundaram H	VTU, RRC, Belagavi	VTU, Belagavi
		Mr. Zuhaib Baig	VTU, RRC, Belagavi	VTU, Belagavi
		Ms. Divya S	VTU, RRC, Belagavi	VTU, Belagavi
		Mr.Shivashankar	VTU, RRC, Belagavi	VTU, Belagavi
2.	Dr.S Kotresh	Ms. J Gayathri	Dept. of E&E, RYMEC,Ballari	VTU, Belagavi
		Mr.Santosh M	Dept. of ECE, RYMEC,Ballari	VTU, Belagavi

Table B.5.7.1e Research Supervisors in the Department

5. Faculty Pursuing Ph.D.

Sl. No	Research Scholar	University Register Number	University & Date of Registration	Research Topic	Course Work (Completed / Not Completed	Submission of Comprehensive Viva / Thesis
1	Mr.Elia Sundaram H M	5VX17PCS19	VTU, Belagavi 25/10/2017	Improving the power quality of synchronous generators by pre computed modulated field current	Completed	

2	Mr.A.Sharanabas ap pa	5VX17PES26	VTU, Belagavi 26/4/2017	Reduction of common mode voltage in indirect vector controlled induction motor drives using ANN	Completed	Comprehensive Viva completed
3	Mr.R Linganagouda	5VX17PES62	VTU, Belagavi 26/4/2017	Reduction of common mode voltage in indirect vector controlled induction motor drives using CNN	Completed	Open seminar completed
4	Mrs.Gayathri J	3VC20PEE02	Dept of EEE, RYMEC ,Ballari 2022	segmentation of tumors in 3D medical image using deep learning techniques	Cleared entrance exam and got registered	
5	Mrs.Deepa B	R20PEE01	Reva University 10/10/2020	Syncro phasor measurements technology using µPMU for smart distribution system monitoring and control	Completed	Comprehensive Viva completed
6	Mr.Santha kumar U	21RD2P0230	JNTUA 30-06-2022	Power Electronics	Cleared entrance exam and got registered	

Table B.5.7.1f Faculty Pursuing Ph.D. in EEE Department

6. Research Centre Details

SL. No	Research Supervisors	Research Scholar	Register No	Title	University
1	Dr.Shivakumar	Mr.Sampath Kumar	5VZ16PEJ33	Evolutionary Algorithms based load Sensitive dynamic EMS for Hybrid Renewable System	VTU, Belagavi
2	Dr.S Kotresh	Ms. J Gayathri	Not received USN	segmentation of tumers using deep learning techniques	VTU, Belagavi
		Mr.Santosh M	Dept. of ECE,RYMEC, Ballari	A new approaches for Image reconstruction using deep learning	VTU, Belagavi

Table B.5.7.1g Details of Research Scholar & Research Supervisors under EEE Research Centre

7. Ph.D. awarded during the assessment period

Research Supervisors	Research Scholar	Research Topic	University	Date of Completion
Dr.Shivakumar	Mr. Sampath Kumar	Evolutionary Algorithms based load Sensitive dynamic EMS for Hybrid Renewable System	VTU, Belagavi	08-06-2020

Table B.5.7.1h Ph.D. Granted During Assessment Year

Faculty name	Research Topic	University	Date of Completion
Mr B.Doddabasavana Goud	A New Instrumentation System For Separation And Detection Of RBC and WBC Components In Whole Blood	JNTU Ananthapur	viva-1.080 2018 27-02-2019
Mr.S Kotresh	Estimation & Analysis Of Fractal Dimensions Of EEG Seizure During Electroconvulsive Therapy & Comparative Analysis With Neural Networks And Wavelets	VTU, Belagavi	March 18 2019
Mr.K Ragavendra Prasad	The design and development of data hiding using deep learning	SSSU , SEHORE	06-06-2022
Mr. Shambulingana gouda	simulation of speed control of drives :controlling by applied voltage	SSSU , SEHORE	06-06-2022
Mr.Hanumatha Rao A	Probabilistic optimal power flow of Karnataka power grid incorporating FACTS Controllers	MEWAR university	21 jan 2023

Table 5.7.1.i Details of Ph.D. awarded during the assessment period

5.7.2. Sponsored Research (5)

CAY (2021-22)				
Sl.No	**Project Title**	**Funding Agency**	**Amount**	**Duration**
01	IoT based Automatic Tank Cleaner for Drinking Water	Unnat Bharat Abhiyan(UBA)	**1,00,000**	**1 year**

CAY m1(2020-2021)				
Sl. No.	**Project Title**	**Funding Agency**	**Amount**	**Duration**
1	Smart Electric cart for street vendors	KSCST	5500.00	6 months
2	Automated waste segregator	KSCST	5000.00	6 months

3	Portable Energy Meter	VTU Financial assistancefor final year projects	5000.00	6 months
4	Smart Electric cart for street vendors	VTU Financial assistancefor final year projects	5000.00	6 months

CAYm2(2019-2020)				
Sl. No.	**Project Title**	**Funding Agency**	**Amount**	**Duration**
1	**Bio fertilizers from waste segregation**	**Karnataka Innovation & Technology Society Department of Electronics, IT,BT,S&T, GOK New Age Incubation Network NAIN**	**3,00,000-00**	**1 year**
2	**3 phase distribution board with display**	**Karnataka Innovation & Technology Society Department of Electronics, IT,BT,S&T, GOK New Age Incubation Network NAIN**	**26,500**	**1 year**
3	**Automated Bio fertilizer generating unit**	**KSCST**	**5000-00**	**1 Year**

Table B.5.7.2a Details of Sponsored Research

a. Sponsored Research Laboratory

Sl no	Name of the Lab	Funding Agency	Tools available
1	NAIN	New Age Innovation Network – NAIN	Computers - Intel i3, 500GB HDD, 4GB RAM

Table B.5.7.2b Details of Research Sponsored Laboratory

New Age Innovation Network – NAIN

NAIN is an Entrepreneurship Development Program launched under the startup policy-2015, It focuses on creating an ecosystem to promote innovation and entrepreneurship in Karnataka. Under this scheme K-tech Innovation Hubs are established in various districts of Karnataka which are fully funded by Government of Karnataka. The students studying in different disciplines are motivated by project funding and mentoring to set up their own start-ups for self- employment. Under NAIN the students are encouraged to identify local problems and address those problems using concepts of frugal innovation to develop appropriate technology-based solutions and working prototypes. The mentors assigned to the students help them to formulate a Business Model based on this new technology and encourage them to think like entrepreneurs.

NAIN Objectives

- The main objective of NAIN Scheme is to encourage students, research scholars and alumni to share their ideas to solve chosen problems which are local centric and to validate, Refine and Nurture the ideas.
- Incubation Center shall provide an eco-system to covert the ideas in proof of concept and upgrade them to a level of commercial value.
- After successful incubation, encourage and lead the teams towards setting up a Business enterprise.

5.7.3 Development activities (10)

1. Product Development

Details of project prototype developed:

CAY 2021-22			
Sl.No	Project Prototype Developed	Guide Name	Awards / Prizes
01	IoT Based Automatic Tank Cleaner for Drinking Water	Mr.Elia Sundaram /A.Sharanabasappa	1 LAKH Funded by UNNAT BHARATH ABHIYAN Central Govt of INDIA
02	IoT Based message conveyor system for paralytic people	Gayatri J	Got recognition of in state level IEEE Project symposium PRAKALP-2022
03	Low cost solar powered electric vehicle for milk vendors	U Shantha Kumar	Got recognition of in state level IEEE Project symposium PRAKALP-2022
04	Electrical Vehicle Garbage Carrier	Mrs.Anusuya patil/Deepa.B	Got recognition of in state level IEEE Project symposium PRAKALP-2022

CAY 2020-21			
SL.NO	**Project Prototype Developed**	**Guide Name**	**Awards / Prizes**
1.	Smart Electric Cart For Street Vendors	Mr.Lingana Gouda R	Awarded For Best Project/KSCST, GOVT OF KARNATAKA Selected for top 10 project in UBA innovative Idea
2.	Automated Waste Segregator	Mr.A.Sharanabasappa	Awarded For Best Project /KSCST Selected for top 10 project in UBA innovative Idea
3.	Portable Energy Meter	Mr.H.Vinay Kumar	Selected For VTU Financial Assistance For Final Year Projects
4.	IOT based solar green tree	Dr.U.M.Nertavati	Selected for top 10 project in UBA innovative Idea

CAY 2019-20			
SL.NO	**Project Prototype Developed**	**Guide Name**	**Awards / Prizes**
1	Automated Bio fertilizer generating unit	Mr.Hanumantha Reddy	Selected for NAIN Projects
2	Bio Fertilizers From Waste Segregation	Mr.Hanumantha Reddy	Selected for KSCST Projects
3	Micro Controller Based Automatic Hand Sanitizer Machine	Dr.S Kotresh	Installed in the department
4	Solar Based LED Lightning System	Dr.S Kotresh	Installed in the department
5	IOT Based Intelligent Domestic System Using Android Est32	Mr.Diawakar B	Installed in the department

Table B.5.7.3a Details of projects developed at Research Centre

2. Research Laboratories:

The following are the list of major Equipment/Software available at the Research Laboratory

Sl no	Equipment/Software	Quantity / User
1	Matlab Software	10
2	Scilab Software	Free open source
3	CAED Software	10
4	Arduino Boards	14
5	GSM modules	05
6	Wi-fi modules	05
7	Bluetooth Module	15
9	Connectors	150
10	IC And Bread Board	10
11	i3 Computer systems.	08
12	Systems with E-contents availabilitythrough Digital Library	05
13	Turnitin Software for plagiarismchecking	01

Table B.5.7.3b List of major Equipment / Software's

3. Instructional materials

Sl No	Location	Instructional materials
1	AEC Lab	Amplifiers ,oscillators ,bread boards ,IC 'S AEC Lab Manual
2	Microcontroller Lab	Micro controller kits ,computers ,Microcontroller lab Manuals
3	Machines lab	Transformers, Motors, Generators Machine lab-01 and Machine Lab-02 with relevant Lab Manuals.
4	CAED/PSS Lab	Computers ,CAED/PSS Lab
5	PE Lab	PE Lab Manual
6	Relay and High voltage lab	Motor protection unit, under and over voltage relays, measurement of high AC and DC voltages , HVE lab manual

7	Basic Electrical Lab	All the laboratory setup is domestically prepared by Electrical staff only with technical manual and models such as : 1.Verification of Kirchhoff's current and voltage laws 2. Measurement of current, power and power factor of different lamps. 3. Two way and three way control of a lamp and formation of truth table. 4. Study the effect of open and short circuit in a simple circuit.

Table B.5.7.3c Details of Instructional materials

4. Working models /charts/monograms:

Sl. No	Labs	Charts	Models
1	Basic Electrical lab	• Precautions, • Construction details of transformer. • KVL and KCL laws, • Difference between star anddelta connections, • construction details of DCmachines	• Modules of DC & AC motors, DC & AC generators, transformers,Ammeter, voltmeter, wattmeter. • Modules of verification ofKVL& KCL. • TWO WAY and THREEWAY control of lamps. • Measurement of current, power and power factor ofdifferent lamps. • Study the effect of openand short circuit in a simple circuit.
2	Analog Electronics lab	Charts of truth tables of Basic andUniversal gates.	Bread Boards, IC ,Diodes etc
3	Power electronics lab	Circuits and waveforms of DIAC,SCR,UJT,TRIAC and RECTIFIERS	Bread Boards, IC ,Diodes etc
4	Machines lab	• First Aid for Electric Shock • Precautions for safety in electric lab. • charts of famous scientists	Modules of old rare DC & AC motors, DC & AC generators, transformers
5	Department Project Lab		Module Of Smart ElectricCart For Street Vendors

6	Department Project Lab		Module Of IOT Based Solar Green Tree
7	HOD Chamber	• Mission, Vision Statements of department. • PO, PEO, PSO	Module Of Micro Controller Based Automatic Hand Sanitizer Machine
8	HOD Chamber	• List of staff members	Module Of IOT Based Intelligent Domestic System Using Android Est32

Table B.5.7.3d Details of Charts and modules

5.7.4 Consultancy (from Industry) (5)

Funding amount (Cumulative during assessment years):

Amount > 10 Lacs – 5 Marks

Amount >= 8 Lacs and <= 10 lacs – 4 Marks
Amount >= 6 Lacs and < 8 lacs – 3 Marks
Amount >= 4 Lacs and < 6 lacs – 2 Marks
Amount >= 2 Lacs and < 4 lacs – 1 Mark
Amount < 2 Lacs – 0 Mark

ACCADEMIC YEAR 2021-22

Project Title	Duration	Funding Agencies	Amount
Third Party Inspection	**12 months**	**town municipal corporation**	**1,20,258/-**

ACCADEMIC YEAR 2020-21

Project Title	Duration	Funding Agencies	Amount
Third Party Inspection	**12 months**	**town municipal corporation**	**1,02,050/-**

ACCADEMIC YEAR 2019-20

Project Title	Duration	Funding Agencies	Amount
Third Party Inspection	**12 months**	**town municipal corporation**	**1,00,000/-**

Table B.5.7.4 Details of Consultancy

5.8. Faculty Performance Appraisal and Development System (FPADS) (30)

A Faculty Performance Appraisal and Development System is essential to each academic institution looking forward to the long-term promotion of faculty competence and academic excellence.

The objectives of Faculty Performance Appraisal Development System

1. To Assess and promote excellence in the teaching/learning process.
2. To meet the educational needs of students and community by continually monitoring instructional performance.
3. To provide a constructive framework for evaluating faculty performance by identifying areas of strength and areas for improvement in classroom instruction.
4. To provide a basis for professional growth and development.

I. Components of Faculty Performance Appraisal Development System

1. Students Feedback
2. Faculty Self Appraisal

1. Students Feedback

Following are the components considered for Students Feedback

1. Presentation of the subject matter
2. Preparation for the class
3. Oral communication
4. Regularity and punctuality in conducting classes.
5. Coverage of syllabus
6. Clearing the doubts inside/outside the class
7. Level of interest shown in the class.
8. Maintenance of discipline and relationship with the students
9. Availability of teacher in department for discussion
10. How comfortable are you with the teacher.

Each componentisrated by giving 1to 10 points.

- Below average:1-4
- Average:5-6
- Good:7-8
- Excellent:9-10

The performance analysis of faculty is carried out by calculating the average rating and the number of student responses for each component of the student feedback.

2. Faculty Self Appraisal form:

Individual faculty member's rate themselves by completing the Faculty Self-Evaluation Form, being as objective as possible. Based upon self-evaluation finding correlated areas of interest for self-improvement, the faculty member notes proposed professional development opportunities. The components of the Faculty Self-Appraisal Form are

- **Faculty contribution towards Research**
  1. Publications in conferences and Journals
  2. Submission of Research proposal
  3. Contribution to growth of any industry, consultancy to industry, any solution developed by you is used in industry
  4. Books, Printed lab journals, compendium, or any printed contribution to your academic area
  5. Invited talks, workshops, conferences organized by you as coordinator or important role in the organization of the event
  6. Funds received from funding agencies in last three years
  7. Membership with Professional bodies (IEE,ISTE)
- **Faculty contribution towards curriculum**
  1. Best practice that is introduced to improve teaching and learning process
  2. Abstract why student should join your department for pursuing higher education (BE course)
  3. Course taught by you which contributes to contents beyond syllabus
  4. What is your role in publishing newsletter of the college/Department
  5. Contribution to E-Learning contents
  6. List students under your guidance acquired certificates that can be used as proof of Lifelong Learning
  7. Your contribution to help direct and indirect analysis of NBA. Collection of feedback forms of Alumni, Parent, and Employer for assessment of PEO and PO.
  8. What is the role played by you in finalization Vision, Mission, PEO, PSO's or any other document

9. Analysis of CO-PO mapping in last three years and suggestion to improve attainmentof PO's. Expected target level shall be more than 50%.
10. Analysis of course exit survey and suggestions to improve attainment of CO and PO's
11. Analysis of CO-PO mapping of Project works through rubric form in last three years

- **Faculty contribution at Department/Institute level**

1. What is your contribution to the department in the current academic year?
2. Philosophy of teaching that includes staff member conception of teaching and learning, description of how staff members teach and justification for why you teach that way
3. Visiting status in other engineering institutions/universities
4. Have you helped the department to have MOU with any industry, Specify industry name and its activities
5. Improvements in the department observed by you since last accreditation visit
6. List five strong and five weakness points about you
7. List at least three points why your presence or service is important to the department or college
8. List five strong and weakness of the department in preparation of NBA.
9. Role of Staff member at the institute level
10. Faulty publication in collaboration with peers of other institution
11. What is your contribution to improve campus placements /higher education etc.
12. Any other information that can help assessment of staff member or Help NBA process

Each faculty submits the Self Appraisal form annually to the HOD.

II. Evaluation of faculty Form by Head of the department

Head of the department completes the Evaluation of Faculty Form using the Information from observation of instruction, review of syllabi, evaluation of other duties, feedback from students, and subject results. HOD evaluates each faculty based on the following parameters:

1. Character and conduct
2. Regularity and punctuality/availability during the working hours/frequency ofleaves availed
3. Attitude towards work.
4. Papers published
5. Papers presented
6. Sponsored projects
7. Presentation in class rooms/labs
8. Communication skills
9. Shouldering responsibility /Extra Curricular activities
10. Memos

Each component on the evaluation is rated by giving 1 to 10 points.

- Poor (2)
- Fair(4)
- Good(8)
- Excellent(10)

Based on the observation, HOD recommends promotion/increment for the faculty to the principal office.

III. Evaluation by external

1. Faculty performance appraisal are evaluated by External member
2. The report will be verified and forwarded to the head of the institution

IV. Evaluation by Principal office

1. Supports and monitor the execution of the system.
2. Verifies and accredits the results submitted by the respective departments.

3. Considers revaluation applications submitted by each faculty.
4. Prepares final college faculty evaluation report.
5. Sends final report/s to the Office of Evaluation.

Based on the feedback given by HOD, the principal office recommends for further action.

IV. The Office of Evaluation:

1. General supervision of the application of the Faculty Performance Review and Development System.
2. Cooperation with the various departments of the colleges to implement the Review andDevelopment System.
3. Contribution in overcoming problems arising at the time of implementation of the Reviewand Development System.
4. Preparation of the final Faculty Review and Development Report and submits to themanagement
5. Document Confidentiality: Evaluation documents and materials prepared and gathered inthis process are treated as confidential and limited to authorized persons.

After completion of the system, the concerned Head of the Department is required to meet with every faculty member in person to provide necessary feedback on strengths and weaknesses of the faculty performance, so as to launch a better future plan.

Faculty Performance Appraisal form is attached below

V.V.Sangha's
Rao Bahadur Y. Mahabaleswarappa Engineering College
Cantonment, Ballari-583104

Part – A : Faculty's General Information

(Note: Fill all the necessary details as applicable during the period from 2014 to 2015 in Bold Letters only)

1	Name					
2	Date of Birth (Age)					
3	Gender					
4	Blood Group					
5	Department					
6	Designation					
7	Employee ID					
8	Qualification Details	Degree	University	Specialization	% age	Passing Year
		Ph.D				
		M.Tech				
		B.E.				
		Others				
9	Experience Details	Field			Years	Months
		Research				
		Administrative				
		Teaching (Other Institutions)				
		Teaching (RYMEC)				
		Total Experience :_____Years _____ Months				
10	Present Pay / Scale of pay					
11	Date of Increment					
12	PF (if any) with PF Number					

13	Mobile Number	
14	Email ID	
15	Aadhar Number	
16	PAN number	
17	Membership of professional Bodies	
18	Permanent Address	
19	Current Address	
20	Any Other Relevant information	

Date :
Place : **Signature of the Faculty**

Part – B : Faculty's Detailed information required for Appraisal

(Note : Attach all the supporting documents as applicable during the period from 2014 to 2015)

Workload				
	UG		PG	
	Theories	Labs	Theories	Labs
Even Semester				
Odd *Semester*				
Projects / Research Guidance				
Projects Guided (UG/PG)	UG Projects			
	PG Projects			
Ph.D	Degree Awarded			
	Thesis Submitted			

	Course Work Completed	
	Registered	

Extra Works / Additional Responsibilities	
Departmental Level	**Institutional Level**

No. of leaves availed during academic session					
No. of days of leave availed					
CL	**EL**	**CM**	**RH**	**CO**	**OOD**

Exam Duties			
Sl. No	**Type of Duty**	**Venue**	**No. of Days**

Conferences and Journals Attended / Papers Published					
Sl. No.	**Type (NJ/NC/IJ/IC)**	**Details of Journal / Conference**	**Title of paper**	**ISSN/ISBN No.**	**Venue**

Workshops and FDPs organized / attended

Sl. No.	Type (WS / FDP)	Title	Duration	Date & Venue	Organized / Participated

Book(s) / Article(s) / Chapter(s) Published

Sl. No.	Title with Page No's	Publisher & ISSN ISBN No.	Sponsoring Agency & Expenditure	Date of Publishing

Projects / Researches Funded / Grants

Sl. No.	Title of the Project	Funding Agency	Duration	Amount Granted

Active Involvement in College Admission

Any Other Relevant Information

I hereby certify that all the information provided is correct as per records available with the Department / Institute / Personal and/or documents enclosed with the duly filled application.

Date :
Place : **Signature of the faculty**

Part – C
To be filled by the Head of the Department

Note : **A** for Excellent (10), **B** for Good (8), **C** for Fair (4) and **D** for Poor (2)

Sl. No.	Related to	A	B	C	D	Score
1	Character and conduct					
2	Regularity and punctuality					
3	Attitude to work					
4	Subject Knowledge					
5	Presentation in Class rooms / Labs					
6	Attitude towards students					
7	Communication Skills					
8	Shouldering responsibility					
9	Extra Curricular activities					
	Total Score					

Feedback of Students

Semester	Subjects / Labs taught	Result %	Feedback
Even Semester			
Odd Semester			

Observations and Recommendations of the HOD

Date :	Signature of the HOD
Place : Ballari	
Place : Ballari	

Observations and Recommendations of the Principal

Date :	**Signature of the Principal**
Place : Ballari	

1. Administrative Responsibilities at Institution level

Sl.No	Faculty Name	Responsibility
01	Dr. S Kotresh	HOD ,NSS
02	Dr. Dodabasavanagoud B	Grievance Cell, RYMEC society president
03	Mr. K Ragavendra Prasad	Anti-Raging committee member
04	Dr. U M Netravati	UBA coordinator, Women's cell co convener
05	Mrs.Anusiya patil	Swath Barath committee
06	Mr.K k Gururaj	Placement in charge
07	Mr.A Hanumantha Rao	Press and media in charge
08	Mr.Shambulingana Gouda	Power house in charge
09	Mr.Elia sundaram H M	1st year mentor & 360 degree in charge
10	Mrs.Gayathri	IQAC Member
11	Mr.A sharanabasappa	PPT Team in charge
12	Mr.H Vinay Kumar	Display committee and admission committee
13	Mr.R Lingana gouda	Energy audit in charge
14	Mr.U Shantha kumar	UBA member ,news letter committee member
15	Mr.Hanumatha reddy	ISTE Member , admission committee
16	Mr.Rajashekar k	Admission committee, Best practices committee member, Scholarship team
17	Mrs.Deepa B	Women's cell, NSS member
18	Mrs Amrutha G E	Women's cell, NSS member

Table B.5.8a Staff's Administrative Responsibilities at Institution level

2. Awards and Ranks received by the Faculty

Sl. No	Faculty Name	Particulars	Year
01	Deepa B	Appreciation from Elsevier for publishing an open access	2022
02	Mrs.Gayatri	got Appreciation from state level IEEE project Symposium PRAKALP-2022	2022
03	Mr.Lingana gouda R	Grant from KSCST	2021
04	Mr.Lingana gouda R	Selected for VTU Financial assistance for final year projects	2021
05	Mr.H Vinay Kumar	Selected for VTU Financial assistance for final year projects	2021
06	Dr.U M Netravati and Mr.Diwakar B	Selected in top 10 project of north east region conducted by (UBA & NECTAR) at Guwahati ,ASSAM	2021
07	Mr.Aladalli Sharanabasappa	Selected in top 10 project of north east region conducted by (UBA & NECTAR) at Guwahati ,ASSAM	2021
08	Mr.Lingana gouda R	Selected in top 10 project of north east region conducted by (NECTAR) at Guwahati ,ASSAM	2021
09	Dr.S B Shiva kumar	Grant from Karnataka Innovation & Technology society, IT, BT, S&T ,GOK under NAIN scheme	2020
10	Mr.Hanumatha reddy	Grant from Karnataka Innovation & Technology society, IT, BT, S&T ,GOK under NAIN scheme	2020
11	Dr.S B Shiva kumar	Authored 1 Books	2019
12	Mr A Hanumantha Rao	Best Paper Presented in International conference	2018
13	Mr. A Hanumantha Rao	Excellence in Teaching	2005

Table B.5.8b Details of Awards and Ranks received by the Faculty

3. Faculty Interaction with outside world

Year : 2020-21		
Sl. No	**Faculty Name**	**Interaction**
1	Dr. S Kotresh	Resource person for AICTE Sponsored 5 days online FDP on "ELECTROPHYSIOLOGY AND NEURO-INSTRUMENTATION"
		VTU BOE member
		Jury member for the virtual project exhibition "Shakthistasavara 2021" at GSSIETW Mysore
2	Dr.U M Netravati	Member Board of Studies-BOS Department of E&E –VTU Belagavi
3	Mr.R Lingana Gouda	IEEE Reviewer for ICMNWC-2021 ,at Tumkur
4	Mr.U Shantha kumar	TOYCATHOM 2021 Primary evaluator
5	Mr.Rajashekar K	State Scholarship E-attestation officer(Social welfare department, Govt. of Karnataka(SSP)
6	Mr. K Raghavendra prasad	Academic Council Member, Vijayanagara Sri krishnadevaraya University ,Ballari

Year : 2019-20		
Sl. No	**Faculty Name**	**Interaction**
1	Dr. Doddabasavanagoud B	Syndicate Member, VSK university, Ballari: Nominated by honorable Governor of Karnataka for 3 years and involved in various university development activities.
		Conducted self defence skills exclusively for girl students by EEE department along with NGO's on 31-10-2019 at BDA ground bellary for girl students under a title "Mission Sahasi"(K.arate martial arts).
2	Dr. S Kotresh	VTU BOE member
		Jury member for the ICETETM-2019" at PDIT HOSAPETE
3	Mr.Rajashekar K	Question Paper setting for BEC Bagalkot of Subject "Transmission and Distribution " & "Electrical power Generation "
4	Mr.Lingana gouda R	Question Paper setting BEC Bagalkot of Subject "power system analysis"
5	Dr.U M Netravati	Member Board of Studies-BOS Department of E&E –VTU Belagavi
Year : 2018-19		
Sl. No	**Faculty Name**	**Interaction**
1	**Dr B Doddabasavanagoud**	Conducted self defence skills exclusively for girl students by EEE department along with NGO's on 30-10-2018 at BDA ground bellary for girl students under a title "Mission Sahasi"(K.arate martial arts).
2	Dr. S B Shiva Kumar	VTU BOE member
3	Mr.Hanumantha reddy	Question Paper setting BEC Bagalkot of Subject "Signals and system"
Year : 2017-18		
Sl. No	**Faculty Name**	**Interaction**
1	A.Sharabasappa	Question Paper setting BEC Bagalkot of Subject "Microcontroller"
2	Mr.H Vinay Kumar	Question Paper setting BEC Bagalkot of Subject "Analog Electronics"

Table B.5.8c Details of Faculty Interaction with outside world

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

Staff Name	AY	Sem	Topic/Course	No of hours Taken
Ramesh. H Executive Engineer, RT section, KPTCL	2021-22	3rd	Distribution System	25
		5th	Distribution System	25
T.K.Nagaraj Rao, Mangalore Refineries, Mangalore	2020-21	5th sem	Electric Safety measures	25
		7thsem	Electric Safety measures	25
Ramesh. H Executive Engineer, RT section, KPTCL	2019-20	4th	Transmission system	25
		6th	Transmission system	25

Table B.5.9 Details of Adjunct Faculty

CRITERION-6

Academic Year 2021-22

CRITERION 6	Facilities and Technical Support	80

6. Facilities and Technical Support

6.1 Adequate and well equipped laboratories, and technical man power(30)

Table 1: Adequate and well equipped laboratories, and technical man power

Sl. No	Name of the laboratory	No. of students per setup (Batch size)	Name of the major equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical man power support		
					Name of the technical staff	Designation	Qualification
01	Electrical Machine Laboratory	20	• 1Φ Transformers 5 KVA 1.5 KVA 1.25KVA • 1Φ Dimmers 8A 4A • 3 Φ Auto transformer 28A • Salient pole Alternator coupled with dc shunt motor • D.C Motors • D.C Generators • Synchronous generators • 1Φ Induction Motor, • 3Φ Induction Motor • Capacitor Start Induction Motor • Slip ring Induction Motor • DC Series Motor Generator Set • DC Shunt Motor Generator Set • Hopkinson's Testing	100% Utilization (18 hrs)	Veeresh M	Foreman	DEE

			Set • DC Static Rectifier Sets -2 • DC Distribution Panel Board • AC Distribution Panel Board • DC Motor Alternator set				
02	Electronics Laboratory	20	• CROs • Signal Generators • Regulators • Dual Power supply • Fixed Power supply • RPS • Analog & Digital IC Tester	100% Utilization (18 hrs)	Prabhu deva H	Instructor	B.Sc
03	Op-Amp & Linear ICs Laboratory	20	• IC 741 • IC 78XX and 79XX • 555 Timers • DMM • Diodes • Resistors • Capacitors • Multimeters • RPS • CRO with probes • Signal Generators, Regulators • Dual Power supply • Fixed Power supply • RPS • Digital IC Tester • Bread Boards for Connection	100% Utilization (18 hrs)	Prabhu deva H	Instructor	B.Sc
04	Micro controller Lab	20	• HCL Computers with Core 2 DUO CPU @3.0GHz;1.5GB RAM; 250GB HD • DELL OptiPlex 390 computers with Intel core i3 @ 3.30GHz;3 GB RAM; 500GB HD • ALS-DSA-51 MEL 8031/51 Microcontroller Trainer kits • Power supply • CRO ‘s • ALS- NIFC-45 LCD &	100% Utilization (18 hrs)	Ayyana Gouda	Electrician	ITI

			Keyboard interface • ALS- NIFC-55 DC Motor interface • ALS-NIFC-01A Stepper motor interface • RIDE Software • KEIL ATMEL Interfacing software				
05	Power Electronics Lab	20	• SCR, TRIAC Characteristics Study Unit • MOSFET, IGBT Characteristics Study Unit • Digital Firing Circuit • DC Motor Speed Control Unit (using MOSFET/IGBT Chopper)- 0.5HP/220V • Single Phase Convert Power Circuit 230V, 5 Amps • Light Dimmer Circuit Using TRIAC/DIAC • Universal Motor Control Unit • CROs	100% Utilization (18 hrs)	Nandeesha H M	Assistant Instructor	DEE
06	Control Systems Lab	20	• AC servo motors • DC Servo Motors • Second order system • Signal Generator • CRO	100% Utilization (18 hrs)	Nandeesha H M	Assistant Instructor	DEE
07	Digital Signal Processing Lab	20	• HCL Computers with Core 2 DUO CPU @3.0GHz;1.5GB RAM; 250GB HD • DELL OptiPlex 390 computers with Intel core i3 @ 3.30GHz;3 GB RAM; 500GB HD • MATLAB software • Software Mi-power • Hp printer-01	100% Utilization (18 hrs)	K Veera bhadrappa	Assistant Instructor	PUC JLC, JOC (Electrical)
08	Power System Simulation Lab	20	• Dell Optiplex 3020, i5 processor Windows-7, 32 bit 8GB Ram 250GB HDD, 17.5 LED	100% Utilization (18 hrs)	Ayyana Gouda	Electrician	ITI

