

**TMAESPOLYTECHNIC,HOSAPETE**



**InstitutionCode:316**

**SELFASSESSMENTREPORT**  
**ApplicationNo:6947-06/06/2022**

## **PART-A**

**Electronics&CommunicationEngg.**

**Part A:**

1 NameandAddressofthe Institution:**TMAESPOLYTECHNICBELLARYROADHOSAPETE**

2. NameandAddressof theDirectorateofTechnicalEducation:**Department ofCollegiateandTechnicalEducation  
PalaceRoadBengaluru**

3. YearofEstablishment: **1983**

4. Typeof theInstitution:**GovernmentAided**

5. OwnershipStatus:**State GovernmentAided - Society**

6. OwnershipStatus: **StateGovernmentAided**

7. OtherAcademicInstitutionsoftheTrust/Society/Companyetc.,ifany:

Name ofInstitutions	YearofEst ablishment	ProgramsofStudy	Location
TMAESTCH	1969	TEACHERS TRAINING	HARAPANAHALLI
TMAESSANSKRITPATASHALA	1970	SCHOOLEDUCATION	HARAPANAHALLI
TMAESCOLLEGE OF EDUCATION	1973	TEACHERSTRAINING	HARAPANAHALLI
TMAESHIGHSCHOOL	1979	HIGHSCHOOLEDUCATION	HARAPANAHALLI
TMAESCOLLEGE OF EDUCATION	1980	TEACHERS TRAINING	GANGAVATHI
TMAESANGANAVADITRAININGCENTER	1982	TEACHERS TRAINING	HARAPANAHALLI
TMAESHIGHSCHOOL	1982	HIGHSCHOOLEDUCATION	NEELAGUNDA,HARAPAN AHALLI
TMAESSRIBAPUJIITI	1982	TECHNICALTRAINING	LAXMESHWARA

**TMAESPOLYTECHNIC(GOVTAIDED),HOSAPETE**

TMAESSRIMAHARISHIVALMIKIITI	1982	TECHNICALTRAINING	RANEBENNUR
TMAESITI	1983	TECHNICALTRAINING	SHIVAMOGGA
TMAESITI	1983	TECHNICALTRAINING	BHADRAVATHI
TMAESITI	1983	TECHNICALTRAINING	HOSAPETE
TMAESITI	1984	TECHNICALTRAINING	CHITHRADURGA
TMAESSRIMAHARUDRASWAMYITI	1984	TECHNICALTRAINING	CHANNAGIRI
TMAESGMCJHIGHSCHOOL	1985	HIGHSCHOOLEDUCATION	DHULEHOLE
TMAESHIGHSCHOOL	1986	HIGHSCHOOLEDUCATION	HIREMUGADUR
TMAESSRI THIMMAIAHSHETTYITI	1986	TECHNICALTRAINING	HAGARIBOMMANAHALLI
TMAESITI	1989	TECHNICALTRAINING	HIRIYUR
TMAESSRITONKADAVEERAPPAITI	1983	TECHNICALTRAINING	HAVERI
TMAESSCSCOLLEGEOPHARMACY	1980	PHARMACY	HARAPANAHALLI
TMAESMMJCOLLEGEOPHARMACY	1983	PHARMACY	HAVERI
TMAESCPED COLLEGE	1984	PHYSICALTEACHERS TRAINING	HAVERI
TMAESPOLYTECHNIC	1984	DIPLOMA	BHADRAVATHI
TMAESAYURVEDICMEDICALCOLLEGE	1991	AYURVEDICMEDICINE	HOSAPETE
TMAESAYURVEDICMEDICALCOLLEGE	1991	AYURVEDICMEDICINE	BHADRAVATHI
TMAESROSEBUDPRIMARYSCHOOL	1995	SCHOOLEDUCATION	HOSAPETE

**TMAESPOLYTECHNIC(GOVTAIDED),HOSAPETE**

TMAESSCHOOLOFNURSING	2004	NURSING	HOSAPETE
TMAESDAVPUBLICSCHOOL	2004	SCHOOLEDUCATION	HOSAPETE
TMAESCOLLEGE OFEDUCATION	2005	TEACHERSTRAINING	HAVERI
TMAESCPEdCOLLEGE	2005	PHYSICAL TEACHERS TRIANING	HAVERI
TMAESSIRMVPOLYTECHNIC	2008	DIPLOMA	HOSAPETE
TMAESITI	2008	TECHNICAL TRAINING	HULIGI,MUNIRABAD
TMAESEASTFORT PRIMARYSCHOOL	2010	SCHOOLEDUCATION	CHITHRADURGA
TMAESWISDOMPUBLICSCHOOL	2010	SCHOOLEDUCATION	HAVERI
TMAES SRIBANGIBASAPPPUSCIENCE COLLEGE	2011	PREUNIVERSITY EDUCATION	HARAPANAHALLI
TMAESDAVPUBLICSCHOOL	2013	SCHOOLEDUCATION	HARAPANAHALLI
TMAESDAVPUBLICSCHOOL	2013	SCHOOLEDUCATION	GANGAVATHI
TMAESPREPRIMARYSCHOOL	2017	SCHOOLEDUCATION	KAMPASAGARA
TMAES SRICHANDRAMOULSESWARB.Sc.	2021	NURSING	HARAPANAHALLI

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

Name of the Program	Program Applied Level	Start of Year	Year of AICTE	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program duration
<b>Electronics &amp; Communication Engineering</b>	<b>Diploma</b>	<b>1983</b>	<b>1983</b>	<b>45</b>	<b>Yes</b>	<b>50</b>	<b>Applying first time</b>	<b>-</b>	<b>-</b>	<b>Yes</b>	<b>0</b>

<b>Sanctioned Intake for Last Five Years for the ELECTRONICS &amp; COMMUNICATION ENGINEERING</b>	
<b>Academic Year</b>	<b>Sanctioned Intake</b>
2023-24	50
2022-23	50
2021-22	50
2020-21	50
2019-20	50

**7a Accreditation History**

<b>Sr. No</b>	<b>Name of the Department</b>	<b>Name of the Program</b>	<b>Year of 1st Accreditation (if Applicable)</b>	<b>Year of 2nd Accreditation (if Applicable)</b>	<b>Year of 3rd Accreditation (if Applicable)</b>
1					

7b Programstobe consideredfor Accreditationvidethisapplication:

S No	Level	Discipline	Program
1	Diploma	Engineering&Technology	CivilEngg.
2	Diploma	Engineering&Technology	Electronics&CommunicationEngg.
3	Diploma	Engineering&Technology	MechanicalEngg.
4	Diploma	Engineering&Technology	ElectricalandElectronicsEngineering

9. TotalnumberofEmployees:

**A. Regular\*Employees(FacultyandStaff):Enginee**

**ringandTechnology- DiplomaShift-1**

Items	2023-24		2022-23		2020-21	
	MIN	MAX	MI N	MAX	MIN	MAX
FacultyinEngineering&Technology(Male)	42	52	43	51	43	52
FacultyinEngineering&Technology(Female)	6	12	6	12	6	10
FacultyinScience&Humanities(Male)	3	3	4	4	4	4
FacultyinScience&Humanities(Female)	2	2	3	3	3	4
Non-teachingstaff(Male)	63	64	63	64	63	64
Non-teachingstaff(Female)	9	9	5	5	5	5

**B. ContractualStaff(NotCoveredin9.A):**

EngineeringandTechnology-Diploma	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
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**10. TotalnumberofStudents:**

**EngineeringandTechnology- DiplomaShift-1**

	<b>2023-24</b>	<b>2022-23</b>	<b>2021-22</b>
Totalno.ofBoys	988	962	926
Totalno.ofGirls	167	158	165
<b>Total</b>	<b>1155</b>	<b>1120</b>	<b>1091</b>

**11. ContactInformationoftheHead oftheInstitutionand NBA Coordinator:**

<b>Head of the Institution</b>	
Name	Dr. H K Shankarananda
Designation	Principal
MobileNo.	9945909990
EmailID	tmaespoly316@gmail.com