			Monitor • MATLAB software • Printer				
09	Relay &High Voltage Lab	20	• Electromechanical Based Over Current Relay Test Unit • Static Negative Sequence (Numeric) Test Unit with source and motor. • Microprocessor Based (Numeric) over/Under Voltage Relay Test Unit • Feeder Protection Study Unit- against Faults • Motor Protection Study Unit- Against Faults • 0-60KV Oil Test Unit • Field Mapping Using Electrolytic Tank Unit • Test Unit to Realize Spark over Characteristics of Air subjected to High Voltage AC/DC with Spark Voltage Corrected to Standard Temperature and Pressure for Uniform and Non-Uniform Configurations: Sphere, Point -Plane.	100% Utilization (18 hrs)	K Veera bhadrappa	Assistant Instructor	PUC JLC, JOC (Electrical)
10	Basic Electrical Engineering LAB	25	• KVL and KCL circuit board with R values 500Ω • Decade resistance boxes • Incandescent lamp Fluorescent lamp LED lamp experiment • Choke coil or inductor coil of 1φ • 1φ transformer 1 KVA	100% Utilization (18 hrs)	Nandeesha H M	Assistant Instructor	DEE

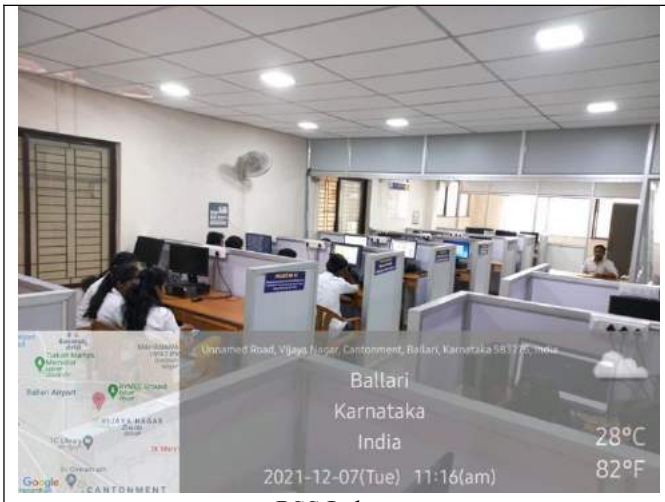
			• Two way control of lamp • Three way control of lamp • Digital Earth resistance tester with electrodes • open circuit and short circuit of a simple lamp circuit • 3φ and 1φ Resistive load				
11	Project Lab	20	• DELL OptiPlex 390 computers with Intel core i3 @ 3.30GHz;3 GB RAM; 500GB HD with NET Connectivity • IEEE Paper Access facility(Library) • IC Trainer kits, Bread Boards. • IC Tester, Soldering gun • LCD Projector	100% Utilization	Veeresh M	Foreman	DEE

EC/CS Laboratory

HVE Laboratory

Machines Laboratory

Micro-Controller/DSP Laboratory

	
PSS Laboratory	PE/OA&LIC Laboratory

ರಾವ್ ಬಹದ್ದೂರ್ ವೈ.ಮಹಾಬಲೇಶ್ವರಪ್ಪ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು, ಬಳ್ಳಾರಿ
(ಹೊಸದಾಗಿ ವಿಜಯನಗರ ಇಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜು)
THE VEERASAIVA VIDYAVARDHAKA SANGHA'S
RAO BAHADUR Y.MAHABALESWARAPPA ENGINEERING COLLEGE
(FORMERLY VIJAYANAGAR ENGINEERING COLLEGE)
CANTONMENT, BALLARI - 583104. (KARNATAKA)
(AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI & APPROVED BY AICTE, NEW DELHI)
e-mail: principalrymec@gmail.com, principal@rymec.in
Website: www.rymec.in
Off: 244809
Fax: 242148
14039

Ref: RYMEC/EST/Appoint/2019-20

Date: 01.08.2019

APPOINTMENT ORDER

Mr. Nandeesh. H.M is appointed as **Assistant Instructor** in the **Department of Electrical and Electronics Engineering** of Rao Bahadur Y Mahabaleswarappa Engineering College, Bellary, on consolidated pay of Rs. 10,000/- per month on purely temporary basis and effect from 01.08.2019. You should report to the Principal, RYMEC, Ballari.

01	She/he shall not leave the station without prior permission of HOD and Principal of the Institution and she/he will be available in the campus during working hours.
02	He/ She is to discharge his/her duties and other relevant assigned work by the authorities in addition to the academic work.
03	The services are Governed by the Service rules and regulations of V.V. Sangha, Bellary as existing now and amended from time to time.
04	In the event of unsatisfactory work or misconduct his/her services are liable for termination at any time without notice.
05	In case he/ she wish to resign for the said post compulsorily Three months advance notice should be given for getting relieved from the services with submission of No due certificate
06	He/ She is entitled to 12 days of Casual Leave per annum and not entitled to avail vocation or any other paid leave.
07	He/she shall report for duty to the Principal, RYMEC, Ballari.

(J.S. Basavaraj)
Chairman,
Governing Council,
RYMEC, Ballari

To,
Mr. Nandeesha H.M.
W.No – 6, Mannur Swamy Matt,
Bandimote, Bangalore Road,
Bellary-583101
Copy to:
1. HOD, EEE Department,
2. EST Section / A/c's Section / Salary,
3. Personal file

Appointment Order

Incharge HOD-EEE

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

The lab skills targets in disseminating knowledge on Electrical Engineering laboratory practical skills and electric circuit simulation .The basic objective of the program is to train the students to enhance the knowledge of Electrical Engineering experiments based on present developments emerging challenges and trends. Apart from conducting the curriculum activities students are also involved in skill development by making use facilities available.

- P Spice/MATLAB.
- Internship provided by TATA Technologies Hub available in the Institution.
- Students are taken to Power House available in the campus to demonstrate the practical concepts of switch gear components and substation, earthing.
- Different wiring methods are taught in skill development centre.

Sl. No	Facility Name	Details	Reasons for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs /PSOs
1.	Web based virtual High Voltage laboratory	Simulation experiments supplements actual experiments and fills the gap between theory and practical	It is a good tool for teaching and also enables student to understand the influence of circuit parameters	UG students	High voltage engineering	PO1 PO2 PO3 PO4 PO5 PSO2
2.	MSP430 (MC/DSP Lab)	ALS SDAMSP430 Micro controller Board	To Provide required resources to carryout academic projects	UG students	Micro-controller lab/projects	PO4 PO5 PO12 PSO2
3.	SPJ C Complier for 8051 family (MC/DSP Lab)	SPJ C Complierfor 8051 family (SC 1+9Licenses)	To Provide required resources to carryout academic projects	UG students	Micro-controller lab/projects	PO4 PO5 PO12 PSO2
4.	Arduino Boards Raspberry PI Kits	Arduino Mega Arduino UNO Arduino NANO	To Provide required resources to carryout academic projects	UG students	projects	PO4,PO5, PO12 PSO2
5.	CNC vertical	ACE Micromatics3-	Content beyond syllabus and	UG students	Advanced Manufacturing	PO1 PO3 PO5 PSO1

	milling machine	Axis machining center(Model 430V)	training students			PSO2
6.	Industrial Robot for arc welding applications	YASKAWA, MOTOMAN arcwelding robot	Content beyond syllabus and training students	UG students	Advanced Manufacturing	PO1 PO3 PO5 PSO1 PSO2
7.	3D Experience Suite from Dassaults systems	3D Experience Suite comprise of 40 different tools for industrialdesign & development, research, digital manufacturing & consultancy	Content beyond syllabus and training students	Content beyond syllabus to make students industry ready	Industrial Design & Development, Digital Manufacturing and PLM	PO1 PO3 PO5 PSO1 PSO2
8.	nCyclo-Turn	Software fortraining on CNC turning	Content beyond syllabus to make students industry ready	Content beyond syllabus to make students industry ready	Digital Manufacturing	PO1 PO3 PO4 PO5 PSO2
9.	nCyclo-Mill	Software fortraining on CNC milling	Content beyond syllabus to make students industry ready.	Content beyond syllabus to make students industry ready	Digital Manufacturing	PO1 PO3 PO4 PO5 PSO2
10.	CFD	CFD Software	Content beyond syllabus to make students industry ready.	Content beyond syllabus to make students industry ready	Simulation and Testing	PO11 PO12 PSO2
11.	3D Printer	ULTIMAKER 3EXTENDED	Content beyond syllabus and training students	Content beyond syllabus	Advanced Manufacturing	PO1 PO3 PO5 PSO1 PSO2

				to make students industry ready		
12.	3D Scanner	EINSCAN SE 3D Scanner For Reverse Engineering	Content beyond syllabus and training students	Students, R&D work and Consultancy	Advanced Manufacturing	PO1 PO3 PO4 PO5 PSO1 PSO2
13.	ISRO FEAST	Software forlinear , non linear and thermalanalysis	Content beyond syllabus to make students industry ready	Training	Industrial Design & analysis	PO1 PO3 PO4PO5 PSO2
14.	Internet Facility	100Mbps	Essential tool for information & Communication	Studens &Staff	Information & Communication	PO12
15	High end Work stations(21Nos)	HP Z4G4 intel Xeon Processor, 32 GB RAM, 8GB Quadro Graphics	Training, R&D & Consultancy	Training	Information Technology	PO4 PO5 PO12

6.2.1 Additional facility created in laboratories:

Table 2: Additional facility created in laboratories

SI NO	Facility name	Details	Reason(s) for creating facilities	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs
01	Internet Facility	100MBPS	Self-Learning/ Seminars/ Presentations /Solve Assignments	Students and staff	Electrical and Electronics Engineering/ Present developing R&D work in electrical engineering/applications of Lab experiments	PO12
02	Laptop and Projector	DELL Laptop and EPSON Projector	To Demonstrate	As Needed	Presentation / Seminars	PO1/ PO5/ PO10/ PO11
03	Seminar Hall	Mike Setup and Projector Facility	For Conducting Workshops/ Seminars/ Conferences/ Dept Level Extra-Curricular Events	As Needed	Exposure To Current Technologies	PO1/ PO2/ PO10
04	Proctor System	Each staff is assigned a set of 20 Students	To Counsel and Motivate Students	Before and After The Internal	Know Their Weaknesses and Strengths And Improve	PO8

				Tests		
05	Tutorial Classes	Conducted for weak Students	To Improve Weak Students	As Needed	Subjects Opted By Students	PO1
06	Department Library	VTU Specified, Program Specific Text Books and Reference Books(540)	Additional Support For Students Not Under Book-Bank Scheme	As Needed	Curriculum Specified Subjects	PO1/PO2

6.2.2 Internet

Table 3: List of Internet Service provider

Name of the Internet provider	**Airtel**
Available bandwidth	100MBPS
Access speed	100MBPS
Availability of Internet as an exclusive lab	Yes
Availability in most computing lab	Yes
Availability in Departments and other units	Yes
Availability in Faculty rooms	Yes

Incharge HOD-EEE

6.3. Laboratories: maintenance and overall ambiance (10)

6.3.1 Academic Infrastructure & Facilities Maintenance details

Table 4: Academic Infrastructure & Facilities Maintenance details

Infrastructure & Facility	Maintenance Description
Laboratories	Well-furnished laboratories are cleaned by internal sweepers every day. A lab instructorlooks after the maintenance of each laboratory. A budget is allocated for the required consumables, new equipment, repairs and calibration if required. They also maintain lab manuals and lab journals. Maintenance and calibration of equipment's are carried out on regular basis.
Renewable Energy (Solar Power Generation)	The department has focused on conservation of energy using Renewable energy (Solar) which helps for environment as well as in saving power. Students along with faculties took initiation to complete solar energy projects in EEE labs as additional fuel for lighting . Go green method is adopted in the campus using solar cells yearly 720 KW-Hr (units) of energy can be saved.
Consultancy	The department takes the third party works from the Government/Semi government/ Private sectors. The faculty of EEE visits the locations and supervises the work carried out in phase wise. The condition of the procured equipment or quality of the work carried out will be reported to the concern as per the standard guidelines
Seminar hall	Seminar hall of the department is maintained by lab instructors at regular intervals.
Tutorial rooms	Tutorial rooms are cleaned every day by internal sweepers.
Equipment's	Lab instructors maintain the ledger book for equipment of the laboratory. They prepare the preventive maintenance schedules and maintain as per the schedule.
Computers	Lab instructors of each computer laboratory are responsible for maintenance of systems and software. Lab instructor carryout maintenance of eachcomputer at regular intervals..
Department library	Along with main library the book worms can get loads of books to read from department library and hence their knowledge. Department library helps in the overall development of staff and students with good ambience and fully flourished curriculum and non curriculum books.
Internet /Intranet	Internet related matters are maintained by a team of instructors and programmers. They maintain the daily band width, usage, band width allocation, sharing etc.

6.3.2 Ambience of the work places:

- Our Department has sufficient number of laboratories that are fully ventilated and provided with necessary concealed electrical wiring and Electrical items like fans, ACs, lights, projectors, computer systems with internet connectivity, printers, scanners etc.
- Faculty members are provided with cabins with all the necessary facilities (Like furniture, desktop System, Printers etc.,)
- Name of the laboratory is displayed in front of every laboratory.
- Name of faculty in charge and staff in charge are displayed in every laboratory.
- Sufficient floor area is available in all laboratories.
- Department layout diagram is displayed at the department entrance.
- Each laboratory is equipped with white/black board and other required amenities
- Safety systems are in place in case of any electrical emergency.
- Laboratory manual safety instructions are made available to the students.
- Corresponding equipment details are displayed in the laboratories.

6.3.3 Maintenance:

- Servicing of Lab equipments/components/probes are carried out regularly and on need basis.
- Computer/Internet Maintenance and software installations are carried out by the technical staff.

6.3.4 Sample Lab Manual

RaoBahadur Y.Mahabaleswarappa Engineering College

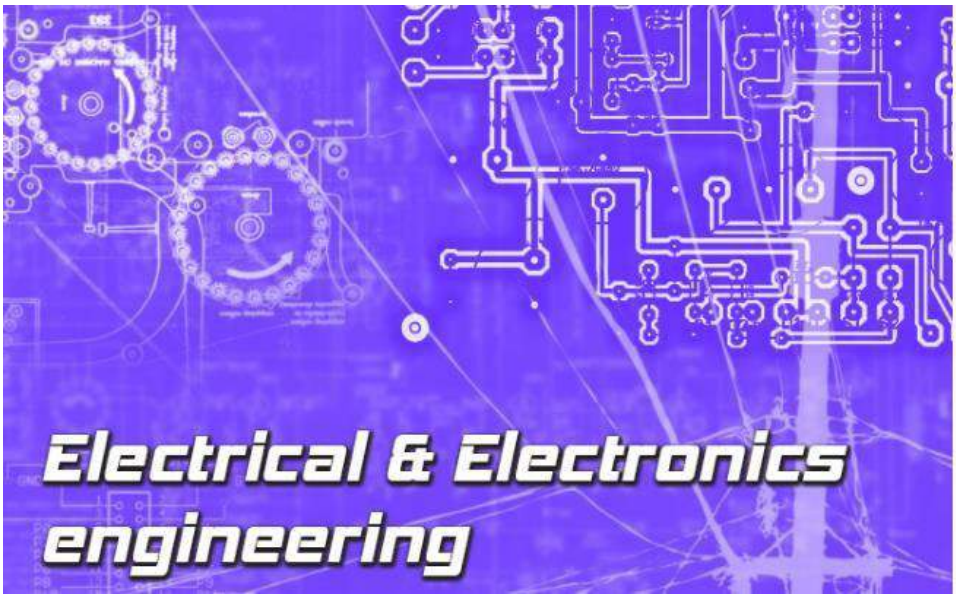
LAB MANUAL

Scheme: 2018

Branch: Electrical & Electronics

Engineering Year & Semester: 3rd /5th -

18EEL58 Power Electronics Lab



List of Experiments

1. Static Characteristics of SCR.
2. Static Characteristics of MOSFET and IGBT.
3. Characteristic of TRIAC.
4. SCR turn on circuit using synchronized UJT relaxation oscillator.
5. SCR digital triggering circuit for a single phase controlled rectifier and acvoltage regulator.
6. Single phase controlled full wave rectifier with R and R –L loads.
7. AC voltage controller using TRIAC and DIAC combination connected to Rand RL loads.
8. Speed control of dc motor using single semi converter.
9. Speed control of stepper motor.
10. Speed control of universal motor using ac voltage regulator.
11. Speed control of a separately excited D.C. Motor using an IGBT or MOSFET chopper.

RaoBahadur Y.Mahabaleswarappa Engineering College

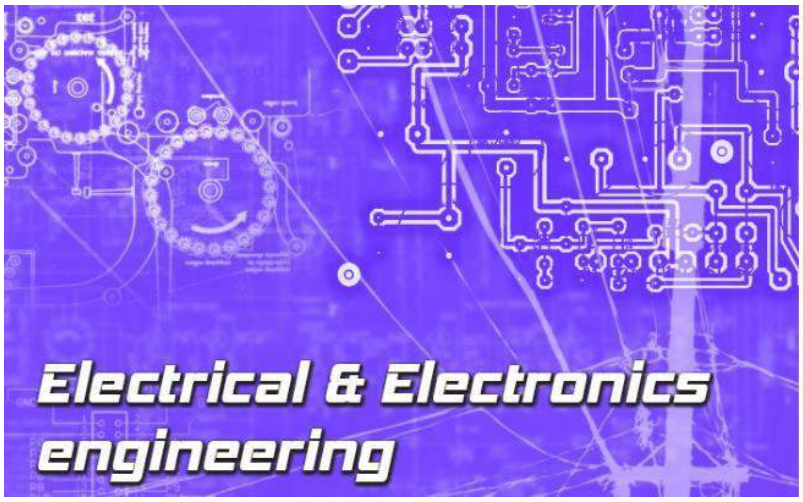
LAB MANUAL

Scheme: 2018

Branch: Electrical & Electronics Engineering

Year & Semester: 2nd /3rd -SEM

18EEL37 ELECTRICAL MACHINES LABORATORY - 1



List of Experiments

1. Open Circuit and Short circuit tests on single phase step up or step down transformer and predetermination of (i) Efficiency and regulation (ii) Calculation of parameters of equivalentcircuit.
2. Sumpner's test on similar transformers and determination of combined and individual transformer efficiency.
3. Parallel operation of two dissimilar single-phase transformers of different KVA and determination of load sharing and analytical verification given the Short circuit test data.
4. Polarity test and connection of 3 single-phase transformers in star – delta and determinationof efficiency and regulation under balanced resistive load.
5. Comparison of performance of 3 single-phase transformers in delta – delta and V – V (opendelta) connection under load.
6. Scott connection with balanced and unbalanced loads.
7. Separation of hysteresis and eddy current losses in single phase transformer.
8. Voltage regulation of an alternator by EMF and MMF methods.
9. Voltage regulation of an alternator by ZPF method.
10. Slip test – Measurement of direct and quadrature axis reactance and predetermination ofregulation of salient pole synchronous machines.
11. Performance of synchronous generator connected to infinite bus, under constant power andvariable excitation & vice - versa.

6.4 Project laboratories(5)

1. The project laboratories have been established in the department to aid the students and faculties in project work and research.
2. Licensed software and software's downloaded from open source are provided to students according to the requirements.
3. Network and Internet facilities are provided to students.
4. Training program, hand on experience workshops will be conducted for students.
5. Every project batch has been allotted with a guide in order to pursue with the projectwork.
6. As per the guidance of faculty member the students will conduct tests related to the project work and fabrication facilities are also provided.
7. The old project reports and the project models are displayed in the project lab premises for the reference of students.
8. Students are encouraged to participate in exhibitions and competitions.
9. Supporting staff provide their undue support to students in completing the project worksuccessfully.

Sl.NO	Facilities	Utilization
1	Software's Available in CIIT	For student Projects
2	Solar Panel assembling and measurement of output power is carried in the lab.	For student Projects
3	IOT/Arduino/microcontroller/DSP related projects are carried in the lab.	For student Projects

Automated Bio-Organic Fertilizer generating unit

Garbage carrier vehicle

Three phase lamp load

Smart electric cart for street vendors

Solar green tree

6.5. Safety measures in laboratories(10)

Electrical & Electronics Engineering Department has made suitable arrangements to protect the laboratories from unexpected hazardous fire accidents, short circuits or any other events shown below by equipping each laboratory with following safety measures.

SL. No.	Name of Laboratory	Safety Measures
1	**Electronics Lab/ Op- amp and Linear ICs Lab**	1) Do's and Don't s statements and Safety charts are displayed in the laboratory. 2) For the safety of the equipment and wires, MCB is provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. 7) Lab is under CC Cameras surveillance 8) For the safety of the workstations, it is provided with Uninterrupted Power Supply
2	**Power Electronics Lab/ Control Systems LAB**	1)Do's and Don't s statements and Safety chartsare displayed in the laboratory. 2) For the safety of the equipment and wires, MCB is are provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. 7) Lab is under CC Cameras surveillance
3	**Relay & High voltage Engineering Lab**	1) Do's and Don't s statements and Safety charts are displayed in the laboratory. 2) For the safety of the equipment and wires, MCB is provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. 7) Lab is under CC Cameras surveillance

4	**Electrical MachinesLab**	1) Do's and Don't s statements and Safety charts are displayed in the laboratory. 2)For the safety of the equipment and wires,MCB is provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. Lab is under CC Cameras surveillance
5	**Micro-Controller Lab**	1) Do's and Don't s statements and Safety charts are displayed in the laboratory. 2) For the safety of the equipment and wires, MCB is provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. 7) Lab is under CC Cameras surveillance For the safety of the workstations, it is provided with Uninterrupted Power Supply
6	**PSS Lab/DSP Lab**	1) Do's and Don't s statements and Safety charts are displayed in the laboratory. 2) For the safety of the equipment and wires, MCB is provided. 3) For the safety of the students, they are instructed to wear a dress code with shoes. 4) Proper Earthing so that it will protect from internal faults. 5) The laboratory is provided with fire extinguishers. 6) The laboratory is provided with First Aid Kits, also in house medical aid facility is provided under emergency. 7) Lab is under CC Cameras surveillance For the safety of the workstations, it is provided with Uninterrupted Power Supply

6.5.1 Safety Norms and Checks

- Checks for wiring and electrical installations for leakage and earthing.
- The safety of electrical equipment's is taken care by properly selecting the conductor size (Wire size) so that the wire will withstand during short circuits and unbalances.
- The safety of equipment and wires are provided by MCB and ELCB. MCB provides protection during short circuits. Fuses provide protection from over currents. Every piece of equipment is provided with proper earthing so that it will be provide protection from internal faults.

6.5.1.1 Earthing & Earth pits

As the college has a multi-block academic ambience, precautions have been taken for proper earthing. All the major pieces of equipment are provided with proper earthing materials. Required amount of charcoal, salt, and earthling rods are made available to the personnel.

We are testing all the earthings pits periodically and strengthening each earthing pit by adding needed salt, coals, red soil & sand, tightening Loosen nut & bolt by as per norms.

Table 5: Earthing & Earth pits

Sl. No.	Name of the Lab	No. Of Earth pits	Remarks /Observations
1	Electrical Machines lab	03 no's	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.
2	Power system simulation lab	01no	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.
3	Relay &high voltage lab	03 no	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.
4	Electronic Circuits Lab	01 no	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.
5	Op-amp and LIC lab	01 no	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.
6	Class rooms	02 no	Earthing is done with 3mts Length and 50mm diameter earthing electrode with chemical pipe.

Routine maintenance of earthing pits is carried out twice ina year

6.5.2 Firefighting measurements

- Firefighting is very essential where student's gatherings are large. Labs are the places where large numberof students work with equipment carrying considerable amount of current and having voltages.

- To avoid damage to the equipment and to the furniture and students firefighting equipment should be placed at all theplaces where large gatherings are expected.

- These will help in saving lives, property from fire. To do firefighting generally firefighting cylinders containing powder mixtures to emit CO_2 to extinguish fire. These are available in different sizes.

- In case of large fire, multiple exists should be designed to the buildings and places so that immediate evacuation is required.

- Each lab is provided with one fire extinguisher.

Table 9: Details of fire extinguisher provided to EEE department

Type and size of the equipment	ABC 6KG/4KG/2KG Fire Extinguishers
No of pieces of equipment	6
Cost of the equipment	ABC 6 kg - Rs. 2450 (per equipment) ABC 4 kg- Rs. 2250 (per equipment) ABC 2 kg- Rs. 1250 (per equipment)
The placement of the equipment	All laboratories (Machine lab, PE lab, computer lab, HV lab, EC lab..etc)

6.5.3 Safety of civil structure

The college takes all the precautions before it goes for constructing a building. The following measures getmeticulously executed before, during and after construction.

6.5.3.1 Processes of Construction

- The plans are developed by eminent engineers.
- Necessary approvals are obtained by relevant government bodies
- .Full-time engineers work on the construction site.
- The progress of constructions is reviewed both by college administration and the management representatives on a regular scale.

6.5.3.2 Safety management of civil structures

- The college accords prime importance to safety during constructions.
- The flooring is monitored on a periodic basis.
- The ceiling is monitored; care is taken in order to see that there would be no leakages & maintainedregularly.
- Window frames are checked and painted whenever necessary.
- Buildings are white washed on a periodic basis.
- Doors are protected from white ants and painted on a periodic basis.
- Roofs of the buildings are maintained and steps are taken to prevent seepage.
- Proper drainage system is provided to prevent water logging.

6.5.4 System and Data security measures taken in the department.

- Students are restricted from carrying pen drives, CDs or any other storage devices into the laboratories toavoid data misuse and prevent systems from virus attacks.
- Students are restricted from carrying cell phones or any other electronic gadgets to prevent any sort ofdistraction.
- CC cameras are placed in each laboratories and corridors to monitor students and prevent them from doingany hazardous activity or theft.

6.5.5 Availability of first-aid unit

We have First aid boxes in the department as a precautionary measure to meet any injuries and in case of emergency the college bus is used in order to reach the hospital which is within a radius of 1km.

CRITERION-7

CRITERION7	**Continuous Improvement**	**50**

1.CONTINUOUS IMPROVEMENT (50)

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

Actions to be written as per table 3.3.2

Identify the areas of weaknesses in the program based on the analysis of evaluation of POs & PSOs attainment levels. Measures identified and implemented to improve POs& PSOs attainment levels for the assessment years.

POs & PSOs Attainment Levels and Actions for improvement

POs Attainment Levels and actions for LYG improvement is shown in Tables below:

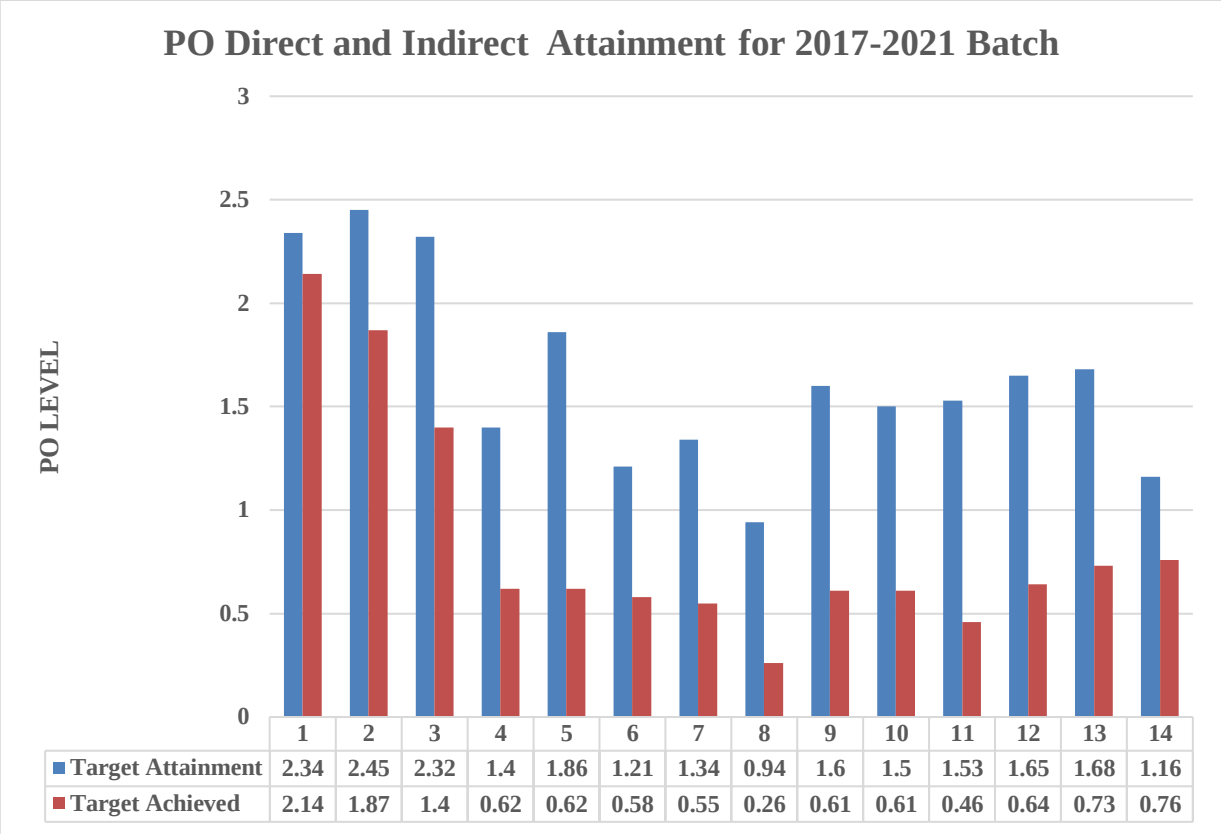
TABLE 7.1.1: 2017-21 LYG (A.Y:2020-21)

POs	Target Level	Attainment Level	Observation
PO1	**Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.**		
PO1	**2.34**	**2.14**	Students are required with strong foundation of science and mathematics which the students are finding difficult to understand the theoretical concepts
Actions Taken: Action 1: Personal attention is given through remedial classes to apply the contents of PO1 to improve. Action 2: To bring awareness about electrical maintenance and scope of EEE. Action 3: Webinar on Technical Session on GATE is organized for students to make fundamental concepts more clear.			
PO2	**Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.**		
PO2	**2.45**	**1.87**	Students need to improve the performance in the subjects relating to the core area so as to achieve the required PO attainment
Action1: industrial visits will be arranged for the students addressing core areas of the program so as to enhance their knowledge through practical observation. Action 2: Webinar on Control of Electrical Machines is conducted for students to develop the MATLAB skills. Action 3: Webinar on Technical Session on GATE is organized for students to make fundamental concepts more clear.			
PO3	**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.		
PO3	**2.32**	**1.4**	The curriculum does not include sufficient inputs regarding public health and safety, cultural, societal, and environmental issues.
Action1: NPTEL/Edusat lecture series are provided for motivating the students in this direction. Action 2: Two days awareness program on Demand side management and Electrical safety measures to enhance the practical knowledge in the same in collaboration with GESCOM. Action 3: The students will be given projects by considering the overall socio cultural and environmental issues			
PO4	**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.**		
PO4	**1.4**	**0.62**	Lack of research-based knowledge in students.
Action1: Students are made to work on research-based projects under faculty and made to learn contents of PO4. Action 2: Webinar on use of Drones and Artificial intelligence. Action 3: Self learning online courses on MATLAB to interpret the research-oriented topics.			
PO5	**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.**		
PO5	**1.86**	**0.62**	It is observed that use of modern software tools and other such facilities is very limited amongst the students.
Action1: Hands on session on Advanced Microcontroller is conducted for students to develop the software skills. Action 2: Webinar on use of Drones and Artificial intelligence. Action 3: Webinar on Control of Electrical Machines is conducted for students to develop the MATLAB skills. Action 4: Tools used in Electrical laboratories, Solar cells, Drives, Firing circuits, Relays etc.,			
PO6	**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.**		
PO6	**1.21**	**0.58**	Electrical engineering is very much accustomed to various safety practices in practical applications. Students must have the knowledge of safety in practical application to avoid any untoward incident.
Action 1: Invited talk on Electrical Maintenance and Scope of EEE is organized for students to create awareness regarding Electrical Maintenance and safety measures to be practiced. Action 2: Safety measure used in industries is to be demonstrated to the students during their industrial visits. Action 3: To identify the major issues in the village and give solutions through projects. Action 4: Visit is organized for students to power house in our institute to get the practical knowledge and safety measures of switch gear components and Alternator			

PO7	**Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.**		
PO7	**1.34**	**0.55**	Electrical engineers are responsible in finding the state of the art solutions which is environmental friendly and sustainable.
Action1: Students are made to work on renewable projects to obtain sustainable development in the environment. Action 2: Students are made to work on Electric vehicle design and Solar power generation undergo green concept. Action 3: Encouraged the students to participate in Swatch Bharat Abhiyaan programs, waste management, E-Waste and its dispose.			
PO8	**Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.**		
PO8	**0.94**	**0.26**	It is of utmost importance that the students not only competent engineers imbibe ethical values
Action1: Webinar on Interpersonal Skills is organized for students to know their responsibilities in engineering practice. Action 3: Students are made to participate in Social & Health oriented programs such as Voluntary Blood donation, Tree plantation apart from academic activities			
PO9	**Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.**		
PO9	**1.6**	**0.61**	Team work and quality leadership is of utmost importance in engineering practices.
Action1: Student will be given group projects to enhance their leadership and teamwork intelligency. Action 2: Webinar on Interpersonal Skills is organized for students to know their individual strengths. Action 3: Students are advised to take up projects, internships, Technical seminars in inter disciplinary areas as per VTU curriculum. Action 4: Students are engaged in group activities like identifying major issues in villages and finding solution through final year projects.			
PO10	**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.**		
PO10	**1.5**	**0.61**	Soft skills are important for engineering graduates. It has been observed that performance of the students is below par in communication and soft skills.
Action 1: Webinar on Interpersonal Skills is organized for students to know their individual strengths. Action 2: Pre-placement training given on group discussion, Resume preparing, and other communication skills to perform better in interviews. Action 3: YouTube channel is created by our faculty for our students to enhance their soft skills.			