**NBA Coordinator, If Designated**

Name	Sri. T Naziruddeen
Designation	VicePrincipal/HOD,Mech.Dept
MobileNo.	9886572502
EmailID	naziruddeent@gmail.com

# Criteria – 1

## Vision, Mission & Program Educational Objectives

## Part B

### 1. VISION,MISSIONANDPROGRAMEDUCATIONALOBJECTIVES(50)

**Total Marks 47**

#### 1.1 StatetheVisionandMissionoftheDepartmentandInstitution(5)

**TotalMarks5.0In  
stituteMarks 5.0**

Visionoftheinstitute	Empoweringyouthbyimpartingqualitytechnicaleducationandstrivetopreparestudentswithexcellentechnicalskills.
Missionoftheinstitute	<ol style="list-style-type: none"> <li>1. Tooffervalueaddedqualitytechnicaleducation&amp;excellentsacademictrainingtoourstudents.</li> <li>2. Toprovidestateofartinfrastructurewithlatestfacilities.</li> <li>3. Tostrengthenindustryinstituteinteraction.</li> </ol>
Vision of theDepartment	Toproducecreative,innovative,competitiveandethicalengineerswhocanleadintheever-changingworldofelectronics andcommunicationtechnologies.

	Mission No.	MissionStatements
MissionoftheDepartment	M1	ToimpartQualityTechnicalEducationindiplomaelectronicsandcommunicationengineering
	M2	Todeveloppracticalexperienceinlearningandinvolveincontinuousindustryinteractionandparticipation.
	M3	Toimpartsocial,ethicalvalues&leadershipqualitiesinstudentsthroughvaluebasedsystemofeducation.

#### 1.2 Statethe ProgrameducationalObjectives(PEOs)(5)

**TotalMarks  
05InstituteMarks  
05**

PEONo.	ProgramEducationalObjectivesStatements
PEO1	Demonstrate,Updateandadaptknowledgeintheareaofelectronicsandcommunicationengineeringandthealliedfields.
PEO2	Proposesolutionsfortheindustryintheeverchangingglobalenterprisewithethicalpractices.
PEO3	Developleadershipqualitiesandsucceedintheirchosencareerpath,inindustryorpublicservicethroughengineeringability,lifeskillsandmultidisciplinaryskillsetacquired.

PEO4	Pursuehighereducationinstitutesofnationallevel
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**1.3 Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)**

**Total Marks 09**

**Institute Marks 09**

The mission and vision of the institute are published in the Institutional website <http://tmaespolytechnichpt.com/>.

The mission and vision is displayed at prominent locations in the campus which can be viewed by students, parents, faculty members and other stakeholders.

Sl. No.	Methodology	Internal Stakeholders					External Stakeholders		
		Students	Faculty	Management	DTE Board	NBA Committee	Parent	Employer	Alumni
1	College Website	√	√	√	√	√	√	√	√
2	Display Boards Departments Class Rooms Laboratories Common Places	√	√	√	√	√	√	√	√
3	Included in the agenda of dept and NBA Committee meetings		√	√		√		√	√
4	Direct Communication				√	√	√	√	√

**Table: Dissemination of Vision, Mission & PEOs among Stakeholders**

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

Total Marks 14  
Institute Marks 14

The Process of defining the Vision and Mission of the program

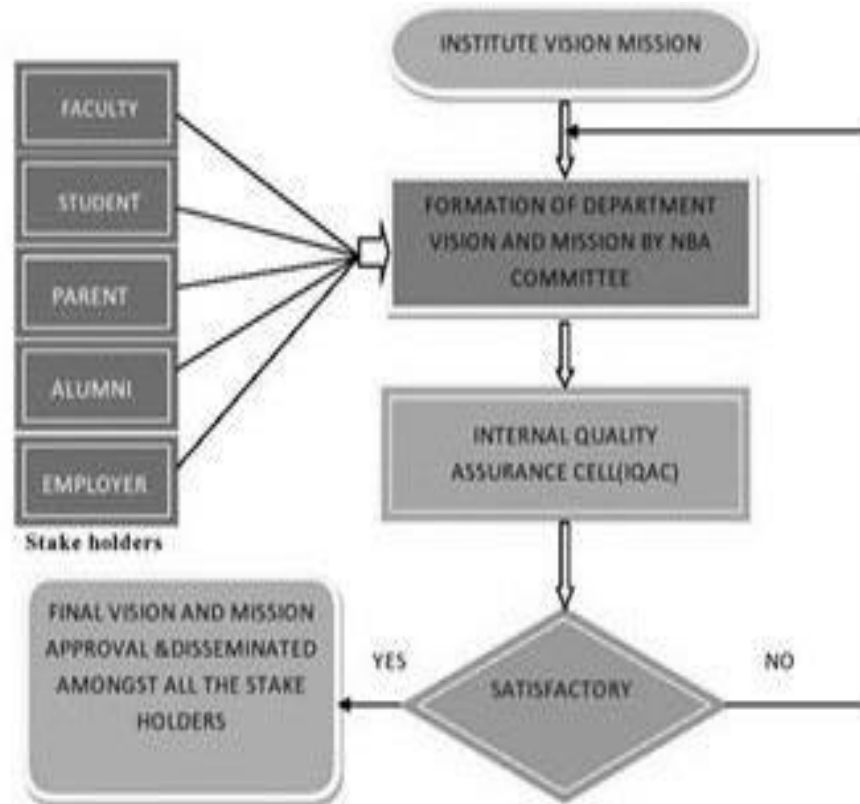


Fig.: Flowchart showing the process

**Step1:** Response of the stakeholders (students, faculty members, parents, employers and alumni) regarding the vision and mission statements of the department are collected through survey.

**Step2:** The views and opinions are consolidated from the survey process, and the institute vision, mission are considered in drafting the vision and mission of the department by the NBA committee.

**Step3:** The draft vision and mission are reviewed by the NBA committee and further submitted to the IQAC. After confirming the consistency of the department vision and mission with the vision and mission of the Institute, the same will be approved by IQAC.

**Step4:** On approval by IQAC, the vision mission of the department are published and disseminated to all the stakeholders.

**The process for defining the PEOs of the program**

The Programme Educational Objectives are established through a consultation process involving the core constituents such as: Student, Alumni, Faculty, Employers and Parents.

The PEOs are established through the following steps and are represented as shown in the fig. below.

**Step 1:** The PEOs are done in line with Institute and Department Vision and Mission statements.

**Step 2:** The collaborative views are collected from various stakeholders by the programme coordinator and formulation of PEOs with reference to PEOs of other institutions and Journal papers.

**Step 3:** The PEOs are developed by the team of faculty members and reviewed in the departmental meetings.

**Step 4:** The PEOs are represented in the Program Advisory Committee (PAC) for additional inputs requirements for any change in the statements.