Action 4: Motivated the students to participate in Vidyutsav, Quiz, Technical seminars & Project exhibition			
PO11	**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.**		
PO11	**1.53**	**0.46**	Students should have knowledge of managing project effectively and efficiently with minimum finance
Action 1: project works carried out by final year students much more efficiently by using sensors/transducers and also by cost analysis. Action 2: Industrial visit is organized for students to get the knowledge of entrepreneurship skills. Action 3: Encouraged the students to fetch the grants towards projects from state funding agencies KSCST, Department of IT/BT Government of Karnataka and VTU			
PO12	**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.**		
PO12	**1.65**	**0.64**	It is essential to inculcate life-long learning skills to sustain in current technological changes.
Action1: Invited talk on Electrical Maintenance and Scope of EEE is organized for students to create awareness regarding Electrical Maintenance and safety measures to be practiced. Action2: Webinar on Control of Electrical Machines is conducted for students to develop the MATLAB skills. Action 3: Two days awareness program on Demand side management and Electrical safety measures to enhance the practical knowledge in the same in collaboration with GESCOM. Action 4: Webinar on guidance on job opportunities in IT industries is organized for students			
PSO1	**Ability to apply fundamental knowledge to identify, formulate, design, and investigate various problems of electrical and electronics circuits, power electronics, and power systems.**		
PSO1	**1.68**	**0.73**	Students should enhance their design knowledge in Electrical Engineering.
Action1: Webinar on Control of Electrical Machines is conducted for students to develop the MATLAB skills. Action2: In addition to curriculum, some topics were explained beyond syllabus in the courses Analog Electronics, Power Electronics and Control Systems.			
PSO2	**Ability to apply modern software tools for design, simulation to engage in lifelong learning and to successfully adapt in multi-disciplinary environments.**		
PSO2	**1.16**	**0.76**	Students should be able to implement and operate the systems practically.
Action1: Students were asked to carryout various projects by using research skills so that they will learn to apply modifications and innovations to the existing systems. Action 2: Students are attending the internships in power sectors, Substations, Railways, Steel plants, KPTCL to gain the knowledge in various Electrical & Electronics Engineering courses			



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Target Attainment	2.34	2.45	2.32	1.4	1.86	1.21	1.34	0.94	1.6	1.5	1.53	1.65	1.68	1.16
Target Achieved	2.14	1.87	1.4	0.62	0.62	0.58	0.55	0.26	0.61	0.61	0.46	0.64	0.73	0.76

Figure 7.1.1: PO Attainment 2017-21 Batch

Table 7.1.2 Summary of the PO Attainment 2020-2021

2020-21			
PO's	**Target (From Table 3.3.2)**	**Attainment**	**Attainment Gap**
PO1	2.34	2.14	0.20
PO2	2.45	1.87	0.58
PO3	2.32	1.40	0.92
PO4	1.4	0.62	0.78
PO5	1.86	0.62	1.24
PO6	1.21	0.58	0.63
PO7	1.34	0.55	0.79
PO8	0.94	0.26	0.67
PO9	1.6	0.61	1.00
PO10	1.5	0.61	0.89
PO11	1.53	0.46	1.07
PO12	1.65	0.64	1.00
PSO1	1.68	0.73	0.94
PSO2	1.16	0.76	0.40

7.2 Academic Audit and Action Taken thereof during the period of Assessment (10)

Academic Audit system/process and its implementation in relation to Continuous improvement

Academic Audit Report for the Academic Year 2018-19 to 2021-22

Academic audits are conducted in order to monitor and evaluate the teaching learning process regularly. The audit process followed by internal audit and external audits. Audits are conducted for teaching learning process, laboratory maintenance and departmental activities.

The institute established Internal Quality Assurance Cell (IQAC) in the year 2017 - 18, whose major responsibility is to conduct periodical audits and take corrective/preventive measures for assuring/improving the academic performance.

Audit process and its implementation:

1. Dr.Veerabhadrappa Algur Associate Professor of Mechanical Engineering is working as the IQAC Convener of the institute. He with the consensus of the Principal constitutes a committee for assessing the academic performance of the different departments. The members in the audit committee are drawn from the IQAC, Heads of the various Departments and senior faculty in the institution.
2. An academic audit is conducted every semester and the details are mentioned in the table 7.2.1 and table7.2.2.
3. Every committee member is assigned with the responsibility of auditing of one or two departments.
4. The auditor will visit the department as per the schedule given by IQAC to inspect the correctness and completeness of academic documents:

   The following are the sample records verified during the internal academic audit:

   - Lab Records, Lab Manuals, Ledger
   - Course Files
   - Personal Files
   - Remedial and Tutorial Class Records.
   - Counseling and Mentoring Records.
   - Co-Curricular Activities: Seminar/Conference/Workshop/Guest Lecture Conducted& Attended.
   - Industrial Visits, Faculty Achievements: Paper publications, Books etc.

5. Auditor will prepare a report of his findings and submit the same to the IQAC Convener and also shares it with the concerned Head of the Department.

6. IQAC Convener shall consolidate the reports submitted by all the members and prepares corrective/preventive actions as necessary and also shares it with the concerned Head of the Department.

7. The report of the IQAC Convener is further submitted to the Principal to deliberate implementation of the suggested actions in the academic council. The Head of the department discusses audit findings with the faculty and prepares plan of action in the DAC meeting for addressing any concern(s) identified by the auditor.

Table 7.2.1 Internal Audit Details

Sl No	Audit Date	Audit Members	Committee	Remarks
01	31-01-2023	Dr. S.P Jagadeesh Assoc. Professor, Mech Dept	IQAC Committee	Department Audit
02	05-04-2022	Dr. S.G Anuradha, Prof. CSE, RYMEC Mr. Raghukumar K.S Assistant Professor	NBA	SAR C-1 to C-7
03	21-02-2022	Dr. S.G Anuradha, Prof. CSE, RYMEC Dr. Sai Madhavi, Prof. CSE RYMEC	IAC	NBA Files verification
04	15/02/2021	Dr. S.G Anuradha, Prof. CSE, RYMEC Mr. Raghukumar K.S Assistant Professor	NBA	Pre-qualifier
05	09/11/2020 to 13/11/2020	K.Raghavendra Prasad, Associate Prof, EEE, RYMEC Anusuya Patil, Asst. Prof. EEE, RYMEC	PC/CC	P files, NBA Files, Course files and other files
06	01/06/2020 to 04/06/2020	Dr. Kori Nagaraj, Prof and HOD .Mech, RYMEC	File verification committee	Program specific file (P1- P32)

		Mr. Raghukumar K S, Asst Prof. CSE ,RYMEC		
07	24/02/2020	Dr. Kori Nagaraj, Prof & HOD, MECH, RYMEC Mr. Raghu Kumar K S Asst Prof, CSE, RYMEC	IAC	NBA Pre-qualifier
08	16/09/2019	Dr. Veeragangadharaswamy Prof, CSE, Convener IQAC, RYMEC Mrs. Gayatri.J Asst Prof, EEE, RYMEC	IQAC Committee	Department Audit

Table 7.2.2: External Audit Details

SL NO	Audit Date	Members	Remarks
1	22-07-2022	Dr. H L Suresh, NBA Expert, Sir MVIT, Bangalore	NBA SAR Audit and Files
2	08-04-2022	Dr. Purohit Shrinivasacharya	External IQAC Audit
3	04-03-2022	Dr.K. RamaNaidu Professor-HOD ECE, IQAC Coordinator, JNTU Anantapur	NBA SAR Audit and Files
4	06-03-2021	Dr. Prakash M Professor- EEE SDM College of Engineering, DHARWAD	IQAC All Academic Files
5	04-11-2020	Dr.S.M.Shashidhar Principal PDIT, Hospet	Academic files
6	31/05/2019	Dr. M. Mahesh HOD EEE, New Horizon College of Engineering, Bengaluru.	Academic files
7	19-12-2018	Dr. Mohammed Rafi Professor Govt. UBDT, Davangere	IQAC Academic Files
8	03/07/2017	Range Forest Officier (RFO), Ballari	Green audit

Corrective Measures for the Improvement of Academic Performance.

Feedback from Students on Course exit Survey, Program Exit Survey is collected at the end of the semester and at the end of the Programme respectively. This serves as a quality indicator and provides an opportunity to improvise.

Feedback from parents: The Program coordinator will collect the feedback from parents about their experience and their wards opinion on the Programme. This activity is carried out once in every year for continuous improvements of the system.

Feedback from alumni: During the annual alumni meet, a questionnaire is prepared by the program coordinator and is given to the attended alumnus seeking suggestions.

7.3. Improvement in Placement, Higher Studies and Entrepreneur (10)

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT (NBA 14.2/ File No.25) etc. and admissions in premier institutions
- Entrepreneurs

7.3.1 Placement Details: (2021-2022)

Sl.No	COMPANY	No. of Students Placed	Salary offered. per annum (In Rupees)
1	INTELLIPAAT	1	9.00 LPA
2	JARO EDUCATION	1	6.06 LPA
3	SKOLAR	1	6.00 LPA
4	NATIONAL PAYMENT CORPORATION OF INDIA	1	5.52 LPA
5	ROBOSOFT TECHNOLOGIES	2	4.6 LPA
6	BOSCH GLOBAL SOFTWARE TECHNOLOGIES PVT LTD	5	4.50 LPA

7	BRIGOSHA	2	4.50 LPA
8	IBM	1	4.50 LPA
9	HCL TECHNOLOGIES LTD	2	4.25 LPA
10	TEACHNOOK	5	4.00 TO 6.00 LPA
11	6D TECHNOLOGIES	2	4.00 LPA
12	MSYS TECHNOLOGIES	1	4.00 LPA
13	MINDTREE	1	4.0 LPA
14	REVATURE	1	4 TO 6 LPA
15	CAPGEMINI	2	3.8 LPA
16	JINDAL SAW LTD	1	3.61 LPA
17	INFOSYS	3	3.6 LPA
18	CGI	5	3.50 LPA
19	PROLIFICS	1	3.50 LPA
20	NTT DATA	2	3.5 LPA
21	WIPRO TECHNOLOGIES	2	3.5 LPA
22	ATOS COMMUNICATION	1	3.4 LPA
23	TCS	1	3.36 LPA
24	MICROLAND	1	3.25 LPA
25	MPHASIS	9	3.25 LPA
26	TANTRAGYAN SOLUTIONS	1	2.9 LPA
27	TERRA LOGIC	2	2.62 LPA
28	CSS CORP	2	2.5 LPA
Total number of students placed		**59**	
Total number of Final year students		**126**	
Percentage of students placed		**47 % till date**	

7.3.2 Placement Details: (2020-2021)

Sl.No	COMPANY	No. of Students Placed	Salary offered per annum (in Rupees)
1	BYJU'S	1	10 LPA
2	JSW (Core)	1	5.00 LPA
3	ALLSTATE SOLUTIONS PVT LTD	1	4.50 LPA
4	ACCENTURE	2	4.5 LPA
5	IBM	2	4.5 LPA
6	L & T TECHNOLOGY SERVICES	1	4.0 LPA
7	JINDAL SAW	1	3.61 LPA
8	INFOSYS	1	3.6 LPA
9	ALCHEMY	1	3.6 LPA
10	DXC	2	3.6 LPA
11	KPIT	1	3.6 LPA
12	IN TIME TECH VISION SOFT PVT LTD	1	3.6 LPA
13	WIPRO TECHNOLOGIES	2	3.50 LPA
14	TCS	4	3.5 LPA
15	U ST	1	3.5 LPA
16	NTT DATA	2	3.5 LPA
17	OLA ELECTRIC	1	3.30 LPA
18	INMOVIDU TECHNOLOGIES	4	3.00 LPA
19	VERZEO	9	3.0 LPA
20	MPHASIS	2	2.5 TO 3.25 LPA
21	COGNIZANT	4	2.29 to 4.5 LPA
22	ANMERKUNG SOLUTIONS PVT. LTD	1	2.06 LPA
23	ELINS SWITCH BORADS	2	1.92 LPA
Total number of students placed		**47**	
Total number of Final year students		**99**	
Percentage of students placed		**47.47%**	

7.3.3 Placement Details: (2019-2020)

SL.NO	COMPANY	No. of Students Placed	Salary offered per annum (in Rupees)
1	BYJUS	2	10 LPA
2	FREENKART	9	4.00 LPA
3	COGNIZANT	3	4.0 LPA
4	VIRTUSA	1	4.0 LPA
5	KPIT	1	3.60 LPA
6	NTT DATA SERVICES	3	3.5 LPA
7	WIPRO	1	3.5 LPA
8	JMAN DIGITAL SERVICES PVT.LTD	1	3.5 LPA
9	TCS	2	3.36 LPA
10	INFOSYS	3	3.2 LPA
11	SLK SOFTWARE SERVICES/ SOLUTIONS	5	3.2 LPA
12	MAVERIC SYSTEMS	1	3.1 LPA
13	SUZLON	1	2.50 LPA
14	DELOITTE	2	2.5 LPA
15	Z-K TECO BIOMETRIC INDIA PVT. LTD.	1	2.5 LPA
16	NMDC LTD	1	2.4 LPA
17	GEBE PVT.LTD	1	2.4 LPA
18	DIYA SYSTEMS	1	2.22 LPA
19	SMART BRAINS	2	2.2 LPA
20	TEAM LEASE SKILLS UNIVERSITY	1	2.03 LPA
21	SRI SAASTHA ENG COMP	1	1.92 LPA
22	WARTENS	1	1.68 LPA
23	EMMVEE PHOTOVOLTAIC POWER PRIVATE LTD	2	1.56 LPA
24	HYOSOENG ELECTRIC INDIA PVT LTD,CHENNAI	6	1.44 LPA
25	TECHNICAL TRAINING INSTITUTE HAL	1	OFFER
26	WISTRON	1	OFFER

27	SNEHA GLASSICS TUFF	1	OFFER
28	Apollo Power System (Core)	1	OFFER
29	TEMENOS INDIA PRIVATE LIMITED	1	OFFER
Total number of students placed		**57**	
Total number of Final year students		**103**	
Percentage of students placed		**55.33 %**	

Table 7.3.4 Placement Details: (2018-2019)

SL.NO	COMPANY	No. of Students Placed	Salary offered per annum (in Rupees)
1	POLICY BAZAAR	1	5.15LPA
2	VEE TECHNOLOGIES	5	4.08 LPA
3	ACCENTURE	1	3.75 LPA
4	BROADBRIDGE	3	3.65 LPA
5	INFOSYS	2	3.60 LPA
6	JSW (Core)	2	3.6 LPA
7	MAINDRA INSURANCE BROKERS	3	3.55 LPA
9	TCS	3	3.36 LPA
10	MICROLAND	1	2.73 LPA
11	24[7]	1	2.69 LPA
12	TASMAI AUTOMATION	1	2.64 LPA
13	UNIVERSAL EDUCATION	2	2.52 LPA
14	SHRI RAM TRANSPORTS	1	2.44 LPA
15	SOURCE 1 MANAGEMENT SERVICES PVT.LTD	1	1.8 LPA
16	REMO SOFTWARE	1	1.44 LPA
17	KPTCL	1	0.84 LPA
18	PIXEL SOFTECH	1	OFFER
19	APTS ADMIN CYBER SECURITY	1	OFFER
20	CIPLA Ltd	4	OFFER

21	DXC TECHNOLOGIES	1	OFFER
19	UNIVVA BUSINESS SOLUTIONS PVT. LTD	3	OFFER
22	VOGO AUTOMOTIVE PVT. LTD.	1	OFFER
23	WISTRON TECH, Kolar	1	OFFER
24	ARYAKI LABS	1	OFFER
Total number of students placed		**42**	
Total number of Final year students		**102**	
Percentage of students placed		**41.17 %**	

Table 7.3.5 Summary of Placement Details :(2018-2022)

Placement Details	2018-19	2019-20	2020-21	2021-22
No of Students Placed	42	57	47	59
Total number of Final year students	102	103	99	126
% OF STUDENT PLACED	41.17 %	55.33 %	47.47%	47% till date

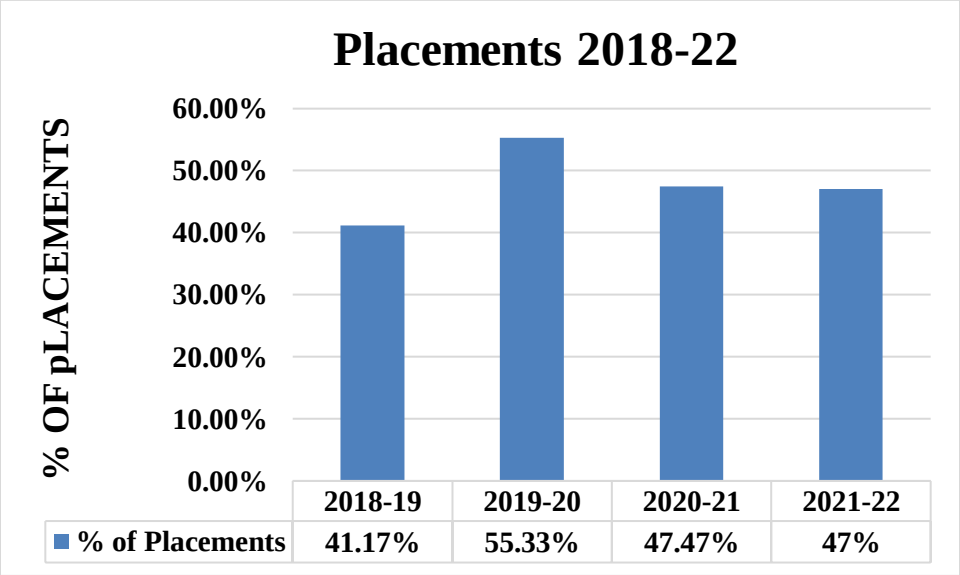


Figure 7.3.1: Summary of Placement Details 2018-2022

Table 7.3.6 Higher Studies: (2018-2022)

Year	2018-19	2019-20	2020-21	2021-22
Total No of Students Perusing Higher Studies	03	04	04	00

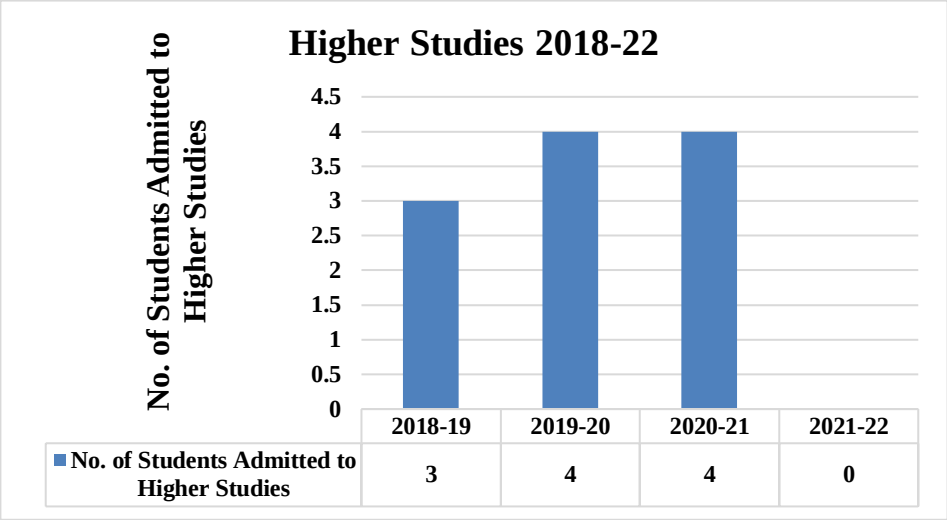


Figure 7.3.2: Summary of Higher Studies Details 2018-2022

Table 7.3.7 Students Admitted to Higher Studies during 2020-21

Sl.No	USN	Name of the Student	PG Course	University	Name of the institution
1	3VC17EE041	NARASIMHA NAYAKA B	MS	University of Hertfordshire	University of Hertfordshire
2	3VC17EE055	SIRI.R.P	MS	University of Applied Sciences, Germany	Ernst-Abbe-Hochschule Jena
3	3VC17EE072	VIJAYARAJ.L.SINGAVI	M.Tech	Deemed to be University, Girinagar, Pune	Defence Institute of Advanced Technology
4	3VC17EE073	VINEETH KUMAR V	M.Tech	Manipal	MNIT, Manipal

Table 7.3.8 Students Admitted to Higher Studies during 2019-20

S.No	USN	Name of the Student	PG Course	University	Name of the institution
1	3VC16EE011	B.SNEHA	M.Tech	VTU	Oxford College of Engineering, Bangalore
2	3VC16EE024	KARISHMA.J.M	M.Tech	VTU	Oxford College of Engineering, Bangalore
3	3VC16EE054	POOJA.D	M.Tech	Autonomous	Dr. AIT, Bangalore
4	3VC16EE081	STELLA M S	M.Tech	Autonomous	BMS College of Engineering

Table 7.3.9 Students Admitted to Higher Studies during 2018-19

Sl.No	USN	Name of the Student	PG Course	University	Name of the institution
1	3VC15EE063	POOJA K	M.Tech	VTU	UVCE, Bangalore
2	3VC15EE091	SWAPNA K	M.Tech	VTU	UBDT, Davangere
3	3vc16EE415	KAVYA.D	M.Tech	Autonomous	BMSCE

7.3.10 Entrepreneur List:

Year	2018-19	2019-20	2020-21	2021-22
Total No of Entrepreneurs	00	00	00	00

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

Assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrance tests, percentage marks in Physics, Chemistry and Mathematics.

Item		CAY (2021-22)	CAY (2020-21)	CAY (2019-20)	CAY (2018-19)
National Level Exam		Nil	Nil	Nil	Nil
KCET Examination	No. of Students admitted	50	36	54	68
	Opening Score/Rank	55016	27672	16457	19940
	Closing Score/Rank	176926	206816	211847	209681
Lateral Entry Students (Diploma-KCET)	No. of Students admitted	94	84	70	66
	Opening Score/Rank	1496	32	659	2192
	Closing Score/Rank	13359	11166	14103	18036
TOTAL No of Students Admitted		**50+94(DIP)=144**	**36+84(DIP)=120**	**54+70(DIP)=124**	**68+66(DIP)=134**
Average CBSE/any other board result of admitted students		**69**	**66**	**70**	**69**

CRITERIA 8	FIRST YEAR ACADEMICS	50

8.1 First Year Student-Faculty Ratio (FYSFR)

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSFR	*Assessment = (5 ×20)/ FYSFR (Limited to Max. 5)
2021-2022	780	46	16.95	5.00
2020-2021	760	42	18.09	5.00
2019-2020	760	44	17.27	5.00
Average	**767**	**44**	**17.44**	**5.00**

Table8.1

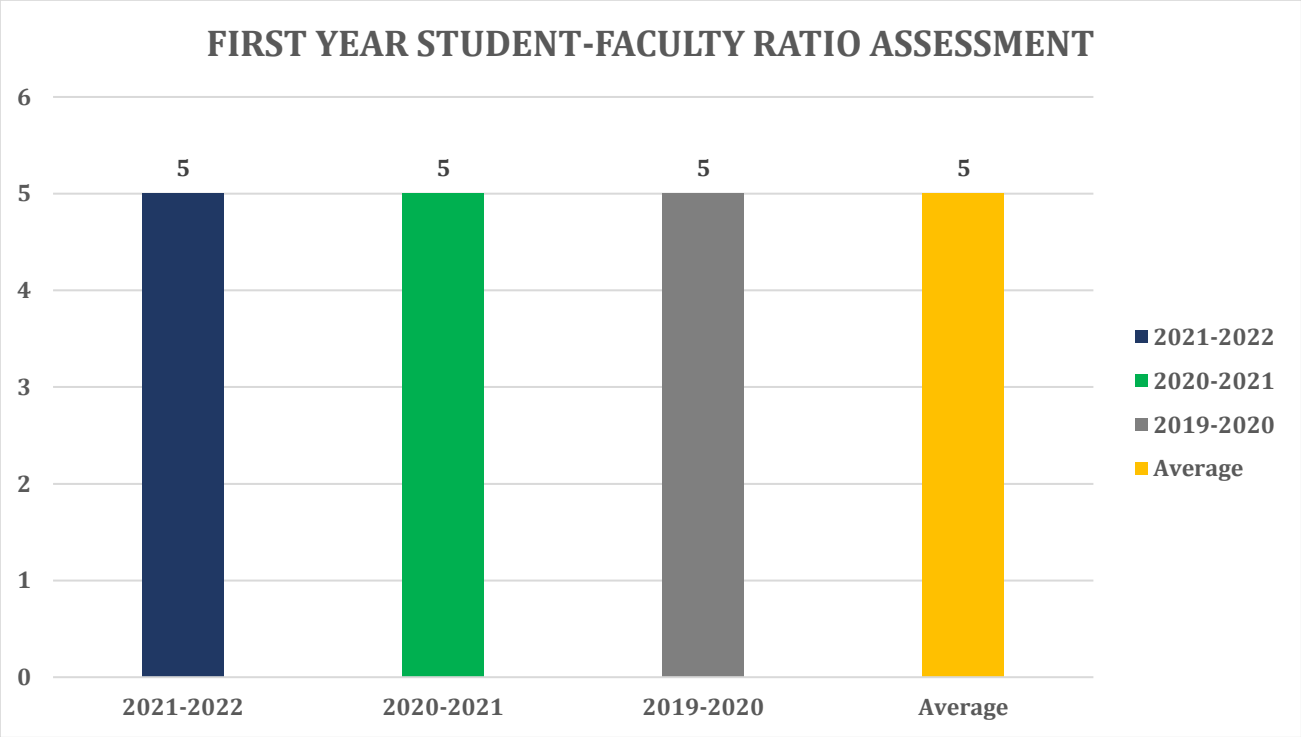


Figure 8.1

8.2. Qualification of Faculty Teaching First Year Common Courses

Assessment of qualification=$(5x+3y)/RF$, 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, Faculty definition as defined in 5.1.