**Step 5:** Finalized Programme Educational Objectives (PEOs) are published.

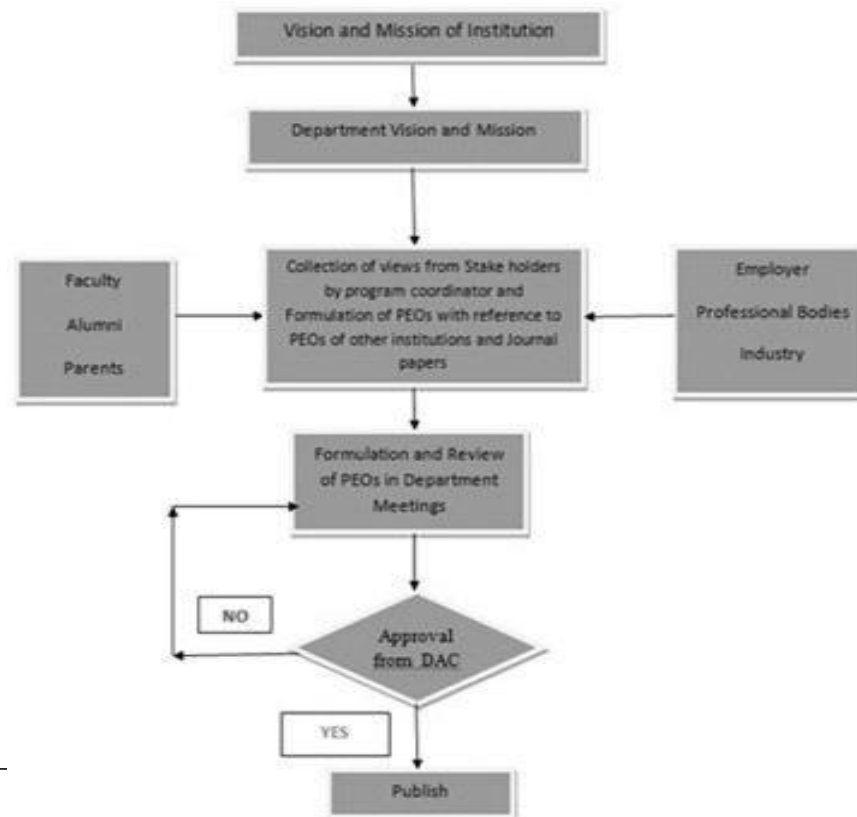


Fig: *Process for defining PEOs of the Program***1.5 Establish Consistency of PEOs with Mission of the Department (15)**

**Total Marks**  
**14 Institute Marks**  
**14**

**Justification:**

PEOs	M1	M2	M3	Justification
PEO1	2	3	3	(Mission1) moderately PEO1 to embed a strong foundation in E & C Engineering to succeed in industry or higher education. (Mission2) highly support to achieve PEO1, as objective is to achieve professional by adapting to challenges in rapidly changing technology. (Mission3) highly support to achieve PEO1 for interpersonal and entrepreneurial skills.
PEO2	2	3	3	(Mission1) moderately support to achieve PEO2, as objective is to be able to solve real world problems using sound technical knowledge in E & C Engineering. (Mission2) highly supports PEO2, as professional growth can only be achieved by adapting to challenges in rapidly changing technology Development in leadership qualities through interpersonal and entrepreneurial skills (Mission3) can be achieved with strong support of core knowledge of Computer Engineering (PEO 2)
PEO3	3	3	2	Strongly support of technical knowledge (Mission1) helps in excelling skill in various field of E & C PEO3 can be achieved through moderately adapting changing curricular, co-curricular activities Moderate bond between mission3 and PEO3 helps in excelling in professional carrier



PEO4	1	2	3	<p>Moderatesupporttechnicalknowledge(Mission1)willhelpinachieving successinvariousfiledofE&amp; Cengineering.</p> <p>Strongbondingbetweenadaptingchallengesinrapidlychangingtechnology(Mission2)canleadtosuccesshonestyandteambuilding.</p> <p>Stronginterpersonalandentrepreneurialskills(Mission3)arenecessary forprofessionaldevelopment.</p>
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<b>PEO Statements</b>	<b>M1</b>	<b>M2</b>	<b>M3</b>
Demonstrate, Update and adapt knowledge in the area of electronics and communication engineering and the allied fields.	3	2	2
Propose solutions for the core industry in the ever changing global enterprise with ethical practices.	2	2	2
Develop leadership qualities and succeed in their chosen career path, in industry or public service through engineering ability, life skills and multidisciplinary skill set acquired.	2	2	2
Pursue higher education in institutes of national level.	2	2	2

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# Criteria – 2

## ProgramCurriculum&TeachingLearningProcesses

**2. PROGRAM CURRICULUM AND TEACHING-LEARNING PROCESSES (200)**

**Total Marks 184**

**2.1 Program Curriculum (40)**

**Institute Marks 38**

All POs and PSOs are being demonstrably met through Curriculum? : Yes

2.1.1 State the process used to identify extent of compliance of the Board curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as mentioned in Annexure I. Also mention the identified curricular gaps, if any (40)

**A. Process used to identify extent of compliance of curriculum for attaining POs & PSOs (40)**

**Institute Marks 38** TMAESPolytechnic, established in the Year 1983. The college is recognized by Government of Karnataka and affiliated to AICTE, New Delhi. The Curriculum for E&C Engineering program comprises of the course content as prescribed by the DCTE, Bengaluru. The DCTE maintains balance between various disciplines such as Science & Humanities, Basic sciences, Program Core, Engineering Program Elective, In plant training course. Hence the Electronics & Communication Engineering Program structure follows the recommendations of the Board of Technical Examination (BTE), Bengaluru, time to time and accordingly modifies the curriculum.