Year	*X*	*Y*	*RF*	*Assessment of faculty qualification (5x + 3y)/RF*
2021-2022	13	33	39	4.20
2020-2021	15	27	38	4.10
2019-2020	14	28	38	4.05
Average Assessment				**4.17**

Table 8.2

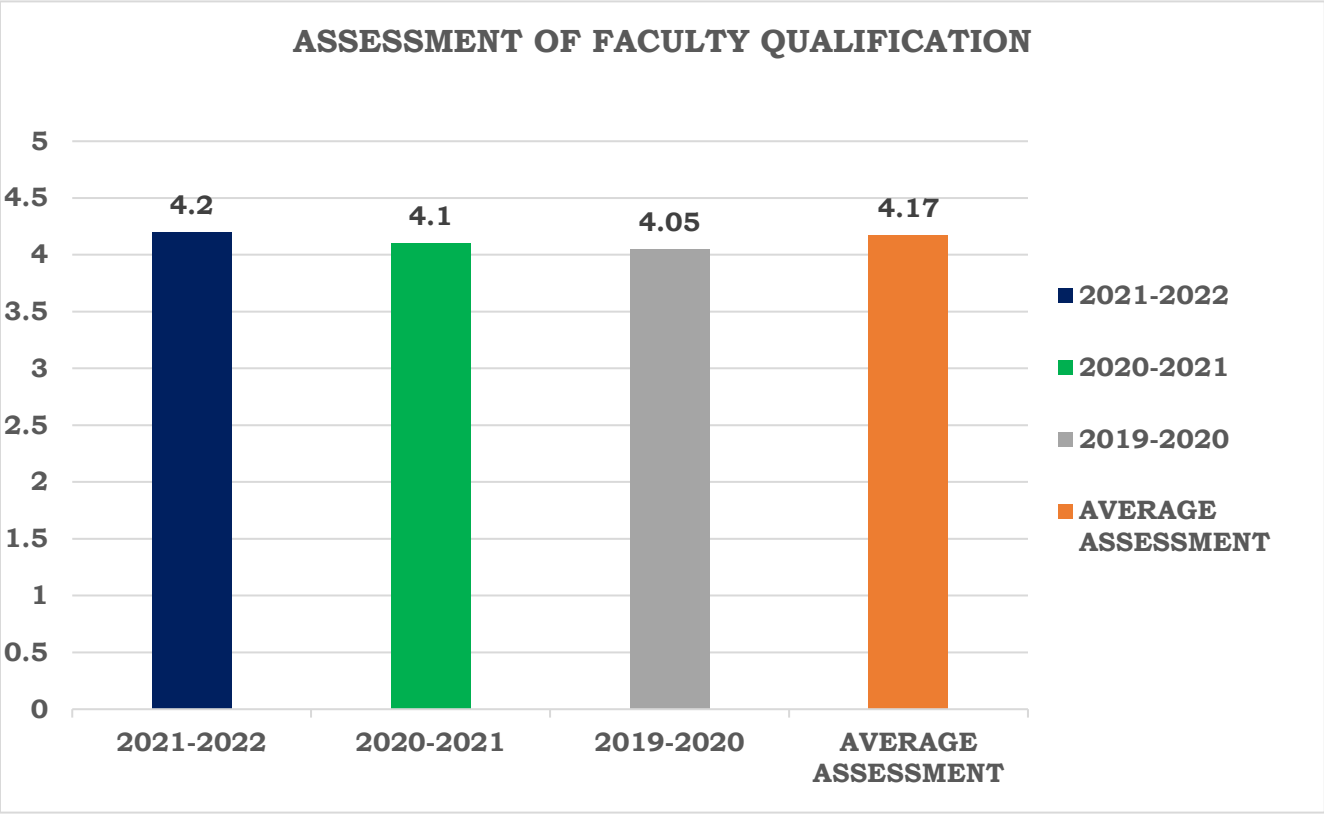


Figure 8.2

8.3. First Year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10-point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

Academic Performance	2021-2022	2020-2021	2019-2020
Mean of CGPA or Mean Percentage of all successful student (X)	7.04	7.44	7.51
Total Number of successful students (Y)	48	36	54
Total number of students appeared in the examination (Z)	48	36	54
API [X * (Y / Z)]	**7.04**	**7.44**	**7.51**

Table 8.3

Average API [(AP1+ AP2+ AP3)/3] = 7.33

Assessment [1.5 * Average API] = 10.99

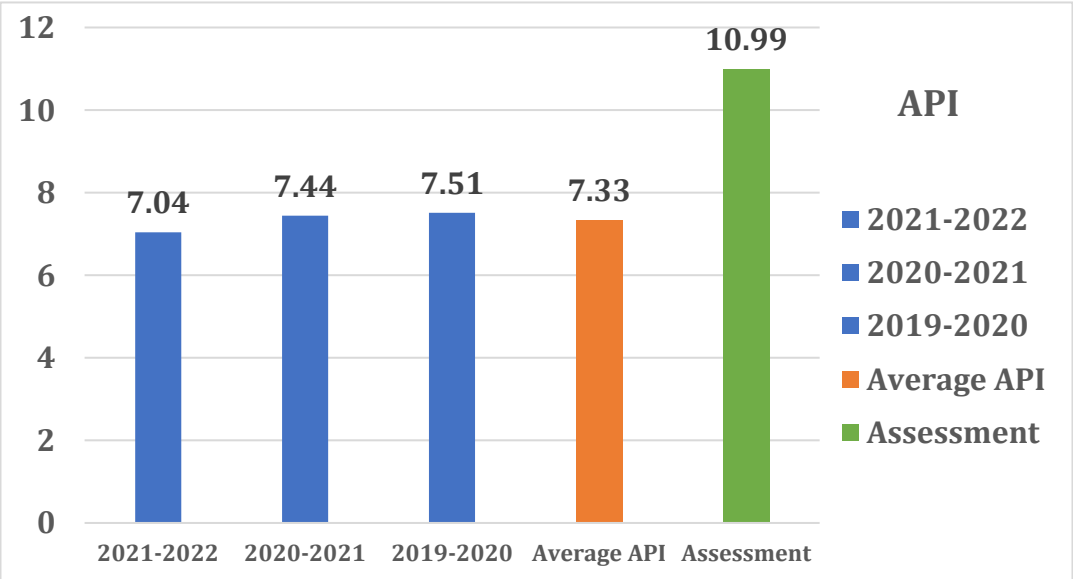


Figure 8.3

8.4. Attainment of Course Outcomes of first year courses

8.4.1. Describe the assessment processes used to gather the data upon which the Evaluation of Course Outcomes of first year is done

Procedure for calculation of grades for the academic year 2021-2022:

Academic Year 2021-2022

2021-2022	• The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks). • A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject / course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination (SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together • **Continuous Internal Evaluation:** Three Unit Tests each of 20 Marks (duration 01 hour) 1. First test at the end of 5 week of the semester. 2. Second test at the end of the 10th week of the semester. 3. Third test at the end of the 15th week of the semester. **Two assignments each of 10 Marks** 4. First assignment at the end of 4th week of the semester. 5. Second assignment at the end of 9th week of the semester. • Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for 20 Marks (duration 01 hours) 6. At the end of the 13th week of the semester. • The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of **100 marks** and **will be scaled down to 50 marks**. • The performance of a student in internal assessment with respect to the CO's is recorded. • End semester university exam performance of student for the maximum marks of 100 is conducted and it is scalded down to 50 marks.

- The summation of these two performances of student is considered as cumulative assessment for a prescribed course outcome.
- Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluation prescribed for each course. SEE and CIE to carry 50 % and 50 % respectively, to enable each course to be evaluated for 100marks, irrespective of its credits.
- For laboratory assessment, the performance of a student in conduction of each experiment, final lab internal test and lab exam is considered. Marks are awarded by SEE and CIE to carry 50 % and 50 % respectively.

2021: CBCS Scheme

Assessment	Marks
IA	60 Marks (IA1(20) + IA2(20) +IA3(20))
Assignment	20 Marks (Assignment1 (10) + Assignment2 (10))
Group Discussion / Seminar / Quiz	20 Marks
Total for IA	100 (100 Marks scaled down to 50 Marks)
External Exam (SEE)	100 Marks (100 Marks scaled down to 50 Marks)
Total	100

COURSE ATTAINMENT PROCEDURE 2021-2022

DIRECT ATTAINMENT
Attainment tools used for Direct Attainment are 1. Internal Assessment Test 2. Final Examination 3. Assignment 4. Group Discussion / Seminar / Quiz
1. Internal Assessment Test – 30% Weightage to internal Assessment

• 60 % of students score more than 60 % marks out of the relevant marks. • 70 % of students score more than 60 % marks out of the relevant marks. • 80 % of students score more than 60 % marks out of the relevant marks.
Attainment Level 1: 60 % of students score more than or equal to 12 marks out of the 20 marks. **Attainment Level 2:** 70 % of students score more than or equal to 14 marks out of the 20 marks. **Attainment Level 3:** 80 % of students score more than or equal to 16 marks out of the 20 marks.
2. **Final Examination – 70 % of weightage to Final Examination**
• 60 % of students score more than 45 % marks out of the relevant marks. • 70 % of students score more than 45 % marks out of the relevant marks. • 80 % of students score more than 45 % marks out of the relevant marks.
Attainment Level 1: 60 % of students score more than or equal to 30 marks out of the 50 marks. **Attainment Level 2:** 70 % of students score more than or equal to 35 marks out of the 50 marks. **Attainment Level 3:** 80 % of students score more than or equal to 40 marks out of the 50 marks. **Not Attained: < 60 %**
3. **Assignment**
• 60 % of students score more than or equal to 60 % marks out of the relevant marks. • 70 % of students score more than or equal to 60 % marks out of the relevant marks • 80 % of students score more than or equal to 60 % marks out of the relevant marks

Attainment Level 1: 60 % of students score more than or equal to 06 marks out of the 10 marks. **Attainment Level 2:** 70 % of students score more than or equal to 06 marks out of the 10 marks. **Attainment Level 3:** 80 % of students score more than or equal to 06 marks out of the 10 marks.
4. Group Discussion / Seminar / Quiz
• 60 % of students score more than or equal to 60 % marks out of the relevant marks. • 70 % of students score more than or equal to 60 % marks out of the relevant marks • 80 % of students score more than or equal to 60 % marks out of the relevant marks
Attainment Level 1: 60 % of students score more than or equal to 12 marks out of the 20 marks. **Attainment Level 2:** 70 % of students score more than or equal to 14 marks out of the 20 marks. **Attainment Level 3:** 80 % of students score more than or equal to 16 marks out of the 20 marks.

Procedure for calculation of grades for the academic years 2020-21 and 2019-20 even semester:

As per the University Circular Ref No VTU/BGM/Reg (E)/PS/2020-2021/298 dated 31 July 2020, following is the method of calculation of grades for the students of 2019-20 even semester:

1. CIE marks of each course of current even semester shall be scaled to a maxim um of 50.
2. SEE marks of all credit courses of the preceding odd semester shall be scaled to a maximum of 50 and then averaged. If a student has remained absent in the preceding semester, the SEE marks for that course shall be taken as zero.
3. The calculated average SEE marks shall be taken as the SEE marks for each course of the current even semester.

4. The minimum average SEE marks for passing shall be 10/50.
5. Regulations applicable to minimum CIE, SEE and total marks for the current even semester shall be as per applicable regulations.
6. Total marks for any course of the current even semester shall be the sum of CIE of' the current semester (scaled to a maximum of 50 marks) and average SEE marks (scaled to a maximum of 50 marks) of all the credit courses of the preceding odd semester.
7. Grades shall be assigned based on the applicable regulations.

Where marks require scaling, fractional marks shall be rounded up to the next larger integer.

Academic Year 2020-21 and 2019-20

2020-21 and 2019-20	• Three Continuous Internal Evaluation (online/Offline) tests for a minimum mark of 50 are conducted and is reduced to 30 marks, average of three internals is considered. The remaining 10 marks shall be awarded based on the evaluation of assignment / unit tests / written quizzes that support to cover some of the course / program outcomes and added to the average internal assessment test marks. The final marks out of 40 are considered as CIE marks. • The performance of a student in internal assessment with respect to the CO's is recorded. • End semester university exam performance of student for the maximum marks of 100 is conducted. 60 % of the marks are considered as external exam performance. • The summation of these two performances of student is considered as cumulative assessment for a prescribed course outcome. • Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluation prescribed for each course. SEE and CIE to carry 60 % and 40 % respectively, to enable each course to be evaluated for 100 marks, irrespective of its credits. • For laboratory assessment, the performance of a student in conduction of each experiment, final lab internal test and lab exam is considered. Marks are awarded by SEE and CIE to carry 60 % and 40 % respectively. • For the academic year **2020-21 and2019-20 Even Semesters**, due to Covid 19 SEE has not been conducted by the University. Previous

semesters i.e., 2020-21 and 2019-20 Odd Semesters SEE results are considered for even semesters result after converting from 60 to 50 marks.

2018: CBCS Scheme

Semester	Assessment	Marks
ODD	CIE	50 MARKS (Reduced to 30 Marks)
	Assignment / Quiz / Test	10
	Total for IA	40
	SEE	60 MARKS (100 Marks reduced to 60%)
	Total	100
EVEN	CIE	50 MARKS (Reduced to 30 Marks)
	Assignment / Quiz / Test	10
	Total for IA	40
	Final CIE converted to 50 from 40 marks	50
	SEE (Not conducted due to COVID 19)	50 MARKS (Considered from 2019-20 ODD Semester results, converted from 60 to 50 marks.)
	Total	100

Table 8.4.1.1

COURSE ATTAINMENT PROCEDURE 2020-21 and 2019-2020

DIRECT ATTAINMENT
Attainment tools used for Direct Attainment are 1. Continuous Internal Evaluation (Online/Offline) Tests. 2. Semester End Examinations. 3. Assignments.
1. Continuous Internal Evaluation – 30% Weightage to internal Assessment
• 60 % of students score more than 60 % marks out of the relevant marks. • 70 % of students score more than 60 % marks out of the relevant marks. • 80 % of students score more than 60 % marks out of the relevant marks.
Attainment Level 1: 60 % of students score more than or equal to 18 marks out of the 30 marks. **Attainment Level 2:** 70 % of students score more than or equal to 18 marks out of the 30 marks. **Attainment Level 3:** 80 % of students score more than or equal to 18 marks out of the 30 marks.
2. Semester End Examinations– 70 % of weightage to Final Examination
• 60 % of students score more than 45 % marks out of the relevant marks. • 70 % of students score more than 45 % marks out of the relevant marks. • 80 % of students score more than 45 % marks out of the relevant marks.
Attainment Level 1: 60 % of students score more than or equal to 27 marks out of the 60 marks (for even semester 23 marks out of the 50 marks). **Attainment Level 2:** 70 % of students score more than or equal to 27 marks out of the 60 marks (for even semester 23 marks out of the 50 marks). **Attainment Level 3:** 80 % of students score more than or equal to 27 marks out of the 60 marks (for even semester 23 marks out of the 50 marks). **Not Attained: < 60 %**

3. **Assignment**
• 60 % of students score more than or equal to 60 % marks out of the relevant marks. • 70 % of students score more than or equal to 60 % marks out of the relevant marks. • 80 % of students score more than or equal to 60 % marks out of the relevant marks.
Attainment Level 1: 60 % of students score more than or equal to 06 marks out of the 10 marks. **Attainment Level 2:** 70 % of students score more than or equal to 06 marks out of the 10 marks. **Attainment Level 3:** 80 % of students score more than or equal to 06 marks out of the 10 marks.

Table 8.4.1.2

8.4.2. Record the attainment of Course Outcomes of all first-year courses

The CO Attainment through all the first-year courses for the year 2021-2020

Index	Course	CO1	CO2	CO3	CO4
C101	21MAT11	60.87	61.02	60.63	60.58
C102	21PHY12	56.82	57.03	57.12	55.79
C103	21ELE13	60.87	58.33	60.63	60.58
C104	21CIV14	57.44	58.91	55.65	57.69
C105	21EVN15	71.95	71.95	71.95	77.51
C106	21PHYL16	93.14	93.14	93.14	93.14
C107	21ELEL17	97.72	97.14	97.20	94.88
C108	21EGH18	85.50	85.09	97.59	97.35
C109	21IDT19	82.6	82	90.53	91.4
C101	21MAT11	60.84	59.91	61.91	61.51
C110	21CHE12	61.97	60.80	64.13	65.20
C111	21PSP13	92.00	91.15	92.85	92.68

C112	21ELN14	48.28	45.76	47.45	47.83
C113	21EME15	89.02	87.73	93.88	94.32
C114	21CHEL16	98.61	99.11	99.11	88.30
C115	21CPL17	97.59	98.46	98.61	98.45
C108	21EGH18	82.76	82.43	94.93	94.67
C116	21SFH19	64	63	65	64
C117	21MAT21	61.68	59.23	61.46	61.40
C118	21PHY22	59.73	59.29	59.86	60.10
C119	21ELE23	50.06	48.78	50.86	50.60
C120	21CIV24	57.41	58.42	56.85	59.09
C121	21EVN25	64.73	64.73	64.73	69.70
C122	21PHYL26	90.29	90.29	90.29	90.29
C123	21ELEL27	92.69	91.25	92.07	91.81
C124	21EGH28	80.32	79.91	92.53	93.29
C125	21IDT29	83	85	90.53	91.4
C117	21MAT21	61.05	60.21	61.87	61.02
C126	21CHE22	81.36	81.21	85.53	85.31
C127	21PSP23	92.67	92.03	92.51	92.70
C128	21ELN24	77.66	75.66	78.35	76.67
C129	21EME25	86.74	85.57	91.59	93.03
C130	21CHEL26	97.19	97.19	97.19	82.90
C131	21CPL27	97.86	97.75	97.82	97.55
C124	21EGH28	69.53	69.12	81.63	81.36
C132	21SFH29	64	64	65	65
AVERAGE		75.83	75.35	78.14	77.75
TARGET		**65**	**65**	**65**	**65**

Table 8.4.2.1

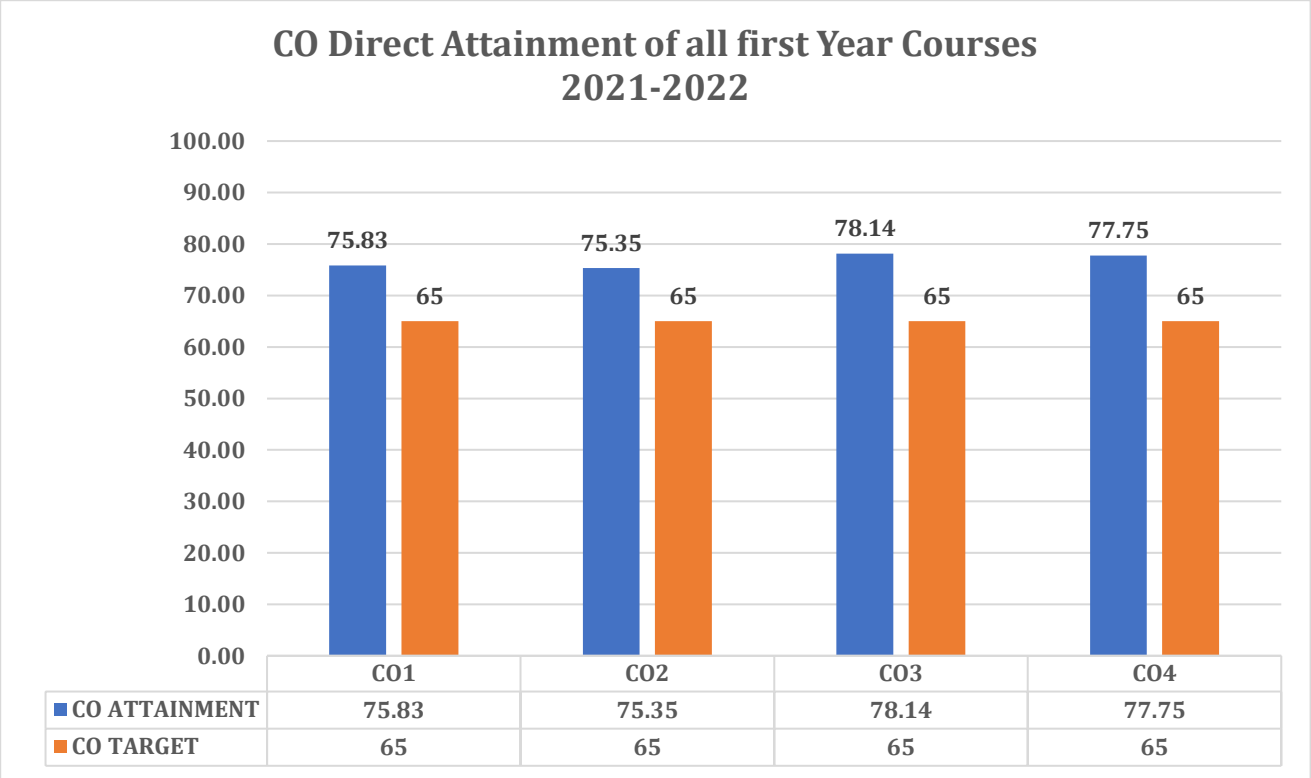


Fig: 8.4.2.1

The CO Attainment through all the first-year courses for the year 2020-2021

Index	Course	CO1	CO2	CO3	CO4	CO5
C101	18MAT11	54.44	57.77	62.03	57.57	59.71
C102	18PHY12	48.13	44.49	49.63	48.70	
C103	18ELE13	68.95	65.19	63.97	61.03	
C104	18CIV14	56.37	55.83	56.30	57.26	
C105	18EGDL15	72.33	86.79	87.89	86.08	85.87
C106	18PHYL16	94.26	94.26	94.26	94.26	
C107	18ELEL17	97.72	97.14	97.20	94.88	
C108	18EGH18	85.73	85.81	86.01	85.21	86.39
C109	18MAT11	54.37	54.63	57.30	57.00	57.33
C110	18CHE12	65.83	66.47	68.55	67.48	

C111	18CPS13	44.47	43.85	41.18	41.58	
C112	18ELN14	48.15	47.93	49.55	43.77	
C113	18ME15	93.27	93.03	93.43	93.25	94.84
C114	18CHEL16	91.41	91.94	91.41	91.41	
C115	18CPL17	99.71	99.71	99.19	100.00	
C116	18EGH18	53.41	74.92	75.14	74.01	75.71
C117	18MAT21	89.38	88.78	89.56	89.64	89.64
C118	18PHY22	74.35	77.92	77.45	74.61	
C119	18ELE23	66.99	64.88	66.88	65.34	
C120	18CIV24	56.21	56.04	56.52	56.55	
C121	18EGDL25	69.73	83.68	83.59	83.70	83.81
C122	18PHYL26	84.00	84.00	84.00	84.00	
C123	18ELE27	94.00	95.00	93.00	92.00	
C124	18EGH28	72.00	72.00	67.00	72.00	68.00
C125	18MAT21	93.00	92.00	92.00	92.00	92.00
C126	18CHE22	89.17	87.74	89.46	88.03	
C127	18CPS23	87.22	87.88	84.55	84.93	
C128	18ELN24	77.46	76.63	78.48	73.23	
C129	18ME25	87.35	85.68	87.05	82.17	86.24
C130	18CHEL26	86.00	83.00	83.00	83.00	
C131	18CPL27	73.00	68.00	66.00	66.00	
C132	18EGH28	74.92	75.01	75.18	75.18	75.32
AVERAGE		**75.1**	**76.19**	**76.46**	**75.5**	**79.57**
TARGET		**65**	**65**	**65**	**65**	**65**

Table 8.4.2.2

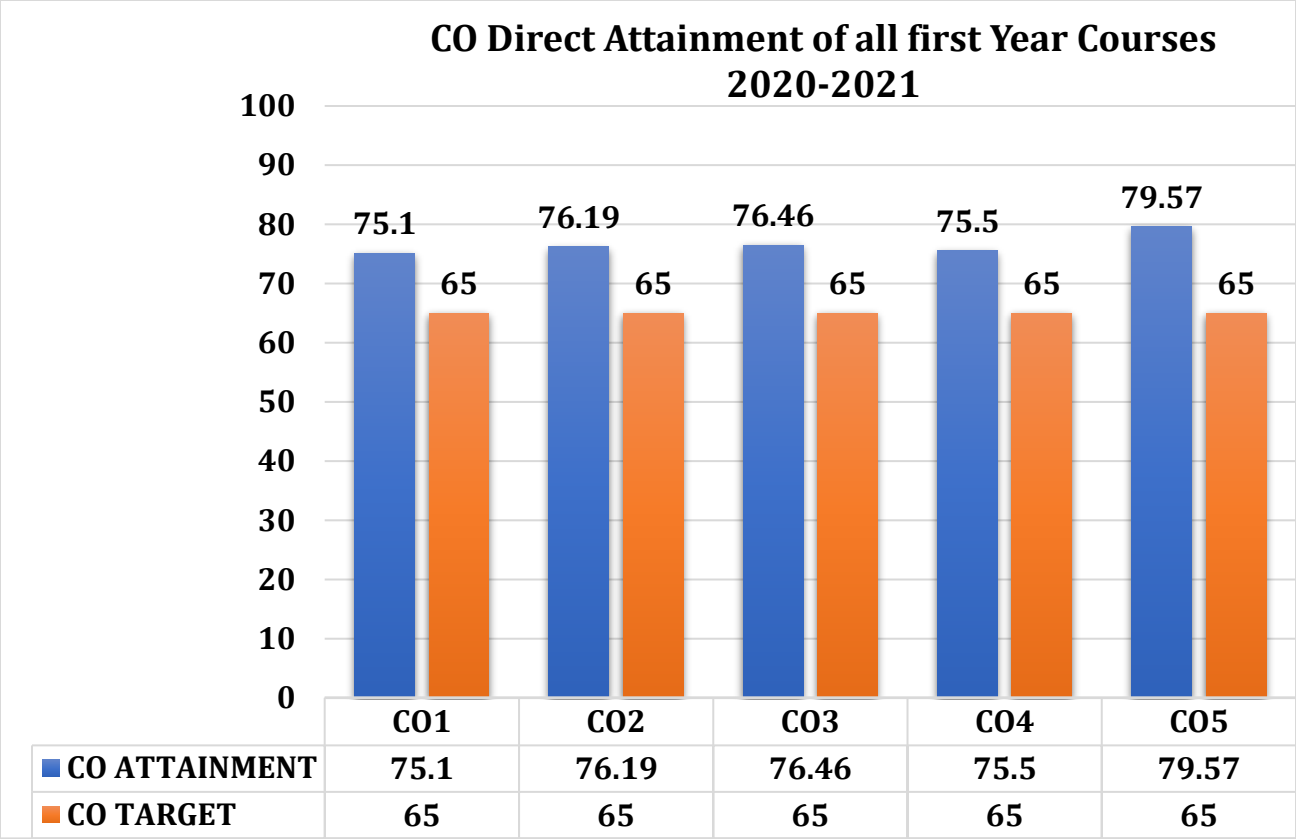


Fig: 8.4.2.2

The CO Attainment through all the first-year courses for the year 2019-2020

Index	Course	CO1	CO2	CO3	CO4	CO5
C101	18MAT11	70.6	71.62	72.94	74.24	74.22
C102	18PHY12	53.34	54.56	53.20	52.14	
C103	18ELE13	57.49	58.58	49.81	45.66	
C104	18CIV14	56.07	56.58	57.05	56.99	
C105	18EGDL15	73.82	88.59	90.59	86.90	87.27
C106	18PHYL16	76.00	76.08	76.48	77.04	
C107	18ELEL17	73.72	73.93	74.20	74.37	
C108	18EGH18	88.40	88.45	89.30	88.58	89.49
C109	18MAT11	61.56	64.16	64.74	65.6	65.58
C110	18CHE12	68.28	66.04	71.13	68.53	

C111	18CPS13	51.64	49.99	44.20	44.45	
C112	18ELN14	55.93	57.50	56.20	57.74	
C113	18ME15	75.74	72.99	73.00	75.17	65.02
C114	18CHEL16	96.08	79.92	79.92	79.92	
C115	18CPL17	71.85	65.32	63.40	64.72	
C116	18EGH18	88.40	88.45	89.30	88.58	89.49
C117	18MAT21	90.61	78.68	87.73	89.96	88.78
C118	18PHY22	66.13	67.78	69.07	69.47	
C119	18ELE23	82.72	71.20	73.10	70.31	
C120	18CIV24	54.78	56.00	55.67	57.15	
C121	18EGDL25	70.60	84.72	84.97	85.15	83.93
C122	18PHYL26	75.96	75.92	75.80	76.16	
C123	18ELE27	89.73	86.15	87.60	87.05	
C124	18EGH28	76.27	76.93	76.74	76.65	76.59
C125	18MAT21	81.91	71.72	77.00	80.51	80.62
C126	18CHE22	86.52	83.17	93.77	92.79	
C127	18CPS23	79.81	83.61	84.83	84.60	
C128	18ELN24	66.20	67.72	69.13	68.52	
C129	18ME25	81.41	88.64	86.57	90.10	69.19
C130	18CHEL26	85.93	71.59	71.59	71.59	
C131	18CPL27	81.85	75.32	73.40	74.72	
C132	18EGH28	72.85	73.07	73.10	73.12	72.97
AVERAGE		**73.82**	**72.66**	**73.3**	**73.39**	**78.6**
TARGET		**60**	**60**	**60**	**60**	**60**

Table 8.4.2.3

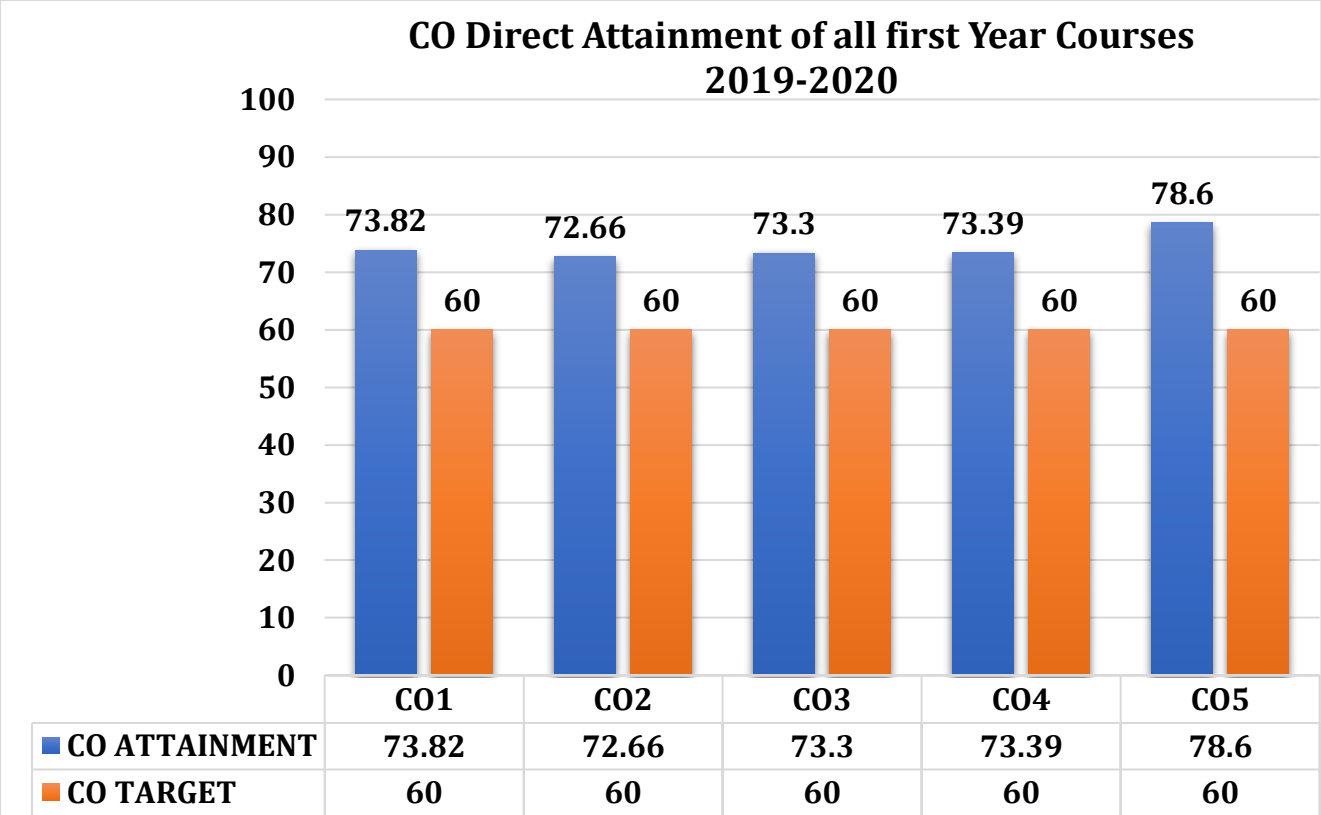


Fig: 8.4.2.3

8.5. Attainment of Program Outcomes from first year courses

8.5.1. Indicate results of evaluation of each relevant PO and/or PSO if applicable

The PO Attainment through all the first-year courses for the year 2021-2022

Course	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	21MAT11	1.80	1.80										
C102	21PHY12	1.72	1.22										
C103	21ELE13	1.58	1.47										
C104	21CIV14	1.69	1.72										
C105	21EVN15	2.50	2.50			2.50					2.50		1.05
C106	21PHYL16	1.94	2.84										

C107	21ELEL17	2.47	2.46							1.96	1.94		
C108	21EGH18										1.83		
C109	21IDT19			2.34		2.36	2.69	2.69	2.69	2.65	2.69	2.69	2.69
C101	21MAT11	1.66	1.66										
C110	21CHE12	1.89	1.26										
C111	21PSP13	1.87	2.86			1.85			1.85		1.86		1.86
C112	21ELN14	1.42	0.95	0.94		0.94			0.95	0.95	0.95		
C113	21EME15	2.72	1.79			0.91	0.91	0.91	0.91	1.79	0.91		
C114	21CHEL16	2.84	2.14										
C115	21CPL17	2.94	2.51			2.56			2.79	1.69	2.14		1.91
C108	21EGH18										1.78		
C116	21SFH19	1.26					1.26					1.26	1.26
C117	21MAT21	1.67	1.67										
C118	21PHY22	1.56	1.83										
C119	21ELE23	2.37	2.18										
C120	21CIV24	1.68	1.69										
C121	21EVN25	2.24	2.24			2.24					2.24		0.93
C122	21PHYL26	1.77	2.73										
C123	21ELEL27	2.40	2.48							1.92	1.94		
C124	21EGH28										1.72		
C125	21IDT29			2.65		2.36	2.75	2.75	2.75	2.75	2.75	2.75	2.75
C117	21MAT21	1.65	1.65										
C126	21CHE22	2.49	1.66										
C127	21PSP23	1.83	2.71			1.81			1.85		1.90		1.84

C128	21ELN24	2.24	1.50	1.50		1.47			1.52	1.48	1.49		
C129	21EME25	2.65	1.77			0.89	0.88	0.88	0.88	1.75	0.89		
C130	21CHEL26	2.81	2.12										
C131	21CPL27	2.77	2.68			2.63			2.81	1.71	2.27		1.84
C124	21EGH28										1.51		
C132	21SFH29	1.35					1.35					1.35	1.35
AVERAGE		**2.06**	**2**	**1.86**		**1.88**	**1.64**	**1.81**	**1.9**	**1.86**	**1.85**	**2.01**	**1.75**
TARGET		**2.69**	**2.54**	**2.25**		**2.24**	**2**	**2**	**2.2**	**2.2**	**2.13**	**2.5**	**2.05**

Table 8.5.1.1

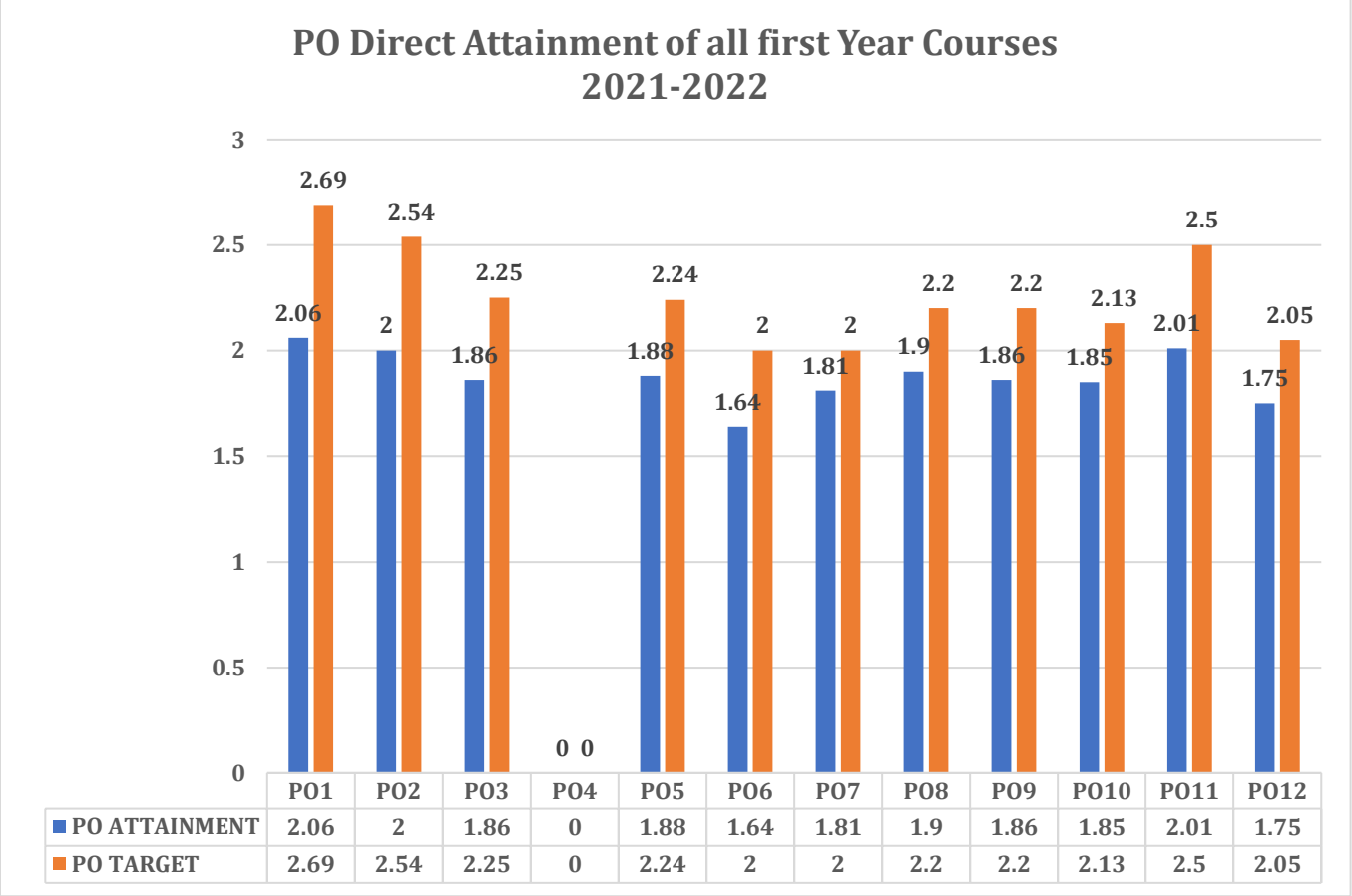


Fig: 8.5.1.1

The PO Attainment through all the first-year courses for the year 2020-2021

Course	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	18MAT11	1.72	1.72										
C102	18PHY12	1.41	0.94										
C103	18ELE13	1.58	1.47										
C104	18CIV14	1.69	1.71										
C105	18EGDL15	2.60	2.43			2.43					2.60		
C106	18PHYL16	1.89	2.83										
C107	18ELEL17	2.47	2.46							1.96	1.94		
C108	18EGH18										2.23		2.58
C109	18MAT11	1.68	1.68										
C110	18CHE12	2.01	1.34										
C111	18CPS13	1.28	0.97	0.96									
C112	18ELN14	1.30	0.95										
C113	18ME15	2.61	1.65										2.11
C114	18CHEL16	2.74	2.05										
C115	18CPL17	2.13	2.27	2.31	2.22								
C116	18EGH18										1.93		2.26
C117	18MAT21	2.38	2.38										
C118	18PHY22	2.28	1.52										
C119	18ELE23	2.37	2.15										
C120	18CIV24	1.69	1.69										
C121	18EGDL25	2.51	2.34			2.34					2.51		

C122	18PHYL26	1.67	2.51										
C123	18ELE27	2.42	2.48							1.91	1.92		
C124	18EGH28										1.64		1.89
C125	18MAT21	2.66	2.66										
C126	18CHE22	2.66	1.77										
C127	18CPS23	2.76	2.07	2.07									
C128	18ELN24	2.10	1.53										
C129	18ME25	2.60	1.64										2.09
C130	18CHEL26	2.58	1.94										
C131	18CPL27	1.90	1.96	1.97	1.90								
C132	18EGH28										1.95		2.25
AVERAGE		**2.13**	**1.9**	**1.83**	**2.06**	**2.39**				**1.94**	**2.09**		**2.2**
TARGET		**2.7**	**2.44**	**2.29**	**2.25**	**2.8**				**2**	**2.55**		**2.8**

Table 8.5.1.2

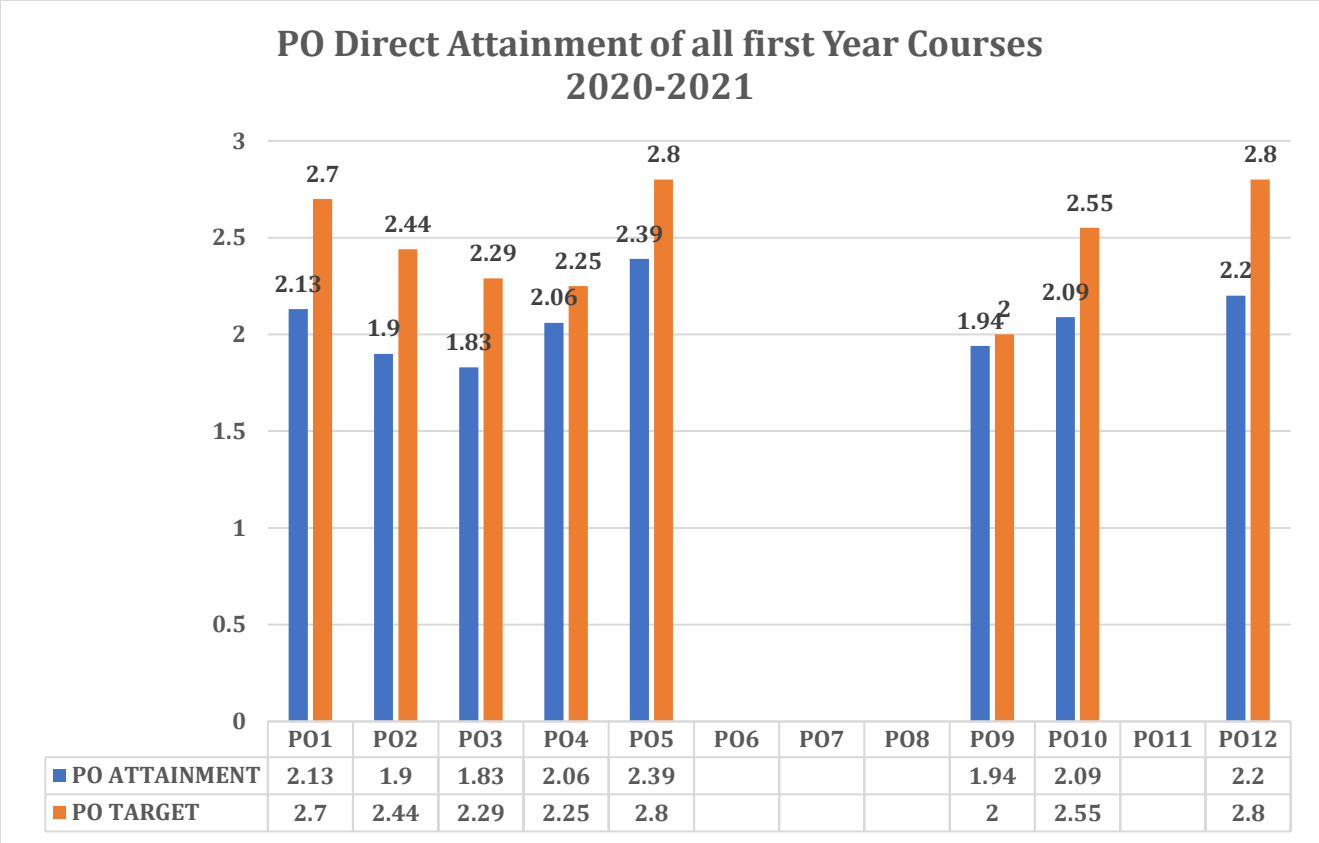


Fig: 8.5.1.2

The PO Attainment through all the first-year courses for the year 2019-2020

Course	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	18MAT11	2.18	2.18										
C102	18PHY12	1.66	1.10										
C103	18ELE13	1.58	1.47										
C104	18CIV14	1.69	1.67										
C105	18EGDL15	2.68	2.50			2.50					2.68		
C106	18PHYL16	1.78	2.65										
C107	18ELEL17	2.47	2.46							1.96	1.94		
C108	18EGH18										2.31		2.68

C109	18MAT11	1.93	1.93										
C110	18CHE12	2.21	1.48										
C111	18CPS13	1.70	1.28	1.28									
C112	18ELN14	1.56	1.14										
C113	18ME15	2.26	1.51										1.82
C114	18CHEL16	2.88	2.16										
C115	18CPL17	2.23	2.24	2.28	2.24								
C116	18EGH18										2.31		2.68
C117	18MAT21	2.47	2.51										
C118	18PHY22	1.90	1.62										
C119	18ELE23	2.37	2.19										
C120	18CIV24	1.69	1.71										
C121	18EGDL25	2.54	2.37			2.37					2.54		
C122	18PHYL26	1.69	2.64										
C123	18ELE27	2.41	2.47							1.93	1.94		
C124	18EGH28										1.99		2.30
C125	18MAT21	2.24	2.36										
C126	18CHE22	2.67	1.78										
C127	18CPS23	2.59	2.59	0.82									
C128	18ELN24	1.86	1.36										
C129	18ME25	2.50	1.66										2.01
C130	18CHEL26	2.58	1.93										
C131	18CPL27	2.23	2.24	2.28	2.24								
C132	18EGH28										1.91		2.19

AVERAGE	**2.16**	**1.97**	**1.67**	**2.24**	**2.44**				**1.95**	**2.2**		**2.28**
TARGET	**2.7**	**2.44**	**2.29**	**2.25**	**2.8**				**2**	**2.55**		**2.8**

Table 8.5.1.3

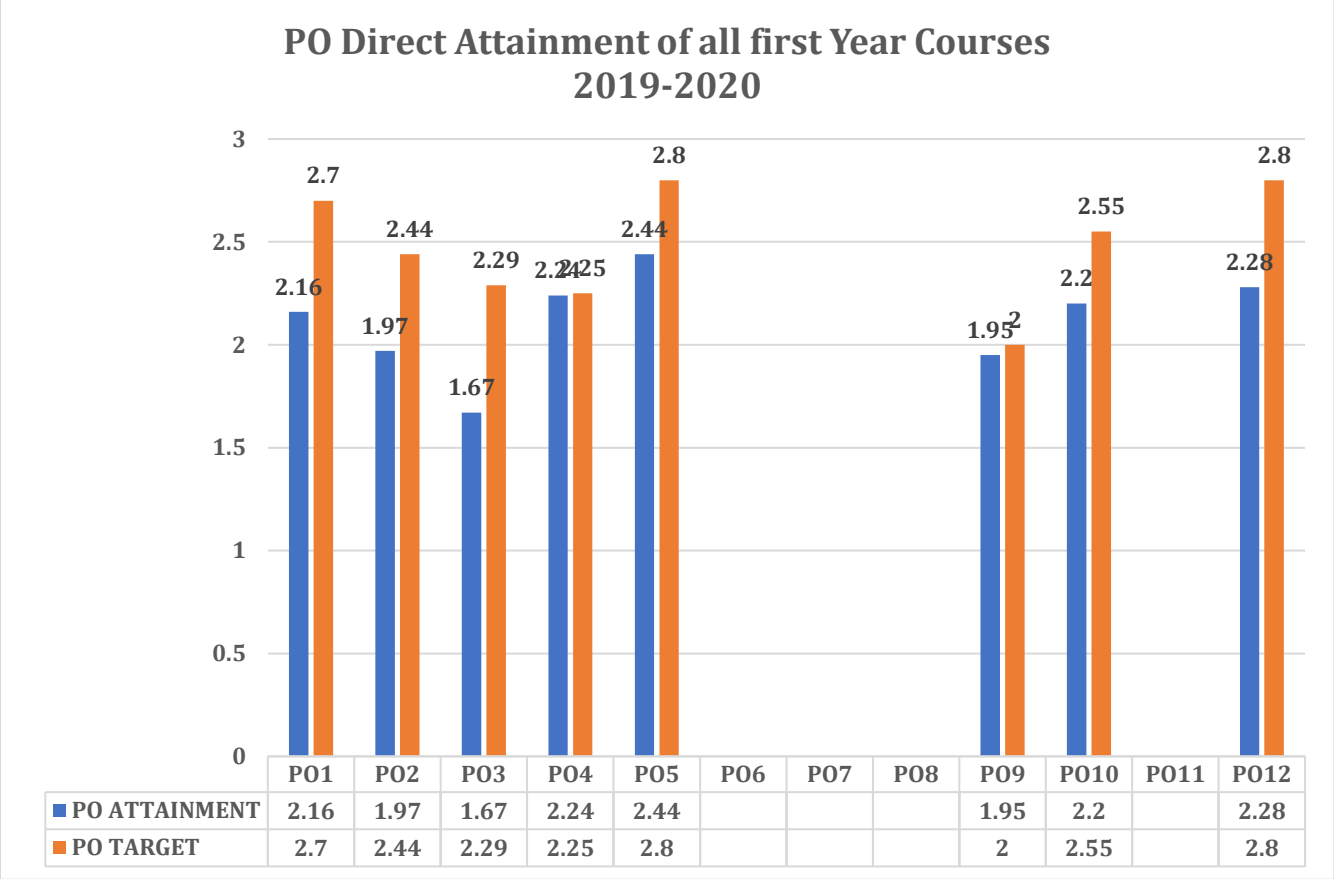


Fig: 8.5.1.3

8.5.2. Actions taken based on the results of evaluation of relevant POs and PSOs

PO Attainment Levels and Actions for improvement: 2021 - 2022. Mention for relevant POs

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.69**	**2.06**	PO1 is Moderately attained.
Action: The activities to be carried out for enhancing the PO1 involves solving exercise problems, understand the nature of the given problem, formulate and provide multiple solutions to the given complex problems**.**			
PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.54**	**2**	PO2 is Moderately attained.
Action: PO2 is addressed with the subset of the courses and to enhance the outcome, it requires considerable planning of the course owner, design activities of Assignment and Case Studies and develop appropriate rubrics for evaluation of the performance of each member of the group.			
PO3: Design / Development of Solutions: Design solutions for complex engineering problems and design system components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, social, and environmental considerations.			
PO3	**2.25**	**1.86**	PO3 is Moderately attained.
Action: Improve the student's knowledge in applying engineering concepts by conducting extra lab experiments.			
PO4: Conduct Investigations of complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			

PO4	NIL	NIL	NIL
Action:			
PO5: Modern Tools 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.			
PO5	**2.24**	**1.88**	PO5 is Moderately attained.
Action 1: Students are instructed to use the simulation tools and animations for hands-on experience to improve the attainment of problem solving and programming in C language.			
PO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	**2**	**1.64**	PO6 is Moderately attained.
Action: Students are instructed to participate in NSS campus, Horticultural activities, social service which enable them to appreciate Societal problems and possibility of engineering solutions.			
PO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	**2**	**1.81**	PO7 is Moderately attained.
Action: Awareness on environment is to be created among the first-year students. Motivate them to engage in the process of finding solution to global warming problems in future engineering career.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	2.2	1.86	PO8 is Moderately attained.
Action: Inculcate Cyber Security Day activity celebration at the College level, Youth awareness day, Green Club activities and Professional responsibilities among the students wherever applicable.			

PO9: Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.			
PO9	**2.2**	**1.86**	PO9 is Moderately attained.
Action 1: Students are encouraged to involve in activities like Self-discipline and mind control, Personality Development sessions **Action 2:** Group assignments that involve group decision making, division of work through negotiation are focused and strengthened to enhance the team work. **Action 3:** Students are encouraged to participate as a leader to give service towards the benefit of the society and to improve their leadership qualities. Co-curricular activities through e-groups must be encouraged to students.			
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large such as, being able to comprehend and write effective reports and design documentation, make effective presentation and give and receive clear instructions.			
PO10	**2.13**	**1.85**	PO10 is Moderately attained.
Action 1: Oral Communication skills and Personality development sessions needs to be strengthened and students are to be encouraged to actively participate. **Action 2:** Student's participation in activities like Debate, Group discussion, Oral Presentation, Article writing etc.., needs to be strengthened through College and Intra college fest. **Action 3.** A short video presentation on seminar is to be recorded and presented to peers for evaluations. Further feedback on the activity is recorded with respect to rubrics designed for evaluation of communication skill**.**			
PO11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	**2.5**	**2.01**	PO11 is Moderately attained.
Action: Students are encouraged to participate in technical competitions right from the beginning of the course to acquire project management skills			
PO12: Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	**2.05**	**1.75**	PO12 is Moderately attained.

Action 1: To encourage students to make use of Interactive Learning Tools.

Action 2: To encourage students to do some certification courses on Technology changes, Recent Trends, Honor Degree and Communication Skills.

Table 8.5.2.1

PO Attainment Levels and Actions for improvement: 2020 - 2021. Mention for relevant POs

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.7**	**2.13**	PO1 is Moderately attained.
Action: The activities to be carried out for enhancing the PO1 involves solving exercise problems, understand the nature of the given problem, formulate and provide multiple solutions to the given complex problems**.**			
PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.44**	**1.90**	PO2 is Moderately attained.
Action: PO2 is addressed with the subset of the courses and to enhance the outcome, it requires considerable planning of the course owner, design activities of Assignment and Case Studies and develop appropriate rubrics for evaluation of the performance of each member of the group.			
PO3: Design / Development of Solutions: Design solutions for complex engineering problems and design system components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, social, and environmental considerations.			
PO3	**2.29**	**1.83**	PO3 is Moderately attained.
Action: Improve the student's knowledge in applying engineering concepts by conducting extra lab experiments.			

PO4: Conduct Investigations of complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	**2.25**	**2.06**	PO4 is Moderately attained.
Action: Students are encouraged to study and interpret design of experiments, analysis, and result data will be carried out through laboratory experiments and Case Studies.			
PO5: Modern Tools 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.			
PO5	**2.8**	**2.39**	PO5 is Moderately attained.
Action 1: Students are instructed to use the simulation tools and animations for hands-on experience to improve the attainment of problem solving and programming in C language.			
PO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	NIL	NIL	NIL
Action:			
PO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	NIL	NIL	NIL
Action: Awareness on environment is to be created among the first-year students. Motivate them to engage in the process of finding solution to global warming problems in future engineering career.			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	NIL	NIL	NIL

Action: Inculcate Cyber Security Day activity celebration at the College level, Youth awareness day, Green Club activities and Professional responsibilities among the students wherever applicable.			
PO9: Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.			
PO9	**2.0**	**1.94**	PO9 is Moderately attained.
Action 1: Students are encouraged to involve in activities like Self-discipline and mind control, Personality Development sessions **Action 2:** Group assignments that involve group decision making, division of work through negotiation are focused and strengthened to enhance the team work. **Action 3:** Students are encouraged to participate as a leader to give service towards the benefit of the society and to improve their leadership qualities. Co-curricular activities through e-groups must be encouraged to students.			
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large such as, being able to comprehend and write effective reports and design documentation, make effective presentation and give and receive clear instructions.			
PO10	**2.55**	**1.33**	PO10 is not attained.
Action 1: Oral Communication skills and Personality development sessions needs to be strengthened and students are to be encouraged to actively participate. **Action 2:** Student's participation in activities like Debate, Group discussion, Oral Presentation, Article writing etc.., needs to be strengthened through College and Intra college fest. **Action 3.** A short video presentation on seminar is to be recorded and presented to peers for evaluations. Further feedback on the activity is recorded with respect to rubrics designed for evaluation of communication skill**.**			
PO11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	NIL	NIL	NIL
Action:			
PO12: Life-Long Learning: Recognize the need for, and have the preparation and ability to			

engage in independent and life-long learning in the broadest context of technological change.			
PO12	**2.8**	**2.2**	PO12 is Moderately attained.
Action 1: To encourage students to make use of Interactive Learning Tools. **Action 2:** To encourage students to do some certification courses on Technology changes, Recent Trends, Honor Degree and Communication Skills.			

Table 8.5.2.2

PO Attainment Levels and Actions for improvement – 2019 - 2020 only – Mention for relevant POs

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	**2.7**	**2.16**	PO1 is Moderately attained.
Action: The activities to be carried out for enhancing the PO involves solving end chapter problems, understand the nature of the given problem, formulate and provide multiple solutions to the given complex problems**.**			
PO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	**2.44**	**1.97**	PO2 is Moderately attained.
Action: PO2 is addressed with the subset of the courses and to enhance the outcome, it requires considerable planning of the course owner, design activities of Assignment and Case Studies and develop appropriate rubrics for evaluation of the performance of each member of the group.			
PO3: Design / Development of Solutions: Design solutions for complex engineering problems and design system components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, social, and environmental considerations.			

PO3	**2.29**	**1.67**	PO3 is Moderately attained.
Action 1: Improve the student's knowledge in applying engineering concepts by conducting extra lab experiments.			
PO4: Conduct Investigations of complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	**2.25**	**2.24**	PO4 is attained.
Action 1: Design of experiments, analysis, and interpretation of data will be carried out through open ended experiments in the laboratory, in Assignment and Case Studies.			
PO5: Modern Tools 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.			
PO5	**2.8**	**2.44**	PO5 is Moderately attained.
Action 1: Students are instructed to use the simulation tools and animations for hands-on experience to improve the attainment of problem solving and programming in C language.			
PO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	NIL	NIL	NIL
Action:			
PO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO7	NIL	NIL	NIL
Action:			

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	NIL	NIL	NIL
Action:			
PO9: Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.			
PO9	**2**	**1.95**	PO9 is attained.
Action 1: Group assignments that involve group decision making, division of work through negotiation are focused to enhance the team work. **Action 2:** Students are encouraged to participate as a leader in giving services to social related problems and in Co-curricular activities to improve their leadership qualities.			
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large such as, being able to comprehend and write effective reports and design documentation, make effective presentation and give and receive clear instructions.			
PO10	**2.55**	**2.2**	PO10 is Moderately attained.
Action 1: Student's participation in activities like Debate, Group discussion, Oral Presentation, Article writing etc.., needs to be strengthened through College and Intra college fest. **Action 2.** A short video presentation on seminar is to be recorded and presented to peers for evaluations. Further feedback on the activity is recorded with respect to rubrics designed for evaluation of communication skill**.**			
PO11: Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	NIL	NIL	NIL
Action:			
PO12: Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			

PO12	**2.8**	**2.28**	PO12 is Moderately attained.
Action 1: To encourage students to make use of Interactive Learning Tools. **Action 2:** To encourage students to do some certification courses on Technology changes, Recent Trends, Honor Degree and Communication Skills.			

Table 8.5.2.3

CRITERIA 9	STUDENT SUPPORT SYSTEMS	50

9.1	Mentoring system to help at individual levels	05

"Mentoring is to support and encourage people to manage their own learning in order that they may maximize their potential, develop their skills, improve their performance and become the person they want to be."

Mentoring is a powerful personal development and empowerment tool. It is an effective way of helping students to progress in their careers and is becoming increasing popular as its potential is realized. It is a partnership between two people (mentor and mentee) normally working in a similar field or sharing similar experiences. It is a helpful relationship based upon mutual trust and respect. A mentor is a guide who can help the mentee to find the right direction and who can help them to develop solutions to career issues. Mentoring provides the mentee with an opportunity to think about career options.

The RYMEC Institute is working towards enhancing the institutional culture to better serve the needs of an ever-changing and dynamic learning community. Effective mentoring begins with the faculty. When it comes to academic success and persistence, there is no substitute for a healthy relationship between faculty and students. Mentoring and Guidance provides

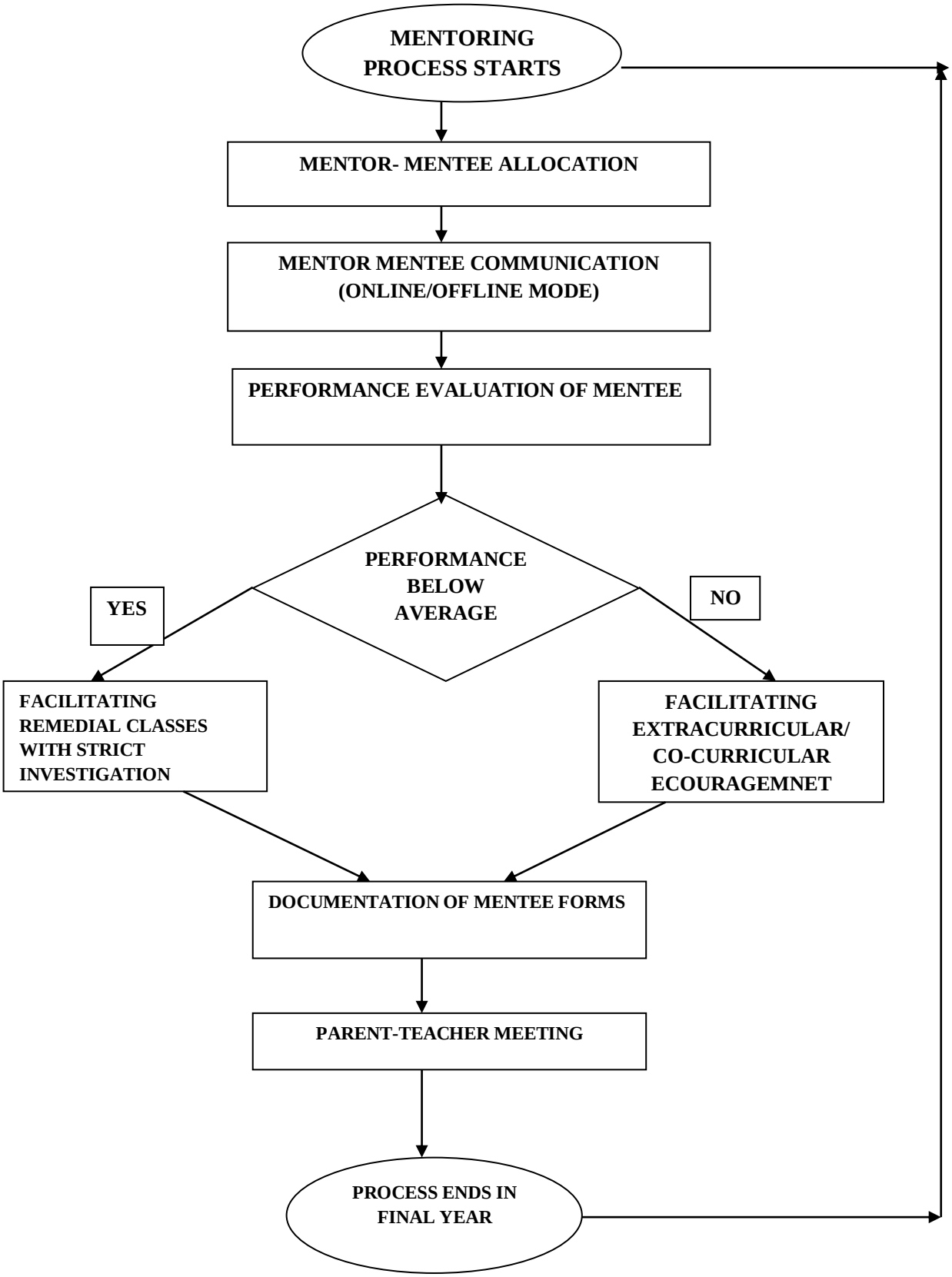
- Encouraging students to discuss their ideas.
- Encouraging students to try new techniques and expand their skills.