Further the E&C Engineering Curriculum is also upgraded continuously as per the directions from Curriculum Development Cell of the DCTE. The cell conducts periodic meetings and sets guidelines and frames the syllabus based on the input received from Industrialists, Academicians, Industrialists and Alumni. The curriculum will be revised once in 5 years by the DCTE.

The board follows the overall curriculum breakup and it is implemented in its program, which is for a period of 6 semesters or 3 years.

**PROGRAM OUTCOMES (POs)**

<b>1</b>	<b>Basic and Disciplines specific knowledge:</b> Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve
<b>2</b>	<b>Problem analysis:</b> Identify and analyse well-defined engineering problems using codified standard methods.
<b>3</b>	<b>Design/development of solutions:</b> Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
<b>4</b>	<b>Engineering Tools, Experimentation and Testing:</b> Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
<b>5</b>	<b>Engineering practices for society, sustainability and environment:</b> Apply appropriate technology in context of society, sustainability, environment and ethical practices.

6	<b>Project Management:</b> Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
7	<b>Life-long learning:</b> Ability to analyse individual needs and engage in updating in the context of technological changes.

**PROGRAM SPECIFIC OUTCOMES (PSOs)**

PSO1	Apply principles of mathematics, communication, automation and logic control to analyze different types of signals and switching operations.
PSO2	Analyze, Synthesize the analog & digital circuits & to adapt for rapid changes in tools and technology through life-long learning.
PSO3	Design, simulate and fabricate PCB using EDA tools for Electronics & Communication, Electrical circuits, and interface through programming.

**Table 2.1: Structure of the program as per BTE Curriculum (2020 Scheme)**

**I SEMESTER DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING**

S.No	Course/Teaching Department	Course Code	Course Title	Hours per week			Total Contact Hrs/week	Credits
				L	T	P		
<b>THEORY COURSES</b>								
1	ES/EC	20EC11T	Digital Electronics	4	0	0	4	4
<b>PRACTICAL COURSES</b>								
2	BS/SC	20SC02P	Statistics and Analytics	2	0	4	6	4
3	ES/ME	20ME02P	Computer Aided Engg Graphics	2	0	4	6	4
4	ES/EE/EC	20SC01P	Fundamentals of Elect & EEngg	2	0	4	6	4
<b>AUDIT COURSES</b>								
5	AU/SC	20AU01T	Environmental Sustainability	2	0	0	2	2
TOTAL				14	0	12	14	18

**T: Theory P: Practical D: Drawing E: Elective BS: Basic Science ES: Engineering Science HS: Humanities & Social Science AU: Audit Course EG: English SC: Science**

**II SEMESTER DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING**

S.No	Course/Teaching Department	Course Code	Course Title	Hours per week			Total Contact Hrs/week	Credits
				L	T	P		
<b>THEORY COURSES</b>								
1	SC/EC	20PM01T	Project Management Skills	2	0	4	6	4
2	BS/SC	20SC01T	Engineering Mathematics	4	0	0	4	4
<b>PRACTICAL COURSES</b>								
3	ES/EE/EC	20EG01P	Communication Skills	2	0	4	6	4
4	ES/CS	20CS01P	IT Skills	2	0	4	6	4
5	ES/EC	20EC21P	Electronic Components & Devices	2	0	4	6	4
<b>AUDIT COURSES</b>								
5	AU/SC	20KA21T	Kannada-I/Sahithya Sincha-I/Balke Kannada-I	2	0	0	2	2
TOTAL				12	0	20	32	22

**T:Theory P:Practical D:Drawing E:Elective BS:Basic Science ES:Engineering Science HS:Humanities & Social Science AU:Audit Course EG:English SC:Science**