Each faculty is assigned 15 to 20 students. The faculty monitors their progress and reports to department in-charge of counseling cell. This mentoring is for over-all development of the student. A counseling sheet is maintained by faculty, where attendance, examination marks and family details are recorded. The same is continued till the student completes his/her graduation. The periodic status will be submitted to the parents/Guardians.

9.1.1	Objective of the Mentoring System

- To provide guidance to students towards achieving professional fulfilment and assessment of his/her academic progress as well as personal growth.
- To familiarize the greater culture of the institution to all aspiring graduates and instill the realization of potential of successes through accomplishment of qualitative education.
- To create collaborative environment amongst students and facilitators while aptly establishing network of transparency both in academic and administrative matters.
- To lay the foundation of lifelong learning and ethical conduct and behaviour in all aspects of larger life through dissemination of knowledge compounded with positive motivation, morale boasting and sense of community acceptance.

9.1.2 Process Flow Diagram



9.1.3	Types of Mentoring Systems

Table 9.1: Types of Mentoring Systems

SL. NO.	TYPES OF MENTORING SYSTEM	FUNCTIONS
1	ACADEMIC SPECIFIC	• Identify academically slow learning students and council them in presence of HOD to ensure that they improve their attendance. • Identify academically weaker students and provide them with additional reading materials, model questions along with solutions.
2	PROFESSIONAL GUIDANCE/ CAREER ADVANCEMENT	• Motivate them to expand their domain knowledge base through participating in technical competitions. • Stimulate students to exhibit innovations in project by participating in project exhibitions. • Encourage students to present their ideas through paper presentations in conference. • Encourage students to do certification course which adds value in addition to their qualifications related to the career such as MOOC, NPTEL, PLACEMENT PREPARATION • Provide career guidance and workshop apart from soft skill training provided by training and placement cell.
3	ALLROUND DEVELOPMENT	• To encourage the students to learn teamwork, leadership and motivate them to participate them in sports and cultural activities. • To create ethical and moral awareness. • Encourage and motivate students in social and environmental causes, national service scheme (NSS) and blood donations camps.
4	PSYCHOLOGICAL COUNSELLING	• Conducting workshops to support the students to strength their interpersonal relationships, improve their Inferiority Complex, Exam Phobia etc. • Conducting Yoga/ Meditation training classes to students to manage their stress levels.

9.1.4	Policy mechanism of Mentoring System

Table 9.2: Policy mechanism of Mentoring System

1	Mentors	Teaching faculty act as Mentor
2	No. of students per mentor	15 to 20 plus
3	Frequency of meeting	Meeting conducted every month after internal assessment by OFFLINE MODE/ONLINE MODE/PHONECALLS/SMS/WATSAPP GROUP
4	Parents feedback	The Parents feedback is collected after every parent meet in the department or through phone calls.
5	Analysis	The feedback analysis will be referred by the HOD's for corrective measures, through Head of the Institution

9.1.5	Outcome of Mentoring System

- Improvement in student attendance.
- Students excel in academics performance and technical skills and participate in extracurricular activities.
- Improvement in quality of projects.
- Improvement in personality development of an individual student mental stamina.
- Enhances the scope for career advancement of each student and aiming for higher education.
- Proficiency in addressing the societal issues.

9.2	Feedback Analysis and Reward/Corrective measures taken, if any	10

The feedback collection process is very important for quality improvement of the Institution. The faculty feedback is collected from the students every semester. This process contributes to evaluate the faculty performance for reward / corrective measures. The online feedback will be taken from the students in regular class hours and monitored by the inter department faculty.

Average Percentage of Students who participate: Students having attendance more than 75% are participated.

The feedback analysis process:

The inter department faculty collect the feedback from students through online and consolidated report generated online is forwarded to the Principal's Office for further Corrective Measures. The same will be sent to respective HOD's.

Table 9.3: Feedback analysis grading

Grading	Points
Excellent	9.01 - 10
Good	7.01 - 9.0
Average	3.01 - 7.00
Poor	1.00 – 3.00

The teaching performance indices are analyzed by the Principal's Office and the same is conveyed to the concerned.

Basis of Reward / Corrective Measures:

The indices used for measuring the quality of teaching, learning and summary of the index values are mentioned in below.

1) Creating interest in the Subject.
2) Regularity in handling the Classes/E-Classes.
3) Presentation of the Subject.
4) Audibility or Clarity of Speech.
5) Interaction with Students.
6) Clarifying Students Doubts.
7) Fairness in evaluation of I A test and assignment books.
8) Ability to design Quizzes/Tests/Assignments/Examinations and projects to evaluate students understanding of the course.
9) Interact and encourages students to ask question/participation.
10) Fulfilment of course objectives and outcomes.

System of Reward:

Best performing faculty is rewarded by issuing a Letter of Appreciation. Performance rating of faculty through student feedback system is one of the factors in evaluating the annual performance and to release the annual increment.

Corrective Actions taken:

The faculties performing below average are trained continuously through Faculty Development Program to improve the quality of the staff.

9.3	Feedback on facilities	05

Assessment is based on student feedback collection, analysis and corrective action taken.

Feedback on facilities

A standard procedure for feedback on facilities is taken up in the college. Feedback is collected from the students on facilities available in the college such as Water facility, Internet facility, Canteen facility, Sports and Gymnastic facility, etc.

The feedback is analyzed and the necessary corrective measures are implemented after discussions with the Management.

Following is the process of feedback on facilities.

i. Feedback collection process

ii. Feedback analysis

iii. Corrective measures

i) Feedback collection process:

Table 9.4: Details of feedback collection process

Items	Description
Feedback collected on all facilities provided by the college.	YES
Feedback collection process	Computerized
Feedback receiver	Administrative officer / Admin manager / Academic Dean

Frequency of feedback collection	Once in a semester
Metrics used for calculation	Poor: 1 to 3
	Average: 3.01 to 7
	Good: 7.01 to 9
	Excellent: 9.01 to 10
Purpose of comments	For improving the quality of facilities.

FORMAT of Student Feedback on Facility:

Questionnaires:

1. Interaction with the Principal.
2. Interaction with HODs.
3. Response at the Reception
4. Good support/interaction from Office
5. Availability of Staff in working Hours.
6. Extra-Curricular Activities.
7. Discipline in Campus.
8. Internet facility at Internet Centre
9. House Keeping at College Campus
10. Drinking Water Facility
11. Washroom facilities and maintenance
12. Sports Activities
13. Mentor-Mentee System
14. Are you happy with the food served in the present canteen?
15. Are you aware of the NSS Activities in our University?

Rating of Scale

Poor --- 1 to 3

Average --- 3.01 to 7

Good --- 7.01 to 9

Excellent --- 9.01 to 10

ii) Feedback analysis:

The feedback given by the students is consolidated and analyzed. Principal will discuss about the consolidated report with the management and come out with necessary actions.

iii) Corrective measures:

Corrective measures will be implemented at the college level with respect to the decision made by the management.

9.4	Self-Learning	05

Self-learning helps the students to develop sense of responsibility that equips with the essential attributes required for their career. Self-learning helps the students in gaining the knowledge and applying to larger domains. Self-learning helps better understanding of the discipline. Self-learning facility is provided for both students and staff such as webinars, MOOCS, NPTEL, SWAYAM, SWAYAM PRABHA, EDUSAT, AICTE, FDP'S etc. Self-learning helps to actively participation in industrial training.

Facilities, Materials and Scope for self-learning facilities provided by the college.

- E-learning
- Technical Talks
- Workshops
- Webinars
- Industrial Tour
- Internship
- Project Exhibitions
- MOOC certificates
- NPTEL

- SWAYAM
- EDUSAT
- AICTE webinars
- SWAYAM PRABHA

E-learning details

Table 9.5: E-learning details

Sl.No	Facilities	Information Resources
1	SWAYAM	Available Online
2	SWAYAM PRABHA	TV CHANNAL
3	IIT Bombay -X	FDP101X, SKANI-101X, FDP201X, ET611TX, CS101.1X, ET702X-MOOC, SKVIZ101X.
4	NPTEL online courses	Available Online
5	NITTTR	Available Online
6	E-SHIKSHANA	Available Online
7	VTU E-LEARNING CENTRE	e-CONTENT, e-RESOURCES, e-LIBRARY Available.
7	VTU EDUSAT	CD's available for all the subjects
8	WEBINAR	Available Online
9	Digital Library	Notes, Question Papers, Manual Solutions etc.
10	Language Lab	Communication skills, vocabulary, phonetics, etc.
11	TEACHING SKILLS	Available Online
12	Professional activities	Available Online
13	Soft skills	Available Online
14	Work place communication	Available Online
15	English for oral communication	Available Online

16	Financial literacy	Available Online
17	Handling large project	Available Online

MOOC

A massive open online course is an online course aimed at unlimited participation and open access via web. In addition to traditional course materials such as filmed lectures, readings and problem sets, many MOOCs provide interactive user forums to support community interactions between students, professors and teaching assistants (TAs). MOOCs are a recent and widely researched development in distance education which was first introduced in 2008 and emerged as a popular mode of learning in 2012.

Learning beyond syllabus and creation of facilities for self-learning is to make the students well-verse in all the directions. The format for this system is as specified below.

CONTENTS BEYOND SYLABUS

RYMEC supports for students to learn the subjects in a broader way so as to inculcate the skills of creativity, applying domain knowledge for practical problems and to improve the quality of self-learning. Contents beyond the syllabus are given to students by respective subject teachers in the form of:

- Case Studies
- Mini Projects
- Assignments
- Quiz

9.5	Career Guidance, Training and Placement	10

Career Guidance

Career guidance for engineering students is a must so that graduates can discover their strengths and weaknesses before venturing out into the highly competitive world, some Precautionary as well as career-boosting measures need to be taken by graduates.

Career counseling or career guidance process involves individuals (school or college students or professionals) exploring various career options, understanding more about the opportunities, analyzing the career prospects and earning potential. The process also includes an all-inclusive

career assessment test which evaluates individuals' interests, strengths and weaknesses, ability/aptitude, personality traits and capabilities. The students are guided by mentors and also career guidance program is conducted by companies like

i) RARE MINDS, Bengaluru

ii) AECC Global India, Bengaluru

iii) NEOPAT Chennai

iv) TYOTA KIRLOSKAR MOTOR Pvt Ltd.

v) FACE pulse, Coimbatore

vi) ETHNUS, Bengaluru

Table 9.6: Career Development workshop

Sl. No.	Orientation Program	Resource person/ Company
1	Managing Your Personality in World Working Virtually	RARE MINDS, Bengaluru
2	UNLOCK Jobs Part-2	SA-MUDRA FOUNDATION
3	How to get Scholarship on Microsoft Google certification	QUANTUM LEARNING
4	Career Pathway & Study Abroad Opportunities	AECC Global India, Bengaluru.
5	Carrier Opportunities in VLSI industry	Chip Edge Technologies, Bengaluru
6	Web Development as Carrier for Engineers	Face pulse, Coimbatore
7	Young Ambassador Program	QtPi Robotics, Bangalore
8	Industry Expectations from Young Engineers	By Dr. Binoy Mathew Director, VTU CPC, Bengaluru
9	Software Development & Testing	By Mr. Keshav CEO, JSPIFERS, Bengaluru
10	How to land in a dream IT Product company job as a fresher	FACE-PREP, Coimbatore

Training and Placement Cell

Campus training and placements play a major role in shaping up the career goals of students. It is the dream of every engineering student to get placed in a top organization visiting their campus for recruitment. A placement year can **give students inspiration for final year projects and dissertations**. It can also help develop your soft skills, such as being able to work in a team and the ability to solve complex problems, which are all valuable assets for both your academic and professional career. To cater this, an independent Training and Placement Cell is in function in the institute since 2001. The Training and Placement Cell is headed by Concerned Officers and supported by Departmental co-coordinators. The vision of the training and placement cell is "**Transforming every student – an employer's** choice". Our mission is "Develop the students to face global competitive world with confidence and attain desired placement". Our industry partners are TCS, JSW. Our Trusted recruiters are TCS, HCL, Emphasis, IGATE, Cigital, SLK Software Services, Advanced electronics Ltd, Global Edge, Tech Mahindra, L&T, Accenture, Mind Tree, JSW, Kirloskar and many more.

Pre-Placement Training:

Pre-placement training is imparted to all the final year students, as part of the curriculum to enhance the competency among students with respect to various soft skills and domain specific areas like finance, HR etc. During campus placements, recruiters test for an array of skill sets in their potential employees. In addition to being knowledgeable in their core subjects, students should also possess a great aptitude and soft skills. Hence pre-placement training is necessary. The Pre-placement training has been conducted by **Universal Education Bangalore, Bizotic, Bangalore GTT, Pune and Ethnus, Bangalore** the contents of Pre-Placement training are mention as below.

CONTENTS OF PRE-PLACEMENT TRAINING

Quantitative aptitude

- Basic math
- HCF, LCM and simple and compound interest
- Data sufficiency 1
- Data sufficiency 2
- Analytical Reasoning

- Logical Reasoning 2
- Progression
- Permutation and Combination
- Ratios and Proportion
- Averages and Blood Relations
- Percentages, Profit and loss
- Speed, time and distance
- Time and Work
- Logical Reasoning 1
- Data Interpretation 1
- Data Interpretation 2

Verbal aptitude

- Parts of speech & Vocabulary Building
- Synonyms, Antonyms
- Analogies
- Sentence Completion Sentence Correction & Incorrect sentence
- Reading comprehension 1
- Reading comprehension 2
- Error detection

Soft skills

- Group discussion
- Personal interviews
- Language Skill (Written)
- Resume building
- Communication Skill
- Grooming

9.6	Entrepreneurship cell	05

EDC is headed by Dr. Srishaila J M, Associate Professor, Department of Civil Engineering with a team of faculty coordinators from other departments of the college.

The goal of EDC is to assist students, entrepreneurs, including Institution faculty, with pre-venture, start-up or existing business with financial management, marketing, technology and product development, commercialization issues, to understand the employability options, opportunities to control unemployment and to create better opportunities for youngsters.

Working in collaboration with New Age Incubation Network (NAIN) Government of Karnataka and District Industry Centre – DIC, BALLARI. EDC has conducted various activities for the college students creating and promoting entrepreneurship awareness in the campus.

Recent activities carried out at college premises:

1. VTU TEQIP 1.3 Sponsored (STTP) 3-day short term training program for students Program on Employability & Entrepreneurial Skills On 6th - 8th September 2019 In Association with Visvesvaraya Technological University Belagavi, Karnataka Aryabhata Knowledge University Patna, Bihar Biju Patnaik University of Technology Rourkela, Orissa
2. BOOT CAMP in association with K-Tech and Department of IT-BT, Government of Karnataka on 29th August 2019.Many students presented their ideas during above said activities.
3. Ideathon Programme is organized to students to present their ideas on projects as on 7/9/2019.
4. Online Covid Quiz is organized to students as on 30/05/2020.
5. Webinar on Artificial Intelligence is organized in association with K-Tech and Department of IT-BT, Government of Karnataka on 7th October 2020.
6. Webinar on IOT is organized in association with K-Tech and Department of IT-BT, Government of Karnataka on 23rd March 2021.
7. Webinar on Entrepreneurship, startups in association NAIN as on 28th May 2021.
8. BOOT CAMP in association with K-Tech and Department of IT-BT, Government of Karnataka on 8th June 2021

9.7	Co-Curricular and Extra-curricular Activities	10

IEEE STUDENT CHAPTER

I. IEEE Student Branch Petition & formation of IEEE student Branch – RYMEC

IEEE is a not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity Petition to form IEEE student branch in **RYM Engineering College** with **Bhoomika Jaghirdar,** Student Chair IEEE – RYMEC was filed on 6th December 2021 and the following faculty members are communicated as ExCom Members of IEEE RYMEC section. The Endorsement for initiation of student branch was carried on 16th December 2021.

II. Approval of IEEE Student Branch Petition

On December 23rd, 2021 on behalf of the Member and Geographic Activities Board the IEEE Student Branch program has approved our petition to form an IEEE Student Branch at RYMEC-Bellary.

Our Student Branch is located in Region 10 and our activities will be of interest to the volunteers listed below:

- **Deepak Mathur, Region 10 Director**
- **Jennifer Dela Cruz, Region 10 Student Activities Chair**
- **Saaveethya Shivakumar, Region 10 Student Representative**
- **Bindhu madhava Bapu, Bangalore Section Chair**
- **RYMEC IEEE Student Branch code is STB99412 and School Code is 60202606**

III. VIRTUAL INAUGURATION OF IEEE STUDENT BRANCH (STB99412)

On 30th December, 2021 @10.00 AM the virtual inauguration of IEEE STUDENT BRANCH (STB99412) in Zoom platform was conducted .The program was and successfully inaugurated with the presence of chief guests **Dr. D N Sujatha,** Chair, SAC, IEEE Bangalore Section, Professor, Dept. of MCA, BMSCE, Bangalore and **Dr. Parameshachari B D,** Secretary, IEEE CAS**,** Chair, IEEE ITS**,** Bangalore Chapter**,** Prof & Head, Dept. of TCE **,**GSSSIETW, Mysuru .The Heads and coordinators of various department ,IEEE student and IEEE faculty members ,principal and management joined virtually for the inauguration.

Picture 1: Virtual Inauguration IEEE Student Branch

Picture 2: Virtual Inauguration IEEE Student Branch

IV. NATIONAL SCIENCE DAY CELEBRATION

National Science Day (NSD) is celebrated every year on 28th February to commemorate the discovery of the ***'Raman Effect'***. Government of India designated 28th February as National Science Day (NSD) in 1986. On this day ***Sir C.V. Raman announced the discovery of the 'Raman Effect' for which he was awarded the Nobel Prize in 1930***. On this occasion theme-based science activities are organized to **sustain the spirit of science** and **celebrate the science day under the flagship of IEEE RYMEC student chapter.** On this occasion, theme-based science communication activities are carried out all over the country. It's the time to sustain the spirit of science and **celebrate the science day** on **28th Feb 2022 under the flagship of IEEE RYMEC student chapter**. In this regard IEEE RYMEC STB organized various events such as Online Quiz programs, Poster Presentation on the specific theme appropriate for the science day

celebration, Invited talk/Guest lecturer and Placement of electronic bins in the campus.

Picture 3: Poster Presentation: Theme: E - Waste Segregation and Management

I. Prakalp 2K22- State Level Project Symposium held on 17th June, 2022. Chief Guest Dr Viayalakshmni Jigajini IEEE Senior Member, BEC, WIE Faculty Advisor, Bagalkot.

Picture 4: Poster Presentation: Theme: E - Waste Segregation and Management

II. Poster Exhibition

IEEE RYMEC student branch successfully conducted Poster Presentation Competition to commemorate the 75th Independence Day on 13th August 2022 with more than 50 participants from various branches of RYMEC. The objective of the event was to provide an open platform for our UG&PG students to express their insights on the theme: **Ek Bharat Shreshta Bharat and proudly involve in the celebration of Azadi ka Amurath Mohastav.**

Picture 5: Poster Presentation Theme: Ek Bharat Shreshta Bharat

III. IEEE Mysore Congress Event on 15th & 16th July, 2022 & Industrial Visit to Infosys Mysore campus.

Picture 6 Industrial Visit to Infosys Mysore Campus

IV. Election Awareness program to high school children of VVS SK MODI School, Ballari Chaired by Dr Savita Sonoli, IEEE Chair RYMEC with volunteers of IEEE RYME students.

Picture 7: Inter Institute Program

V. IEEE Celebration 2022

Picture 7: IEEE DAY EVENTS

VI. **Invited talk by resource person Dr Rajesh Sugur,** B.A.M.S.M.D Ayurveda Panchakarma, Taranath Govt. Ayurveda College Ballari Dept of Panchakarma**, organized by IEEE STB on 19th November, 2022.**

Picture 8: Felicitation to Dr Rajesh Sugur – Invited talk on Applications of Ayurveda in Modern Day

NSS-UNIT RYMEC

NSS UNIT of RYMEC is headed by Prof. Virupaksha Gouda H of Mechanical Engineering Department. NSS UNIT of our college is functioning from many years and organizing several useful programs for the society.

The programs like Voluntary Blood donation camps, Tree plantation, Health education & Health orientation programs, Essay writing- Drawing competitions, Free medical and Health checkup camps, helping towards flood affected people etc.

Objective of NSS:

1. Creating awareness of social service for the students
2. Motivating the students to serve for society in tree plantation, blood donation etc.,
3. Not only education also promoting the students towards moral ethics, healthy and sound thinking about society.
4. Helping for the poor and disabled people by organizing health orientation programs.

Outcome of the programs:

From our NSS UNIT many patients, poor and disabled people were benefited.

i) Covid-19 Vaccination Drive-3:

The Covid-19 Vaccination drive was organized by NSS Team Members in the college on 12-07-2021 from 10.00am onwards, in association with District Health and Family Welfare Office, Ballari. All teaching, non-teaching staff members and students of various departments are participated in the vaccination drive and around 375+ have got vaccinated.

Covid-19 Vaccination Drive-2

As per the Circular received from VTU Registrar, instructed to ensure that, the Covid-19 related vaccination for all Staff and Students of institution be taken up and to be completed by 8th of July 2021. In view of this the Covid-19 Vaccination drive was organized by NSS Team Members in the college on 02-07-2021 from 10.00am onwards, in association with District Health and Family welfare Office, Ballari. All teaching, non-teaching staff members and students of Various departments are participated in the vaccination drive and around 600+ have got vaccinated.

ii) Oxygen Challenge

As per the Circular received from Department of NSS and Youth Empowerment and Sports, Govt. of Karnataka to organize "Oxygen Challenge" program to plant 5 lac Seed Balls thought the Karnataka State on occasion of "International Environment Day". In this connection the Plantation Programme was organized in the premises of RYM Engineering College, Ballari near Ganesha Temple in association with ABVP, Karnataka State and Ballari Division on 17-06-2021 from 10:30am onwards. Dr. D Basavana Gouda, Professor of EEE Dept and NSS Team Members have taken initiation to organize the plantation program. All teaching, non-teaching staff members and students

of Various departments are participated in the program and made it huge success. Around 1500 Seed Balls sown in and around campus.

iii) AICTE Sponsored Work Shop on Sansad Adarsh Grama Yojana

Dr. K Veeresh, Principal, RYMEC and Dr. Kotresh. S & Prashanth Keni of NSS UNIT, RYMEC participated in AICTE sponsored workshop on SANSAD ADARSH GRAMA YOJANA (SAGY) at Nagarjuna College of Engineering & Technology, Bengaluru on 25th& 26th of November-2017.

SAANSAD ADARSH GRAM YOJANA

M.P. Constituency: Ballari

Member of Parliament: Sri B. Sriramulu

Village: Tambrahalli: Taluk: H.B. Halli.

NSS UNIT: Rao Bahadur Y Mahabaleswarappa Engineering College

Brief Report:

We the NSS Unit of RYMEC visited the Tambrahalli village (120KM from Ballari) which was declared as Saansad Adarsh Gram Yojana from the honorable Member of Parliament Sri B. Sriramulu. In this visit, we collected the information related to this program from the villagers and we organized some orientation programs Viz., Solar energy awareness, water conservation, Rain water harvesting, Global warming awareness to the people. The programs were organized in Kinnal Porammambe Gurusiddappa high school, Thambrahalli village.

LEAD ACTIVITY

LEAD team of RYMEC is headed by Prof. Dr. Chidananda. H of Computer Science & Engineering department. Our college LEAD team is functioning from 2019.

ABOUT LEAD

The Leaders Accelerating Development (LEAD) Program of Deshpande Foundation, Hubballi, Karnataka fosters innovative and entrepreneurial thinking within college students by exposing them to social issues and by encouraging them to volunteer their time and effort into the community. LEAD ignites their latent talent to come up with creative solutions. LEAD is an incubator where innovation meets implementation, knowledge meets experience, social issues meet solutions and efforts meet impact.

Activates carried out under LEAD:

i) 'Break the chain' campaign to fend off the Covid-19spread.

On 5th April2020RYMEC LEAD students, presented an online presentation to provide awareness to the public regarding the pandemic situation.

Feeding Voiceless creatures during COVID-19 period

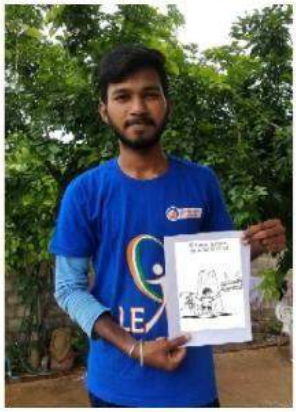
ii) CHILD_LABOUR_DAY

World Day against Child Labor 2020 focuses on the impact of crisis on child labor. TheCOVID-19 health pandemic and the resulting economic and labor market shock are having huge impact on people's lives and livelihoods. Unfortunately, children are often the first to suffer. The crisis can push millions of vulnerable children in to child labor. On this day i.e.,12/06/2020our LEAD Students have given a meaningful message to the society:

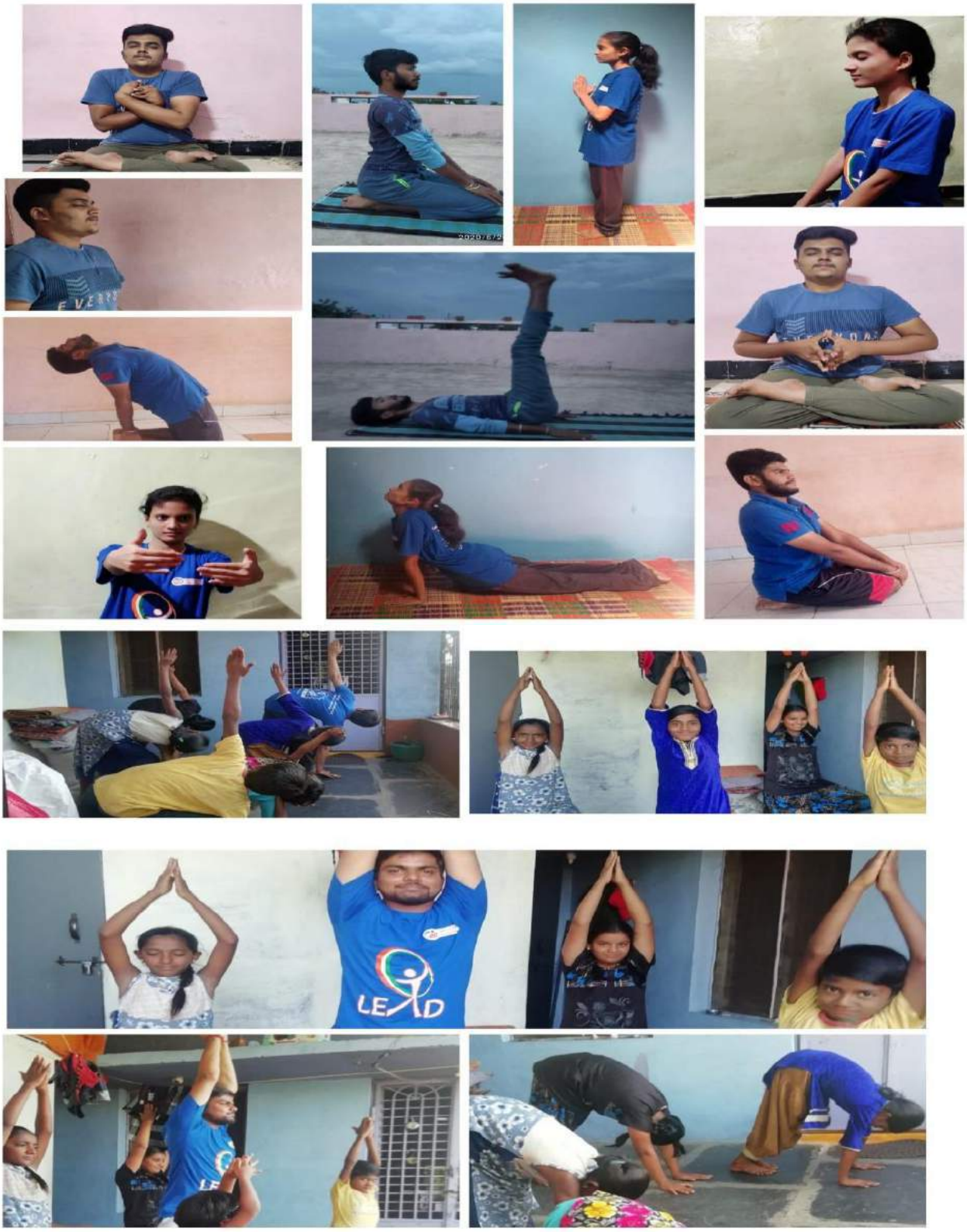






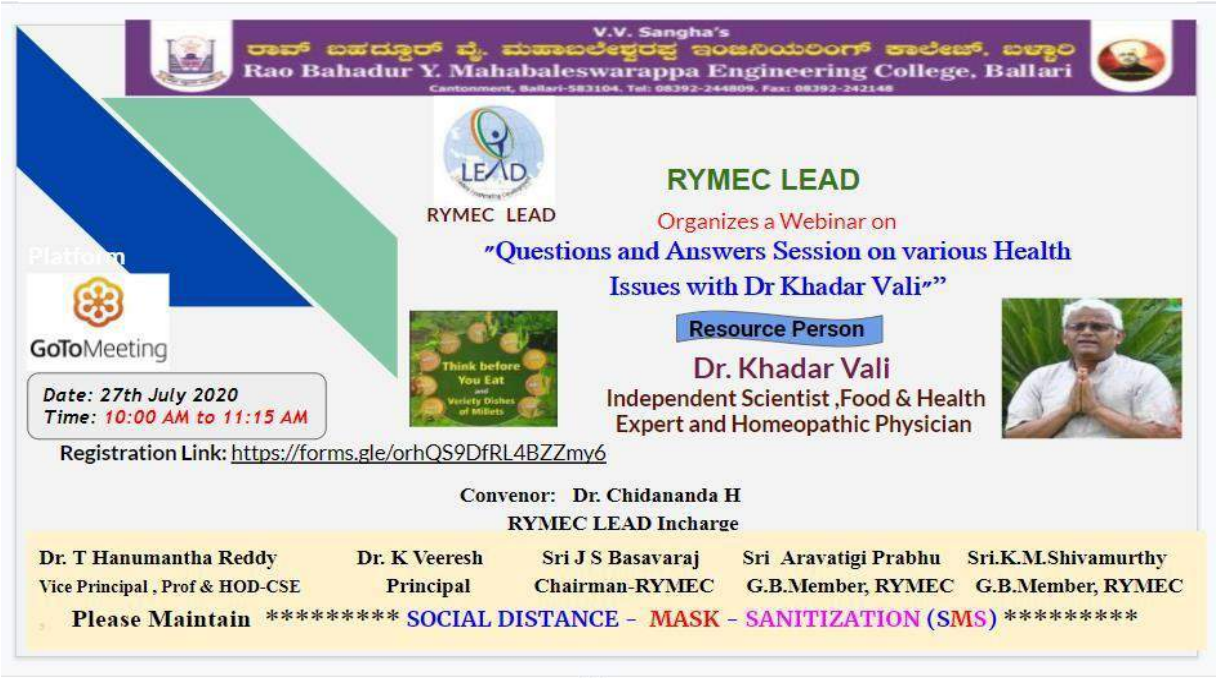


iii) International Yoga Day On the occasion of 6th International Yoga Day i.e., 21st June2020, our LEAD students performed some yoga practice and given training to others to prevent from the unprecedented pandemic.