**III SEMESTER DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING**

S.No	Course/Teaching Department	Course Code	Course Title	Hours per week			Total Contact Hrs/week	Credits
				L	T	P		
<b>INTEGRATED COURSE</b>								
1	PC/EC	20EC31P	Analog Electronics	3	1	4	8	6
2	PC/EC	20EC32P	Logic Design Using Verilog	3	1	4	8	6

3	PC/EC	20EC33P	CommunicationSystems	3	1	4	8	6
4	PC/EC	20EF34P	ElectronicsmeasurementsandTestingTechniques	3	1	4	8	6
<b>AUDITCOURSES</b>								
5	AU/KA	20KA31T	Kannada-II/SahithyaSincha-II/BalkeKannada-II	2	0	0	2	2
TOTAL				14	4	16	34	26

**IV SEMESTER DIPLOMA IN ELECTRONICS&COMMUNICATION ENGINEERING**

S.No	Course/TeachingDepartment	Course Code	CourseTitle	Hoursper week			Total Contact Hrs/week	Credits
				L	T	P		
<b>INTEGRATEDCOURSE</b>								
1	PC/EC	20EC41P	PCB Design&Fabrication	3	1	4	8	6
2	PC/EC	20EC42P	WirelessCommunication	3	1	4	8	6
3	PC/EC	20EC43P	EmbeddedC Programming	3	1	4	8	6
4	PC/EC	20EF44P	IndustrialAutomation	3	1	4	8	6
<b>AUDITCOURSES</b>								
5	AU/EC	20KA41T	IndianConstitution	2	0	0	2	2
TOTAL				14	4	16	34	26

**V SEMESTER DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING**

S.No	Course/Teaching Department	Course Code	Pathway Title	Hours per week			Total Contact Hrs/semester	Credits
				L	T	P		
<b>Programme Specialization Pathway</b>								
1	EC Specialization pathways in Emerging Areas student may select any one of the specializations	20EC51I	1. Drone Technologies	104	52	312	468	24
		20EC52I	2. Industrial Internet of Things	104	52	312	468	24
		20EC53I	3. Automation & Robotics	104	52	312	468	24
		20EC54I	4. E -Mobility	104	52	312	468	24
<b>Science &amp; Research Pathway</b>				<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>	<b>Credits</b>
2	BS/SC/EC Specialization pathway in Science & Research (Student needs to take all four papers in this pathway)	20SC51T	Paper-I- Applied Mathematics	52	26	0	78	6
		20SC52T	Paper-2- Applied Science	52	0	52	104	6
		20RM53T	Paper-3- Research Methodology	52	0	52	104	6
		20TW54P	Paper-4- Technical Writing	39	13	52	104	6
			Total	195	39	156	390	24
3	ES/EC	20ET51I	Entrepreneurship Startup	104	52	312	468	24

**Note: In 5th Semester student needs to select any one of the pathways consisting of 24 credits. Students can continue their higher education irrespective of the pathway selected**



**VI SEMESTER DIPLOMA IN ELECTRONICS&COMMUNICATION ENGINEERING**

Pathway	Course/Teaching Department	Course Code	Pathway Title	Course	Total Contact Hours	Credits	
Internship/Project	ES/EC	20EC61S	Specialisation Pathway	Internship/ Project	40 Hours /Week Total 16 weeks	640	16
		20EC61R	Science&Research Pathway	Research Project	40 Hours /Week Total 16 weeks	640	16
		20EC61E	Entrepreneurship and start up pathway	Minimum Viable Product MVP/Incubation/Startup Proposal	40 Hours /Week Total 16 weeks	640	16

**Note: Student**

**shall undergo Internship/Project/research project/MVP/Incubation/Startup proposal in the same area as opted in 5th semester pathway**

**a)Courses:**

Year/Sem		HS	BS	ES (Inter- disciplinary)	PC	PE	OE	AU	EEC	Totalno. ofCourse s
IYear	ISem		1	2	1			1		5
	IISem	1	1	1	2			1		6
IIYear	IIISem				4			1		5
	IIIVSem				4			1		5
III Year	IIIVSem					1				1
	IIIVISem								1	1
TotalCourses		1	2	3	11	1		4	1	<b>22</b>