YOGA training to children on International YOGA Day

iv) Webinar on " Post COVID-19 and How to Enhance Our Immune System" with Dr. Khadar Vali on29/06/2020.



v) LEAD RYMEC, on 26/07/2021 prepared handmade greetings, a gift to expresses gratitude to our indomitable courage of the Indian soldiers on the occasion of #KARGIL VIJAY DIVAS

vi) RYMEC LEAD Students received as a BEST TEAM AWARD 2K18 in LEAD Valedictory Program

Activities carried out under Youth Red Cross – Unit RYMEC

i) Visit to Old-Age Home

A visit to old Age home has been organized, students involved voluntarily and distributed clothes and served food for the senior citizens. Students have spent a meaningful time with them, and made them happy. Program was organized by Youth Red Cross coordinator Mr. Aladhalli Sharanabasappa. Old age home in-charge Mr. Venkobanna was thankful to the management and students for such a gentle program.

Students serving Food at Old Age Home

Sports Achievements

B Balaji of ECE branch,5th semester has won GOLD MEDAL in WORLD KARATE CHAMPIONSHIP of 2019 held at Jaipur, Rajasthan from 10th to 13th January 2019 more than 40+ countries participated.

Mr. Balaji has secured First Place, with Gold Medal in "IMAS World Kumite Championship – 2019".

- Aruna Kumari Branch: IP participated in women's Indonesia-India International Throwball Championship from 25th to 26th February 2018
- Prashanth Kumar H. Branch – Mechanical, selected for VTU Hockey team Inter University tournament held at Bangalore University, Bangalore, from 22nd to 28th January 2018.
- Lakshmikantha N. Branch – Civil, selected for VTU Hockey team Inter University tournament held at Bangalore University. Bangalore, from 22nd to 28th January 2018.
- Girish K M. Branch – Mechanical, selected for VTU KHO-KHO team Inter University tournament held at Mysore University. Mysore, from17th to20th January 2018.
- RYMEC students represented Karnataka Men and Women's Handball Team and secured First place in All India Tournament and Men Team secured 3rd Place at Delhi organized by Student Olympic Association of India from 26-10-2018 to 28-10-2018

In this event following students has participated: SAHANA DESHPANDE, RAJANI S, DIVYA D, SAI AKHILA V, SAIDU BEGUM, SUSHMA POLICE PATIL AND MURALI KRISHNA.

- VTU Rest of Bangalore Zone volley ball women's team 3rd place held at NMAMIT NITTE from 1 7th to 19th march 2019.
- Shiva Kumar STM. Branch: Mechanical. Selected for Indian Throw ball team for Indo-Bangladesh International Throw ball Championship held at Chhattisgarh India from 14th to 16th MAY 2017.
- Shiva Kumar STM. Branch: Mechanical Selected for Indian Throw ball team for Indo-Thailand International Throw ball series held at Bangkok Thailand from 21th to 25th JUNE 2017.

Unnat Bharat Abhiyan, a flagship program of Ministry of Human Resource Development (MHRD)

RYMEC selected under Unnat Bharat Abhiyan, a flagship program of Ministry of Human Resource Development (MHRD) Government of India through a challenge mode application. RYMEC selected the cluster of villages under Unnat Bharat Abhiyan (UBA) in consultation with the District Collectors.

About Unnat Bharat Abhiyan:

- It is a flagship program of the Ministry of Education. It was launched in 2014.
- It aims to link the Higher Education Institutions (HEIs) with a set of at least (5) villages, so that these institutions can contribute to the economic and social betterment of these village communities using their knowledge base.
- It covers two major domains for holistic development of villages – human development and material (economic) development - in an integrated way.
- The Indian Institute of Technology Delhi (IIT, Delhi) has been designated as the National Coordinating Institute (NCI) for the UBA scheme.

Main Objectives:

1. To engage the faculty and students of HEIs in identifying development issues in rural areas and finding sustainable solutions for the same.

2. Identify & select existing innovative technologies, enable Customisation of technologies, or devise implementation methods for solutions, as required by the people
3. To allow HEIS to contribute to devising system for smooth implementation of various Government Programs.

Name of the Proposed Villages:

1. Sanganakal
2. Haraginadoni
3. Somasamudra
4. Kolur
5. Sirivara

Chief coordinator:

- Dr. U M Netravati acting as a UBA Chief coordinator of RYMEC.
- Dr. Chidananda H, Sri. U Shantha Kumar, Sri. Aparna K.S, Sri. Virupaksha Gouda H, Sri. Shiva Kumari I, Sri. M I Basavalinganagouda, Sri. Channaveeranagouda and Sri. K Suresh are the team members

i) Activities organized under UBA-RYMEC:

On 10/08/2021Grama Sabha Meeting conducted in Haraginadoni village to identify the major issues in the village by discussing with village people.

1. 0n 10/08/2021Village and Household survey conducted in Haraginadoni village to identify the problems in the village.

2. Awareness programme on COVID-19 organized by UBA-RYMEC in Haraginadone village on 10/08/2021

Swachh Bharath Mission Cell RYMEC

Name of the Convener's: Mrs. Anusuya Patil and Mr. Santosh Mugali

Objective of the SBM:

1. Maintaining RYMEC campus clean
2. Discussing about the trees leaves and others renewable things to compost
3. Preparation of Display boards about cleanness
4. Collection of Feedback and Suggestions from Students and Staff
5. All members of Swachh Bharat Mission Cell RYMEC to Instruct and Guide to House Keepers to maintain Cleanness campus of RYMEC and Toilet room.


POCO
SHOT ON POCO M2


POCO
SHOT ON POCO M2

Co-curricular Activities

i) MANDARA

ii) VIDHARA

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING AND INFORMATION SCIENCE ENGINEERING is organizing **VIDARA 2020** ON 26th and 27th November 2020.

VIDARA is a tech fest conducted in the dept of CSE every year, VIDARA means a flower that blossoms in a desert. This flower is an emblem for a student who needs to grow and blossom in every hard time.

Opportunities for learning, growing and achieving exist everywhere at RYMEC, Life at RYMEC is a blend of academics, extracurricular and co-curricular activities. VIDARA 2020 allows students' to explore their new ideas of problem solving ,it strengthens students' logical thinking skills and it develops students' potential and talents to the fullest.

This tech fest is a platform for all students to participate in various technical and non-technical events so as to identify the hidden talents. The various events conducted in Vidara2020 are:
List of events:

Event 1: "SHODHANA": Inviting new and innovative start-up solutions for day-to-day problems.

Event 2: Elocution Competition

Event 3: Photography (Inviting you to share photos from your celebrations of Diwali in this pandemic, Show us your most creative and unique pictures of the festival of lights.)

Event 4: Quiz

Event 5: Crossword

Event 6: Alumni Talk

VIDHARA-TECH FEST conducted annually by CSE-FORUM by CSE staff and students, for tall the basic degree students and technical degree students. The various events conducted are both technical like debugging, coding, quiz etc. and nontechnical event alike dancing, singing, video games, movie making etc.

iii) TALENTRONICS FORUM

Department of Electronics and Communication Engineering is organizing Every year Talentronics Forum. The various events conducted are both technical like debugging, coding, quiz etc. and nontechnical event alike dancing, singing, video games, movie making etc.

Main Objectives of Forum

- To bring holistic development of students of the ECE Department through technical and cultural events.
- To increase their exposure to the professional world by organizing expert lectures.
- To organize Industrial Visits to places related to the ECE field.
- To encourage Student projects related to ECE.
- To organize Intra-department technical and non-technical competitions.

iv) Dept of Mechanical facilitates a techno cultural democracy for the students. The department has inaugurated student's forum with the title "MECH-TANTRIKA".

v) Department of EEE having forum named has "VIDYUTSAV" under this forum, the events like Technical Talk, photo hunt, Brainstorming Activities were conducted, also Competitions like Logo Design, Rangoli and Skits were organized.

WOMEN CELL ACTIVITY REPORT

Conducted on January 13, 2022

WOMENS CELL LOGO LAUNCH

An event was conducted to finalize a logo for Women's cell of RYMEC, Ballari

To finalize the logo for the Women cell, a competition was conducted on 29.10.2021 to the students of RYMEC for all discipline. Best logo design was selected and the student was awarded with a cash prize. The best logo design was revealed on 13.01.2022 . On this occasion the management of RYMEC and VV Sangha office bearers distributed the prizes to the winners. Also, an Inspirational talk was arranged on the day.

CRITERIA 10	**GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES**	**120**

10.1	**Organization, Governance and Transparency**	**40**

10.1.1	**State the Vision and Mission of the Institute**	**05**

VISION OF THE INSTITUTE

"To build Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Engineers and Entrepreneurs"

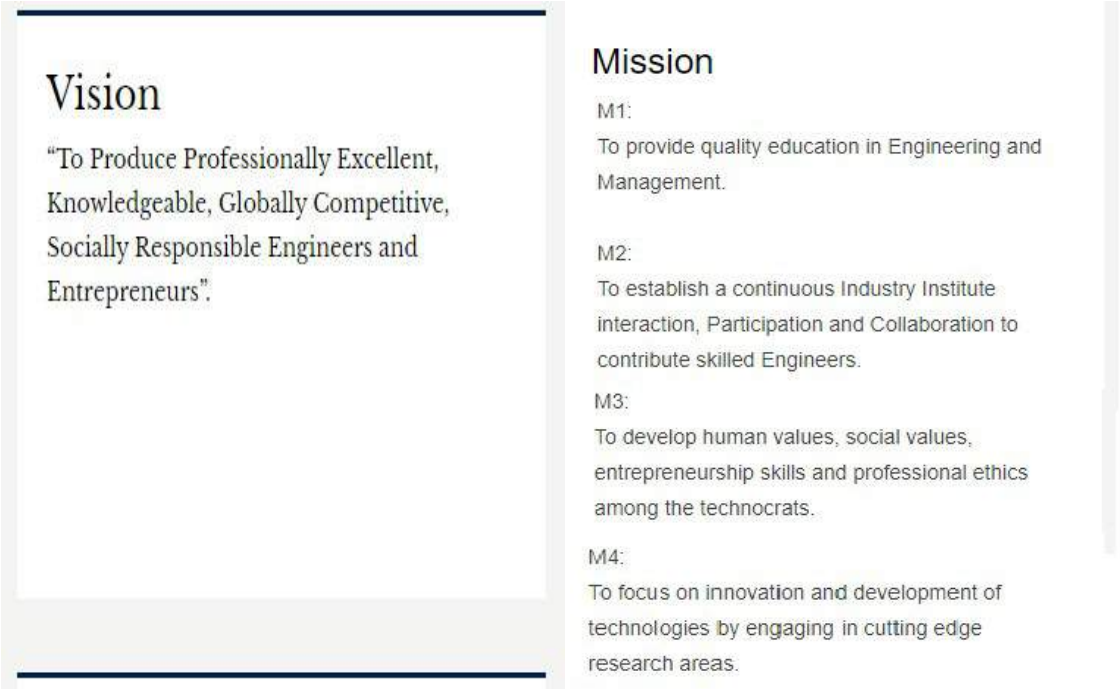
MISSION OF THE INSTITUTE

M1. To provide quality education in Engineering and Management.

M2. To establish a continuous Industry Institute interaction, Participation and Collaboration to contribute skilled Engineers.

M3. To develop human values, social values, entrepreneurship skills and professional ethics among the technocrats.

M4. To focus on innovation and development of technologies by engaging in cutting edge research areas.



Vision

"To Produce Professionally Excellent, Knowledgeable, Globally Competitive, Socially Responsible Engineers and Entrepreneurs".

Mission

M1:
To provide quality education in Engineering and Management.

M2:
To establish a continuous Industry Institute interaction, Participation and Collaboration to contribute skilled Engineers.

M3:
To develop human values, social values, entrepreneurship skills and professional ethics among the technocrats.

M4:
To focus on innovation and development of technologies by engaging in cutting edge research areas.

Fig. 10.1: Vision and Mission of the institute displayed in college Website *https://www.rymec.in*

10.1.2	**Governing Body, Administrative Setup, and Functions of Various Bodies, Service Rules, Procedures, Recruitment, and Promotional Policies**	**10**

The Governing Body:

Governance is the key activity that connects the management, staff, students and the community. The governing body of the Institution is a legal structure responsible for the overall functioning of the college. In general, it is responsible for the Quality of service (QoS) the college offers to the student and other local community and society, as well as the college's annual budget, health, and strategic direction. The institution has a governing body in place wherein the members are drawn from distinguished cross-sections of the society as shown in Table 10.1.

Sl.No.	Name	Designation	Occupation
1	Sri. H.M. Gurusidda Swamy	President., V.V. Sangha, Ballari.	Advocate
2	Sri. Allum Channappa	Vice President/Chairman, RYMEC, Ballari.	Advocate
3	Sri. B.V. Basavaraj	Secretary, V.V. Sangha, Ballari.	Advocate
4	Sri. Gonal Rajshekhar Gouda	Treasurer	Business
5	Sri G M Mallikarjuna Reddy	Governing Body Member	Business
6	Sri Basavaraj Rupanagudi	Governing Body Member	Business
7	Sri Janekunte Pompana Gouda	Governing Body Member	Business
8	Sri Korlagundi Basavana Gouda	Governing Body Member	Business
9	Sri Halakundi Satish Kumar	Governing Body Member	Business
10	Dr T. Hanumantha Reddy	Member – Secretary	Principal, RYMEC, Bellary
11	Dr Parama Shiva Murthy	VTU Nominee	Principal, Govt Engineering College, Chamarajanagar
12	Sri. R. Manjunath	Director, DTE	Director, DTE Bangalore
13	Sri. Shakthi Velu	Regional officer	Regional officer, AICTE, Bangalore.
14	Dr K. Ramesh Gopal	Industrial Representative	Business

Table 10.1: Structure of Governing Body

The Administrative Setup:

Institute believes in dedicated work culture with love and affection to every stakeholder. Involvement of each and everyone in the decision-making and transparency associated therein also forms the important features of the work culture. A core team of 24 to28 members lead the processes in the institute. The administrator list is given below.

Table 10.2: List of Administrators

Sl. No.	Name	Designation	Responsibility
1	Sri. Allum Channappa	Chairman, RYMEC	Administration
2	Dr. T. Hanumantha Reddy	Principal	Administration
3	Dr. Savita Sonoli	Vice-Principal, Professor & HOD, ECE	Admission Head
4	Dr. Girisha H	Professor& HOD, CSE	Dean Academics
5	Dr. B Sreepathi	Professor & HOD- ISE Dean Examinations	VTU Examinations, Network Maintenance, Digital Library, Consultancy Work for online Test. Web site coordinator
6	Dr.Hiregoudar Yerrenagoudaru	Professor & PG Coordinator	Dean R & D at Institute Level
7	Dr C Thotappa	Professor & PG Coordinator	Mechanical Dept. NBA Co-ordinator.
8	Dr H M Mallikarajuna	Professor & HOD, Civil Engineering	Departmental Academic Work, Consultancy Work.
9	Dr Kori Nagaraj	Professor & HOD, Mechanical Engg.	Departmental Academic Work
10	Sri. Shambulingana Gouda	Assistant Professor	Electrical Maintenance

11	Dr A Thimmana gouda	Professor, MBA Co-ordinator	Departmental Academic Work
12	Dr. Phakirappa Jeevargi	Professor & HOD, Mathematics& 1st Year Coordinator	Departmental Academic Work, Dean (Academic & Student Welfare for the first year).
13	Dr Hiremath Suresh Babu	Professor & HOD, Chemistry.	Departmental Academic Work
14	Dr N M Nagabhushan	Professor & HOD, Physics	Research Coordinator (Physics)
15	Dr Prabhavathi. S	Professor, ECE Dept.	NIRF coordinator
16	Dr. Veerabhadrappa Algur	Associate Professor	IQAC Coordinator
17	Sri. Gururaj KK	Assistant Professor & Placement Officer	Training & Placement
18	Sri. Virupaksha Gouda H	Assistant Professor	NSS /RED CROSS Coordinator
19	Dr S. P. Jagadeesh	Associate Professor	Chief warden
20	Smt. Sridevi S Malipatil	Assistant Professor	Girls Hostel Warden
21	Dr K.M. Shiva Prasad	Assistant Professor	Boys Hostel Warden
22	Smt. Girija Vani	Assistant Professor	Girls Hostel Warden
23	Sri. Phanindra Reddy	Assistant Professor	Boys Hostel Warden
24	Smt. Chinna V Gowdar	Assistant Professor	EDUSAT Co-ordinator
25	Sri. Sridhar Belagi	Assistant Professor	A-View Co-ordinator
26	Sri. Vishwanath Reddy	Librarian	Library

Functions of Various Bodies:

Positions	Functions
Governing Council	❖ **Frame directive principles and policies** ❖ **Amend and approve policies from time to time** ❖ **Approve budgets**
Chairman and Governing body Members	❖ **Frame directive principles and policies** ❖ **Amend and approve policies from time to time** ❖ **To look after the overall development of the institute** ❖ **Mobilize external resources to strengthen the institute** ❖ **Plan & provide necessary equipments / facilities for development.**
Principal	❖ **Design & define organisational structure** ❖ **Delegate's responsibilities of various positions in the organization** ❖ **Ensure periodic monitoring & evaluation of various process and subprocess** ❖ **Ensure effective purchase procedure** ❖ **Define quality policies and objectives** ❖ **Conduct periodic meetings of various bodies such as Governing Council, Women's grievances redressal committee etc** ❖ **Managing accounts and finance** ❖ **Employee recruitment process**
Vice-Principal(s)	❖ **To discharge the routine duty of Principal during the absence of Principal** ❖ **Annual Magazine** ❖ **Resource Provision** ❖ **Transport**

	❖ **Housekeeping including Hostel** ❖ **Prepare and execute an academic calendar** ❖ **Oversee the teaching-learning process** ❖ **Initiate supplementary teaching measures** ❖ **Co-curricular Activities** ❖ **Sports activities** ❖ **Students discipline** ❖ **Student health care**
Head of the Departments/ PG Coordinators	❖ **Plan and execute academic activities of the department** ❖ **Maintain discipline and culture in the department** ❖ **Maintain department neat and clean** ❖ **Pick and promote the strength of students/faculties/staff** ❖ **Monitor academic activities of the department** ❖ **Propose department budget** ❖ **Maintain records of department activities and achievements**
Administrative Officer	❖ **Propose admission policy** ❖ **Arrange campaign** ❖ **Execute the admission process** ❖ **Design and print admission broucher** ❖ **Maintain and update college broucher** ❖ **Maintain softcopy of photographs** ❖ **Publicity of events**
Training and placement officer	❖ **Liaison with Industry** ❖ **Identify and provide training needs of students** ❖ **Arrange campus interviews** ❖ **Proposing an annual T&B budget**

Superintendent (Establishment, Accounts, Admission)	❖ **Corresponding with AICTE, DTE, VTU etc** ❖ **College Roster** ❖ **Service Books** ❖ **Faculty personal files** ❖ **Recruitment Process** ❖ **Maintain minutes of meeting** ❖ **Coordinate day to day activities of the office** ❖ **AICTE, DTE, VTU etc committee preparation** ❖ **Annual College budget**
Librarian	❖ **Plan and execute modus operandi of routine activity of the library** ❖ **Plan and propose expansion/development** ❖ **Maintain Library discipline and culture** ❖ **Prepare annual budget for Library**
Alumni Association	❖ **Arrange periodic meetings of students council** ❖ **Ensure alumni registration** ❖ **Prepare alumni newsletter** ❖ **Arrange annual alumni meet ("Apporva Milana")** ❖ **Proposing annual budget**
Director of Physical Education	❖ **Ensure smooth conduct of sports** ❖ **Ensure proper use of gymnastics** ❖ **Purchasing of sports items** ❖ **Encourage students to participate in zonal tournaments** ❖ **Creation and upkeep of sports facilities** ❖ **Proposing annual budget**
Student professional activities	❖ **Organize events through students' professional societies/ chapters** ❖ **Encourage students participation**

	❖ **Publication of technical magazines and newsletters** ❖ **Record of student participation and achievements in Co-Curricular and extracurricular activities**

Roles and Responsibilities of Governing Council of RYMEC, Ballari as per Byelaw of V.V Sangha, Ballari

1. Governing council is responsible to monitor day to day overall affairs of the Institution.
2. Governing council is responsible to implement guidelines given by the Management Committee of V.V. Sangha, Ballari.
3. It is Responsible to take cooperation, favour and Sympathy from all stakeholders.
4. To gather Funds required for Management of the Institution and maintenance of audit reports of financial resources of the institution.
5. To Make Independent m its working and dynamic strategy implementation to make institution independent.
6. It is the mandate given by V.V. Sangha Ballari for Governing Council to prepare and submit Annual and supplementary Budget proposals to the V.V Sangha Management for approval.
7. Prepare Annual reports and submit them to the Management Committee of V.V Sangha for approval.
8. Budget requirement of equipment's, construction and maintenance of \ Building and Academic activities shall be submitted to the management committee for approval
9. Promotions and extensions of service after the retirement of staff members shall be submitted to the secretary with a recommendation.

10. Management of Teaching and Nonteaching staff members of RYMEC, Ballari.

11. Verify audit statements from time to time to check their authenticity and correct the audit statements if any deficiencies.

12. All expenditure of the institution shall be within the budget approved by V.V Sangha, Ballari.

13. Submit Annual report to Management committee of V.V Sangha, Ballari and propose measures to resolve problems and issues raised in administrative activities of the Institution.

14. Day to day activities of Teaching, Non-Teaching and office staff members shall be monitored by the Governing body of the institution to initiate punishment if any violation of the service manual of the institution.

15. Follow in letter and spirit advice and directions given by the Management Committee of V.V Sangha, Ballari for the overall growth of the institution.

16. Governing Body shall take advice from senior academic leaders and experts, Industry, Senior legal luminaries, Senior Medical experts, achievers and other Known persons of the society for the overall growth of the institution.

17. Governing Council is responsible to follow diligently rules and regulations prescribed by statutory bodies namely Government, VTU, AICTE, UGC and other regulatory agencies.

18. It is the responsibility of governing council to follow guidelines as amended by V.V Sangha from time to time to accommodate dynamic changes in technical education, general society and other important segments of the society.

Service Rules:

Service rules are constituted by V.V Sangha and are made available to all the departments for the sake of the information to the employees.

RECRUITMENT RULES

1	There shall be three categories of faculty/staff members: • **Academic:** Professor, Associate Professor, Assistant Professor, Librarian, etc., • **Technical:** System Analyst, Programmer Foreman, Instructor, Assistant Instructor, Helpers, Mechanic, etc, • **Office Staff:** Office Superintendents, FDA, SDA, Attenders and Peon etc.,
2	The Appointing Authority for all the above positions there shall be a Governing Council at the institution level including Principal as the Governing Council Member.
3	The appointment of staff members at an Institution shall be made by the Governing Council by adopting an open and transparent selection procedure namely: • Issue of attractive advertisement for the posts at State-level English and Kannada Daily News Papers; • Issue of rolling announcement of vacancies in an appropriate site; • Adherence of Policy matters given by the Management; • Shortlisting of candidates will be done as per AICTE/VTU/GOK Norms to meet the requirements • Intimating eligible candidates for the recruitment process after shortlisting as per norms • Setting up Screening Committees to identify candidates to be interviewed; • Setting up Selection Committees to interview the identified candidates including the subject expert in the concerned

	domain; • Placing the Selection Committee Reports before the GC for approval; • Placing selected candidates in MC Meeting at Management Level Issue of Appointment Letters by the Secretary/Chairman of the Management
4	Each appointment shall be normally made against a sanctioned post at the Institute. However, the GC shall have the powers to make any other appointment/s, after determining and fixing a source of funds for the expenditure.
5	The GC may also consider and appoint well qualified/experienced candidates to the Institution in various departments/sections.
6	The pay scales admissible to the faculty/staff members at the institution shall follow the AICTE/VTU/GOK/Management norms and standards.
7	All the other staff members of the institution shall be entitled to receive pay, allowances and other privileges as prescribed by the State Government from time to time.
8	The Service Conditions for all academic, administrative and technical staff members of the institution shall be as prescribed in the Service Manual of the Management.
9	There shall be a Code of Ethics to be strictly followed by all academic, administrative and technical staff as prescribed in the *Service Manual* of the Management

Procedures and Promotional Policies:

- Policies regarding promotion are as per RYMEC Promotional Policies.

FACULTY NORMS - PRESCRIBED BY AICTE FOR VARIOUS PROGRAMMES

(Engineering & Technology, MBA followed by Rao Bahadur Y Mahabaleswarappa Engineering College, Ballari – 583104)

A. FACULTY NORMS - PRESCRIBED BY AICTE

BE./B.Tech.

Programme	Cadre	Qualification	Experience
Engineering & Technology	Assistant Professor	BE / B. Tech & ME / M. Tech in relevant branch with 1st class or equivalent either in BE/B.Tech or ME / M.Tech.	
	Associate Professor	Qualifications as above that is for the post of Assistant Professor, as applicable and PhD or equivalent, in appropriate discipline. Post PhD publications and guiding PhD students is highly desirable.	Minimum of 5 years experience in teaching/research/industry of which 2 years post PhD experience is desirable.
	Professor	Qualifications as above that is for the post of Associate Professor, applicable. Post PhD publications and guiding PhD students is highly desirable.	Minimum of 10 years teaching/research / industrial experience of which at least 5 years should be at the level of Associate professor. or Minimum of 13 years experience in teaching and/or Research and / or Industry. In case of research experience, a good academic record and books/research paper publications / IPR / patents record shall be required as deemed fit by the expert members of the selection committee. If the experience in the industry is considered, the same shall be at a managerial level equivalent to Associate Professor with active participation record in devising/designing, planning, executing, analyzing, quality control, innovating, training, technical books/research paper publications / IPR / patents, etc., as deemed fit by the expert members of the Selection Committee.

ME./M.Tech

Qualifications as prescribed above

Programme	Cadre	Qualification	Experience
Management (MBA)	Assistant Professor	First Class or equivalent in Master's Degree in Business Administration or equivalent and 2 years relevant Experience is desirable	
	Associate Professor	Qualifications as above that is for the post of Assistant Professor, as applicable and PhD or equivalent, in appropriate discipline. Post PhD publications and guiding PhD students is highly desirable.	Minimum of 5 years experience in teaching/research/industry of which 2 years post PhD experience is desirable.
	Professor	Qualifications as above that is for the post of Associate Professor, applicable. Post PhD publications and guiding PhD students is highly desirable.	Minimum of 10 years teaching/ research /industrial experience of which at least 5 years should be at the level of Associate professor. or Minimum of 13 years experience in teaching and/or Research and/or Industry. In case of research experience, a good academic record and books/research paper publications / IPR / patents record shall be required as deemed fit by the expert members of the selection committee. If the experience in the industry is considered, the same shall be at a managerial level equivalent to Associate Professor with active participation record in devising/ designing, planning, executing, analyzing, quality control, innovating, training, technical books/research paper publications / IPR /patents, etc., as deemed fit by the expert members of the Selection Committee.

Principal

Programme	Cadre	Qualification	Experience
	Principal	Qualifications as above that is for the post of Professor, as applicable. Post PhD publications and guiding PhD students is highly desirable.	Minimum of 10 years experience in teaching / Research / Industry out of which at least 3 years shall be at the level of Professor. or Minimum of 13 years experience in teaching and/ or Research and/or Industry In case of research experience, good academic record and books/research paper publications / IPR / Patents record shall be required as deemed fit by the expert members of the Selection Committee. If the experience in the industry is considered, the same shall be at a managerial level equivalent to Professor level with active participation record in devising/designing, developing, planning, executing, analyzing, quality control, innovating, training, technical books/research paper publications / IPR / patents, etc. as deemed fit by the expert members of the Selection Committee. Flair for Management and Leadership is essential.

10.1.3	Decentralization in Working and Grievance Redressal Mechanism	10

Decentralization of Academics

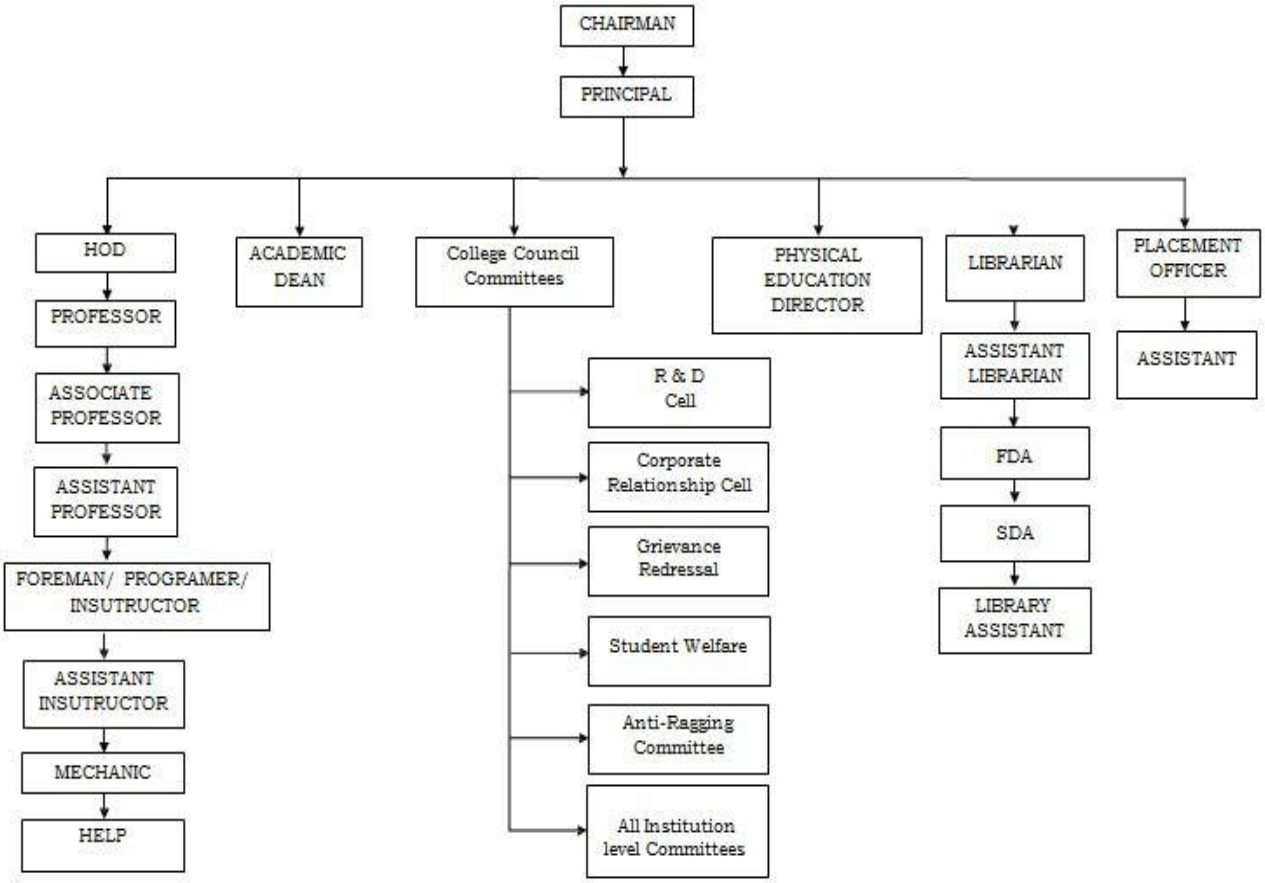


Fig. 10.2a: Decentralized Academics

Decentralization of Administrations

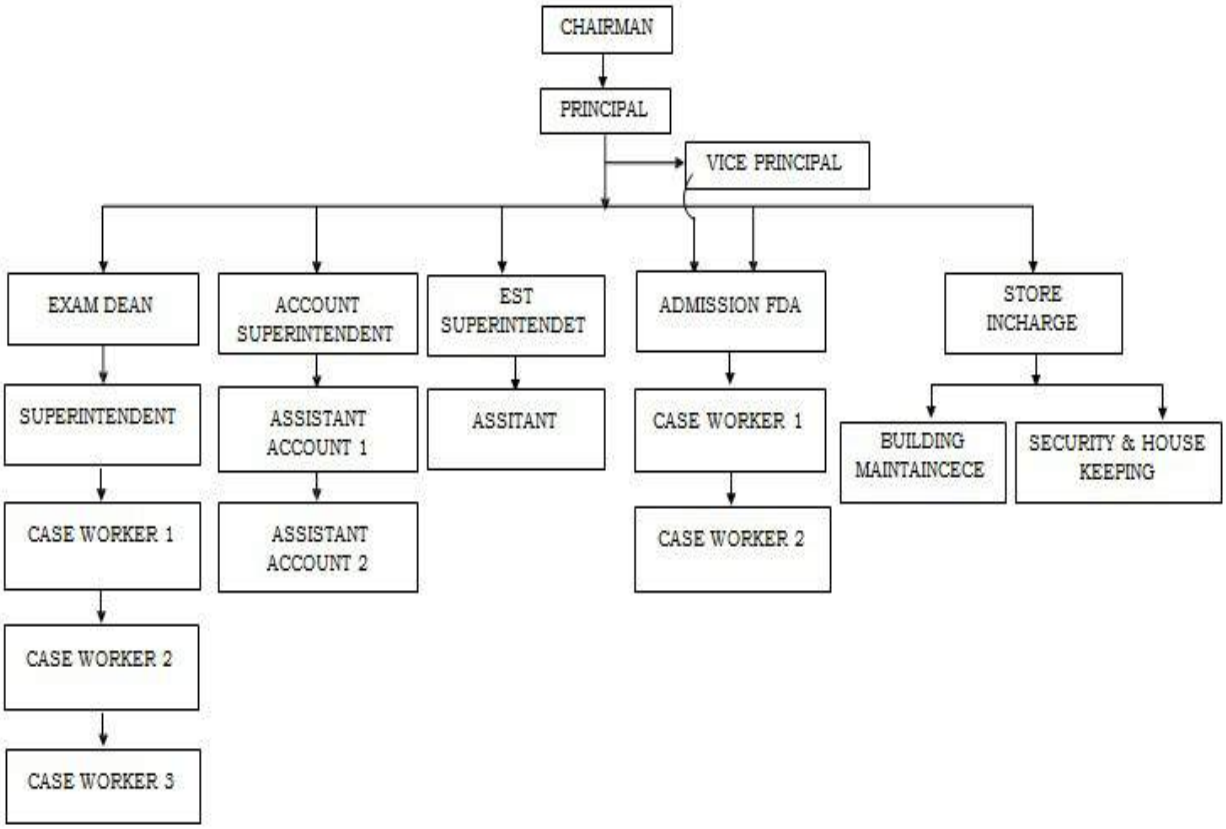


Fig. 10.2b: Decentralized Administrations

GRIEVANCE REDRESSAL CELL

The function of the cell is to look into the complaints lodged by any student if any and then judge its merit. The grievance cell is also empowered to look into matters of harassment. Anyone with a genuine grievance may approach the department members in person or consult with the officer-in-charge student's grievance cell. In case the person is unwilling to appear in self, the grievance may be dropped in writing at the letterbox/suggestion box of the grievance cell at the administrative block.

A mechanism for Collecting Grievances

1. **SMS** to Department Committee Member, HODs, Hostel Warden, Convener and Principal.
2. **Email** to Principal, Convener and Committee Member of the Department.
3. **Written Complaint** to Principal, Convenor and Committee Member of the Department.

4. **Orally** to Department Committee Member, HODs, Hostel Warden, Convener and Principal.

Process for disposal of Grievances

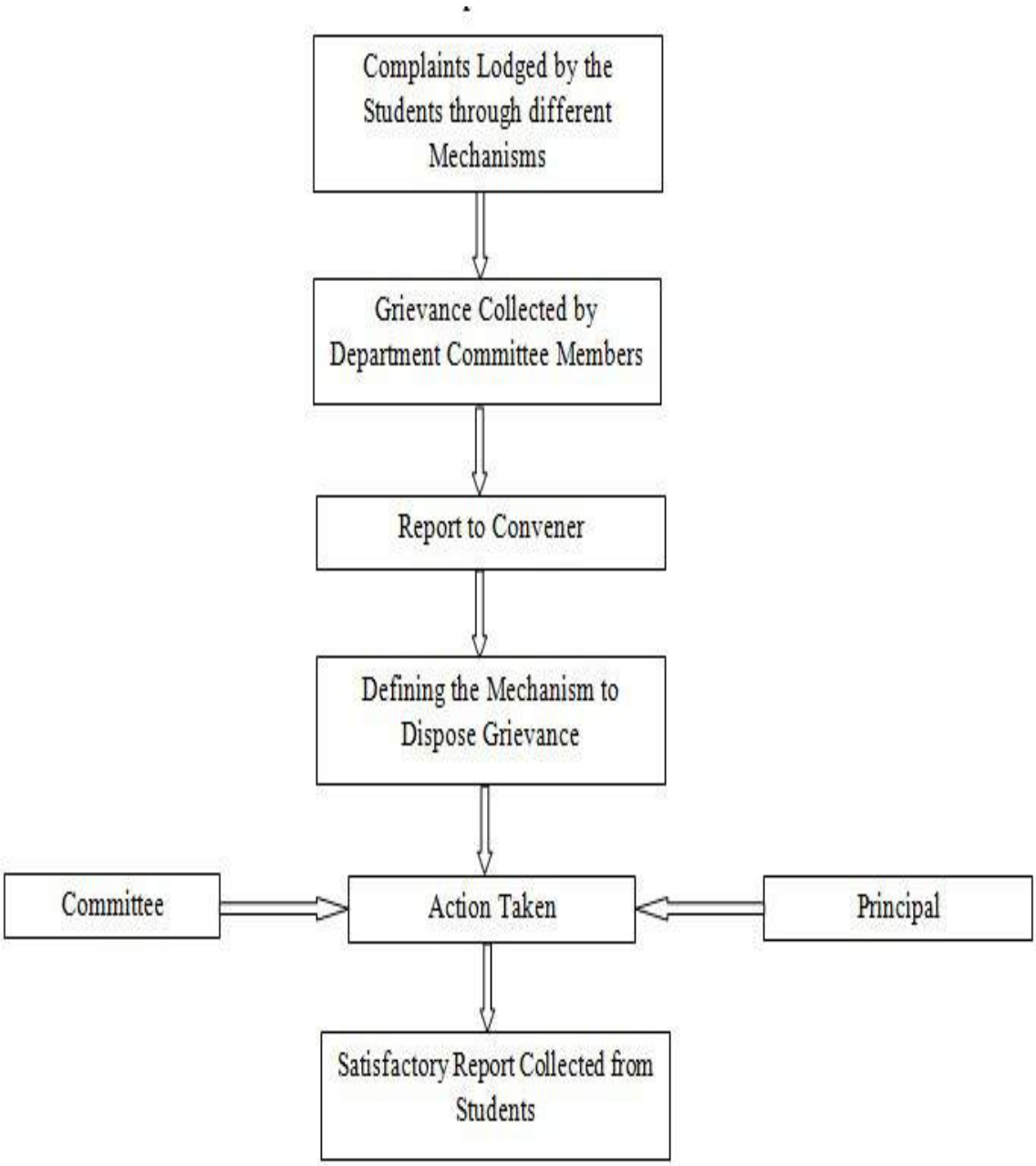


Fig. 10.3: Grievance Disposal Mechanism

Table10.4: Central Grievance Redressal Cell Committee

Sl.No.	Name of the Faculty	Designation	Department	Role	Contact Number
1	Dr Prabhavathi. S	Professor	E&CE	Convener	8105289789
2	Mrs Amrutha G E	Assistant Professor	EEE	Member	7349138852
3	Mr A.M Shivaprakash Swamy	Assistant Professor	Mechanical	Member	9036900991
4	Mrs Manjula Patil	Assistant Professor	ISE	Member	9986413377
5	Mr. Sharanagouda.V.Patil	Assistant Professor	E&CE	Member	9980376126
6	Mr Shivakumar	Assistant Professor	CSE	Member	9449556693
7	Mr. Basavalinganagouda M. I.	Assistant Professor	Civil	Member	9739967538
8	Mr Prabhakar Meti	Assistant Professor	Mathematics	Member	9036550309

Anti-Ragging Committee

- The following team members are informed to act as members of the Anti-Ragging group.
- Group members are informed to make surprise visits as per the schedule given and one of the team members are requested to write a brief report after the inspection.
- These groups are formed to prevent and curb the menace of Raging.

Table 10.5: Anti Ragging Committee

Sl.No.	Name of the Member	Designation	Department	Role	Contact Number
1	Dr B. Doddabasavana Goud	Professor	EEE	Convener	9449171271
2	Dr D. Sai Madhavi	Associate Professor	CSE	Member	9945829150
3	Sri. M. R. Vijaykumar	Associate Professor	Civil	Member	9886893258
4	Sri. Manjunatha H.M	Associate Professor	Mathematics	Member	9481709495
5	Smt. K. R. Bhagya	Assistant	Physics	Member	8762707799

		Professor			
6	Sri. Vasanth Kumar	Police Sub-Inspector	Police	Member	
7	Sri. S. M. Sanna Basaiah	Parents/Guardian	Rtd. Health Inspector	Member	
8	Sri. M. Venu Gopal	Parents/Guardian	Govt.Official	Member	

Table10.6: Anti Ragging Squad

Sl.No.	Name of the Member	Designation	Department	Role	Contact Number
1	Sri. Shridhar Bilagi	Assistant Professor	E&CE	Member	8105828383
2	Sri. Adhana Gouda	Assistant Professor	Civil	Member	9972612107
3	Sri. K.Phanidra Reddy	Assistant Professor	E&CE	Member	9241220917
4	Sri. Prabhakar Meti	Assistant Professor	Mathematics	Member	9036550309
5	Sri.S .P.Jagadeesh	Associate Professor	Mechanical	Member	9481716642

Table10.7: Monitoring Cell on Ragging

Sl.No.	Name of the Member	Designation	Department	Role	Contact Number
1	Sri. K .Raghavendra Prasad	Associate Professor	EEE	Member	9448035570
2	Sri. B. Veeresh	Associate Professor	Mathematics	Member	9449632718
3	Sri. Khaja Mouinuddin	Associate Professor	E&CE	Member	8105263354
4	Mrs. Sridevi Mali Patil	Assistant Professor	CSE	Member	9008055312
5	Mrs. Rohini H.M.	Assistant Professor	E&CE	Member	9902502026

Table10.8: Committee of Wardens

Sl.No.	Name of the Member	Designation	Dept.	Contact Number
1	Dr S P Jagadish	Associate Professor & Chief Warden, RYMEC Hostel	MECH	9481716642
2	Dr K.M. Shivaprasad	Asst. Professor & Warden of GN Boys Hostel	CSE	7899964163

3	Sri. Phanidhar Reddy	Asst. Professor & Warden of Campus Boys Hostel	E&CE	9241220917
4	Mrs Sridevi Mali Patil	Asst. Professor & Warden of WW Hostel	CSE	9008055312
5	Mrs Girija Vani G	Asst. Professor & Warden of Gandhinagar Girls Hostel	E&CE	9481718384

10.1.4	Delegation of Financial Powers	10

Financial powers are delegated/authorized to the Principal to spend up to Rs. 1,00,000(One Lakh Rupees) and the HODs of all the departments of this Institute are also authorized to spend up to Rs. 25,000(Twenty-Five Thousand Rupees) for academic purposes.

10.1.5	Transparency and availability of correct/unambiguous information in the public domain	05

Dissemination and Availability of institute/program-specific information through the web:

- The institute has hosted its website which is updated regularly. The institute and Programme specific information is made available to all aspirants through the website.
- The website URL is: https://www.rymec.in/

Table10.9: URL Links

Sl. No.	Content	URL
1	Institution Mission & Vision	https://www.rymec.in/
2	Audited Statements	https://www.rymec.in/index.php/about-us/location
3	NSS	https://rymec.in/index.php/nss
4	Placement	https://www.rymec.in/index.php/placement-main
5	AICTE Mandatory	https://www.rymec.in/index.php/aicte-mandatory
6	NBA Accreditation Programs	https://www.rymec.in/index.php/nba-acredition-programs

7	IQAC	https://www.rymec.in/index.php/iqac-bot
8	Facebook	www.facebook.com/rymec1980
9	YouTube	https://www.youtube.com/channel/UC11Ds9esAQmsLD2nabcnmlw
10	NBA	https://rymec.in/index.php/nba-top https://rymec.in/index.php/nba-top?start=1

10.2	Budget Allocation, Utilization, and Public Accounting at Institute level	30

CFY-2021-22

Table 10.10: Details of Total Income and Expenditure 2021-2022

Total Income: 34,18,07,689				Actual Expenditure: 30,31,37,463			Total Number of Students: 2679
Fee	Govt.F	Grant	Other Sources	Recurring Including Salaries	Non-Recurring	Special Projects/ Any other, Specify	Expenditure per Student
19,39,21,395	1,10,000	15,63,146	14,78,86,293	15,24,35,503	15,07,01,960	--	1,13,153

CFY-2020-21

Table 10.11: Details of Total Income and Expenditure 2020-2021

Total Income: 18,55,44,473.50				Actual Expenditure: 16,06,64,490			Total Number of Students: 2579
Fee	Govt.F	Grant	Other Sources	Recurring Including Salaries	Non-Recurring	Special Projects/ Any other, Specify	Expenditure per Student
17,50,85,283	19,250	26,86,000	77,53,940.50	15,01,87,296	1,04,77,194	--	62,297

CFYm1-2019-20

Table 10.12: Details of Total Income and Expenditure 2019-2020

Total Income: 18,52,52,434				Actual Expenditure: 21,87,41,442			Total Number of Students: 2523
Fee	Govt.	Grant	Other Sources	Recurring Including Salaries	Non-Recurring	Special Projects/ Any other, Specify	Expenditure per Student
17,15,92,742	65,300	14,96,415	1,20,97,976	17,60,24,016	4,27,17,426	--	86,699

Table 10.14: Actual Expenses during 2019-20 To 2021-22

Items	Budgeted in CFY	Actual expenses in CFY	Budgeted in CFY m1	Actual expenses in CFY m1	Budgeted in CFY m2	Actual Expenses in CFY*m2*
	2021-22		2020-2021		2019-2020	
Infrastructure Built-up	35,00,000	33,87,198	2,00,00,000	86,32,644	3,50,00,000	3,20,30,375
Library	30,00,000	27,91,587	10,00,000	7,38,158	40,00,000	22,88,084
Laboratory equipment	50,00,000	14,47,61,725	50,00,000	16,22,273	50,00,000	88,81,746
Laboratory consumables	5,00,000	2,33,530	10,00,000	1,35,118	5,00,000	2,21,946
Teaching and non-teaching staff salary	13,00,00,000	11,68,65,451	13,00,00,000	11,28,72,483	13,00,00,000	12,95,62,982
Maintenance and spares	1,00,00,000	88,07,660	1,00,00,000	70,88,964	1,25,00,000	1,16,77,731
R&D	50,00,000	1,02,161	50,00,000	25,345	10,00,000	3,90,527
Training and Travel	10,00,000	3,78,449	50,00,000	2,33,596	20,00,000	17,74,712
Miscellaneous expenses *	10,00,000	8,71,826	50,00,000	16,50,813	25,00,000	20,18,071
Other, specify	3,00,00,000	2,49,37,876	5,00,00,000	3,15,75,497	3,25,00,000	3,04,35,399
Total	**18,90,00,000**	**30,31,37,463**	**23,20,00,000**	**16,45,74,891**	**22,50,00,000**	**21,92,81,573**

10.2.1	Adequacy of budget allocation	10

The Budget proposal for the academic year is prepared by the individual departments as per the guidelines by V.V Sangha and the Principal office. The collective budget proposals are scrutinized by the budget committee at the college level and further taken to governing council and management council for approval and sanction. Once it is sanctioned, the Principal will issue the budget order accordingly. The budget allocation and utilization for the last three years are adequate.

10.2.2	Utilization of allocated funds	15

Table 10.15: Utilization of allocated funds during 2019-20 to 2021-22

	2021-22	2020-21	2019-20
Utilization of the Budget (%)	160.39	70.93	97.45

10.2.3	Availability of the audited statements on the institute's website	05

The audit statements of the academic years are available on the institute website: www.rymec.in/index.php/mandatory-disclosures

10.3	Programme Specific Budget Allocation, Utilization	30

CFY – 2021-2022

Table 10.16: Total Budget Allocation and Utilization 2021-22

Total Budget: 6,00,000		Actual Expenditure: 4,65,138		Total Number of Students: 469
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
3,50,000	2,50,000	2,73,475	1,91,663	992

CFY – 2020-2021

Table 10.17: Total Budget Allocation and Utilization 2020-21

Total Budget: 8,75,000		Actual Expenditure: 4,96,146		Total Number of Students: 454
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
2,50,000	6,25,000	1,60,668	3,35,478	1,092.83

CFYm1 – 2019-2020

Table 10.18: Total Budget Allocation and Utilization 2019-20

Total Budget: 8,00,000		Actual Expenditure: 6,84,940		Total Number of Students: 441
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
6,00,000	2,00,000	5,89,750	95,190	1,553.15

Table 10.21: Actual Expenses during 2019-20 TO 2021-2022

Items	Budgeted in CFY (2021-22)	Actual expenses in CFY (2021-22)	Budgeted in CFY*m1* (2020-21)	Actual expenses in CFY *m1* (2020-21)	Budgeted in CFY *m2* (2019-20)	Actual expenses in CFY *m2* (2019-20)
Laboratory Equipment	200000	118780	250000	160668	600000	589750
Software	50000	0	0	0	0	0
Laboratory Consumable	50000	11339	50000	30751	25000	4177
Maintenance and Spares	100000	190559	500000	293907	50000	31811
R&D,	50000	0	25000	0	50000	42384
Training and Travel	50000	33750	25000	3800	50000	6418
Miscellaneous Expenses for academic activities (AC's)	100000	110710	25000	7020	25000	10400
Total	**600000**	**465138**	**875000**	**496146**	**800000**	**684940**

10.3.1	Adequacy of budget allocation	10

The department-wise budget is sanctioned by the VV Sangha office and the sanction letters are sent to the Principal, RYMEC. The principal along with the respective HOD further oversees the utilization of the sanctioned budget. After approval of the budget from governing council and management council, the process of procuring is carried out as per the norms specified by the V.V. Sangha.

10.3.2	Utilization of allocated funds	20

Table 10.21: Budget Utilization 2019-20 to 2021-22

Year	2021-22	2020-21	2019-20
EEE Dept Utilization of the Budget (%)	77.52	56.70	85.61

10.4	Library and Internet	20

10.4.1	Quality of learning resources (hard/soft)	10

Relevance of available learning resources including e-resources:

"Knowledge Centre" is established along with the parent institution in the year 1980 with the prime objective of supporting the parent organization programs. It is having, functionally designed building and it is located in a conveniently accessible place on the college campus to the different groups of library users. The main goal of the knowledge centre is to improve the service effectiveness, economy and efficiency of the library management system, safeguard the interest and benefits of the stakeholders and facilitate to develop the innovative thoughts and knowledge sharing culture among the library users. The Knowledge Centre enfolded both print and digital forms of global standard mass and scholarly knowledge contents.

The collection includes books, e-books, Journals (Print and Electronic), Conference proceedings etc., and Library gives utmost importance to the collection development of learning materials. ***The department heads in consultation with the department faculties concerning VTU Syllabus, recommend the required learning materials to be added to the***

library. The number of titles and volumes are added every year following the norms and standards set by V.T.U. and A.I.C.T.E.

The rich collection of the library comprises the following resources:

Table 10.22: Library Collection:

Sl.No.	Learning / Reading Materials	Nos.
1	Print Books	**1,69,883**
2	e-Books	**24,220**
3	Print Journals	**131**
4	e-Journals	**07 Databases**
5	Bounded Journals	**776**

E-Resources: The Library collaborated with VTU Consortium for the subscription of E-Resources (e-Journals and e-Books).

Table 10.23: E-Journals databases

Sl. No.	Publishers	No. of Resources	URL
1	ELSEVIER	296 Journals	*www.sciencedirect.com*
2	IEEE Proceedings Order Plan (POP)	530,000 papers – from100 core IEEE conference titles in POP	*https://ieeexplore.ieee.org*
3	Springer Nature	690 Journals	*https://link.springer.com/*
4	Taylor & Francis	555 Journals	*https://www.tandfonline.com/*
5	Emerald	120 Journals	*https://www.emeraldinsight.com/*
6	ProQuest	Full text: 3900 Journals Indexed: 7800Abstract	*https://www.proquest.com/165290*
7	Knimbus	E-Books: 10,000+	*https://new.knimbus.com*

Table 10.24: E-Books

Sl. No.	Publishers	No. of Resources	URL
1	ELSEVIER	436 e-Books	www.sciencedirect.com
2	Springer Nature	13139 e-Books	https://link.springer.com/
3	Taylor & Francis	4950 e-Books	https://www.taylorfrancis.com/
4	McGraw-Hill Education	505 e-Books	https://www.expresslibrary.mheducation.com/bookshelf
5	New Age International	220 e-Books	https://digital.elib4u.com/bookshelf
6	Packt	5000 e-Books	https://rbmec.knimbus.com/user#/home
7	Knimbus	10,000+e-Books	https://digital.elib4u.com/bookshelf

Digital library

The digital library system is integrated with the campus network to enhance the learners' body of knowledge. Digital Library server comprises ***of VTU e-Learning/NPTEL Learning Resources of different courses and subjects, Career Oriented Tutorial Videos, PPTs, PDFs of study materials Previous Question Papers, Research Materials etc.,***

The library users can also access digital resources throughout the campus network. The users can access the digital resources by using web browsers and File Explorer by using the following link/URL in the campus network:

- \\192.168.8.8 - File Explorer
- \\192.168.8.4 – File Explorer
- http://192.168.8.4/ - NPTEL/VTU E-learning – Videos

Table 10.25: Accessibility to students

Carpet Area	943 sqm
Seating Capacity	150
Library Hours	8.00 am to 8.00 pm Reference 10.00 am to 5.30 pm Lending on all working days.
Access Type	Open Access
Average users per day.	46.02 users for Reference Section (2017-2020)
Average Circulation per day.	301 Books (2017-2020)
Membership	VTU Consortium for E-Journals and E-Books
	DELNET for Inter-Library Loan.
Automation and Barcode	Yes, with KOHA LMS Software
Web-OPAC	Yes, with a patron account.
Digital Library Contents	Yes - On-Campus Access through Intranet
	Yes - Off-Campus - IP Based Remote Access
NPTEL Facility	Yes on-Campus
General Library Circulation	Yes
Book Bank Facility	Yes – Self-Finance
Library Advisory Committee	Yes
Wifi	Yes
Multimedia Computers	Yes, with high-speed Internet Facility

- **Reference Service**: The Library maintains a separate reference collection consisting of encyclopedias, dictionaries, directories, Competitive books, general books, handbooks, technical data, atlases, bibliographies, etc., with a seating capacity of 150 users.
- **E-Services:** Computer Centre is set up with the latest configuration of Computers at Library for accessing and downloading e-Resources (E-Journals & E-books etc.,) with a 35 Mbps leased line internet connection. These services are IP enabled. Computer

Centre is also equipped with sophisticated Multimedia headphones for accessing NPTEL Videos. The library is part of Campus Network, all the e-resources are accessible throughout the campus view intranet. A dedicated server is available for remote access of e-resources.

- **E-Services:** Computer Centre is set up with the latest configuration of Computers at Library for accessing and downloading e-Resources (E-Journals & E-books etc.,) with a **35 Mbps leased line internet connection**. These services are IP enabled. Computer Centre is also equipped with sophisticated Multimedia headphones for accessing NPTEL Videos
- **Reprographic Service:** The library offers photocopy services. However, this service is offered to users under special arrangements with the librarian.
- **Lending Section:** The Library allows its users to borrow information resources for a specific duration dictated by the user group. Books from the open shelves and Reserves are loaned out from the Circulation Desk.
- **InterLibrary Loan**: The library is a member of the DELNET and participates in all the resource sharing initiatives that include library cooperation. These initiatives enable library users to access and use other libraries, to benefit from such arrangements contact the librarian for more information.
- **Web-OPAC Service:** Online catalogue facility is available to users through intranet and the internet. Link **http://103.44.2.242**/. **Mobile App** is provided for users for easy access of their transactions and OPAC
- **Book Bank Service:** Very economic and Self-Financing Book Bank facility is extended to the student user community. A set of books for the whole semester will be issued at the start of the semester for one semester period and the same should be returned after the semester and students can borrow the next semester's books.
- **Question Bank Service:** Hard copies of the VTU Old Question Papers are available for reference use and a soft copy of the same may be downloaded from Digital Library.
- **User Education/Orientation:** As a part of the Induction Programme Library tour is arranged for newly admitted students. The students can download the **USER MANUAL** from our website from the Library User Manual tab/link. User Manual

provides the entire information of the library system including retrieval of learning material. Many awareness events are conducted for the benefit of the users of the library like e-resources access, book exhibition etc.,

Support to Students for Self-learning activities:

Everything in engineering cannot be taught in the classroom or laboratories. The explosion in knowledge related to applied science and engineering has been so much that four years is too short a period even to cover one branch of engineering. This fact calls for the relevance of self-learning for young engineers. The library is provided adequate facilities like Computer Centre with high-speed internet, Wi-Fi etc., for self-learning to students so that they get motivated to learn more and more and ultimately become life-long learners and innovators.

The library provides excellent facilities and academic ambience for the users for self-learning following activities.

- **VTU e-Learning / NPTEL**: Library has established a separate server to host VTU e-Learning / NPTEL videos which can be accessed via intranet within the campus. One can access the videos on the entire campus without the internet. It offers more than 750+ videos of different streams of Engineering and Management. These videos serve as a supplement to classroom teaching and learning activities
- **SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) and MOOC (Massive Open Online Courses)**: Library has made arrangements for the user to access SWAYAM and MOOC.
- **e-PG Pathshala:** e-PG Pathshala is an initiative of the MHRD under its National Mission on Education through ICT (NME-ICT). Link to e-PG Pathshala is provided to create awareness and to encourage students to take online courses
- **Shodhganga:** The Shodhganga@INFLIBNET Centre provides a platform for research students to deposit their PhD theses and make them available to the entire scholarly community in open access. Link to Shodhganga is provided to create awareness and to encourage students to use it.
- **Open access resources:** A link of many open-access resources is provided which helps in the self-study of the students
- **National Digital library:** Our library has obtained Institutional membership of NDL. We enrol our students and faculty to NDL and encourage them to uses lakhs of resources available freely
- **DELNET:** Institution is member of DELNET. DELNET offers nearly 1.75 crore records of books, periodicals, articles, thesis and dissertations and other databases. Besides this also provides interlibrary loan and document delivery services to all its member libraries.

10.4.2	Internet	10

Table 10.26: Internet details for the year 2021-22

Name of the Internet provider	Airtel
Available bandwidth	835 Mbps
Wi-Fi availability	Yes
Internet access in labs, classrooms, library and office of all department	Yes
Security arrangements	Yes

Table 10.27: Existing Internet Connections in College FY 2021-22

Sl. No	Service Provider	Type of Connection	Bandwidth	Remarks	Service Agent
1	AIRTEL	Leased line/OFC	100 MBPS	Used for e-journal access at Library, Wi-Fi, Common facilities like Principal Office, Placement, FY Dept, Admission, EST etc	Wave Enterprises
2	AIRTEL	FTTH/Unlimited	100 MBPS	MBA Dept	Shreya Enterprises
3	AIRTEL	FTTH/Unlimited	100 MBPS	ME/IPE dept	
4	AIRTEL	FTTH/Unlimited	100 MBPS	Library dept	
5	AIRTEL	FTTH/Unlimited	100 MBPS	ECE dept	
6	AIRTEL	FTTH/Unlimited	100 MBPS	CSE dept	Shreya Enterprises
7	AIRTEL	FTTH/Unlimited	100 MBPS	ISE dept	
8	AIRTEL	FTTH/Unlimited	100 MBPS	Civil dept	
9	AIRTEL	FTTH/Unlimited	100 MBPS	EEE dept	
		Total	**900 Mbps**		

Wi-Fi Locations: Corridor Main Building, Library &PG Block, CSE /ISE and All Hostels.

ವೀರಶೈವ ವಿದ್ಯಾವರ್ಧಕ ಸಂಘ, ಬಳ್ಳಾರಿ.

ರಾವ್ ಬಹದ್ದೂರ್ ವೈ.ಮಹಾಬಲೇಶ್ವರಪ್ಪ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ, ಬಳ್ಳಾರಿ

(ಪೂರ್ವದಲ್ಲಿ ವಿಜಯನಗರ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ)

THE VEERASAIVA VIDYAVARDHAKA SANGHA'S

RAO BAHADUR Y.MAHABALESWARAPPA ENGINEERING COLLEGE

(FORMERLY VIJAYANAGAR ENGINEERING COLLEGE)

CANTONMENT, BALLARI - 583104. (KARNATAKA)

CSE, MECH, CIVIL, ECE.

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Declaration

I Undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for the application, rules, regulations, notifications, and NBA expert visit guidelines in force as on date and the institute shall 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 will be initiated by the NBA, in case any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date: 19.05.2023

Place: Ballari

T. Hanumantha 19/5/23

Dr. T. Hanumantha Reddy

PRINCIPAL,
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