Legend: HS-CommunicationSkills&SocialScience,BS-BasicScience,ES-EnggScience,PC-ProfessionalCore,  
PE-ProfessionalElective,OE-OpenElective,AU-AuditCourse,EEC-EmployabilityEnhancement Course

**a)Credits:**

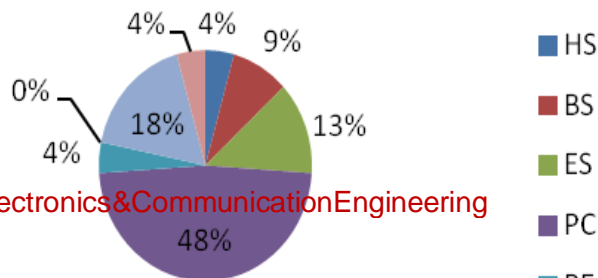
Year/Sem		HS	BS	ES (Inter- disciplinary)	PC	PE	OE	AU	EEC	Total Credits
IYear	ISem		4	8	4			2		18
	IISem	4	4	4	8			2		22
IIYear	IIISem				24			2		26
	IIIVSem				24			2		26
III Year	IIIVSem					24				24
	IIIVISem								16	16
TotalCourses		4	8	12	60	24		8	16	<b>132</b>

Legend: HS-CommunicationSkills&SocialScience,BS-BasicScience,ES-EnggScience,PC-ProfessionalCore,PE-ProfessionalElective,OE-OpenElective,AU-AuditCourse,EEC-EmployabilityEnhancement Course

**CourseContribution:**

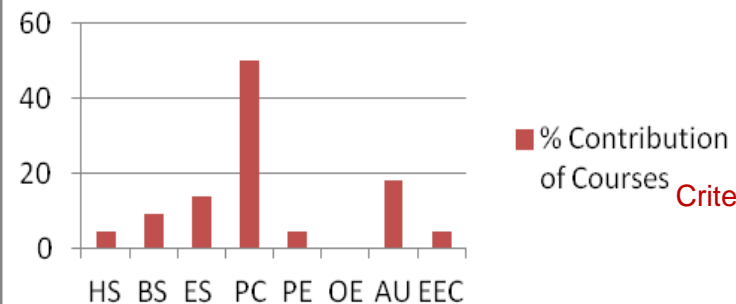
CourseType	% Contribution
CommunicationSkills&SocialScience(HS)	4.5
Basic Science(BS)	9.1
EngineeringScience(ES)	13.6
ProfessionalCore(PC)	50
ProfessionalElective (PE)	4.5
OpenElective(OE)	0
AuditCourse(AU)	18.2
EmploymentEnhancementCourse(EEC)	4.5

**% Contribution of Courses**



Department of Electronics & Communication Engineering

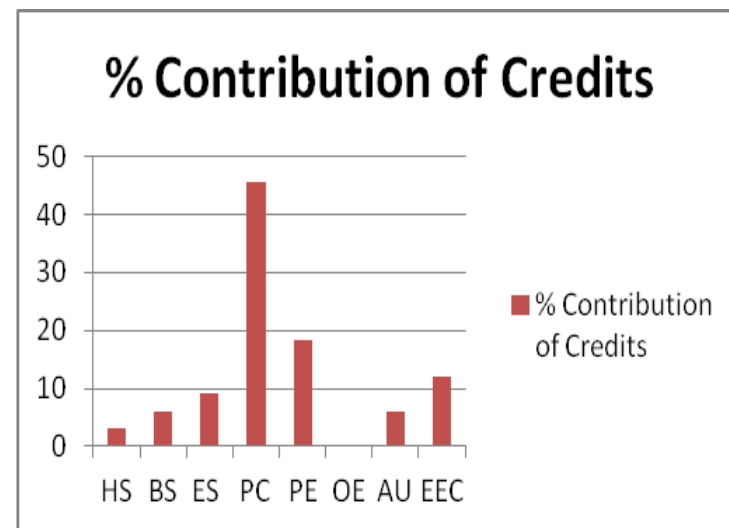
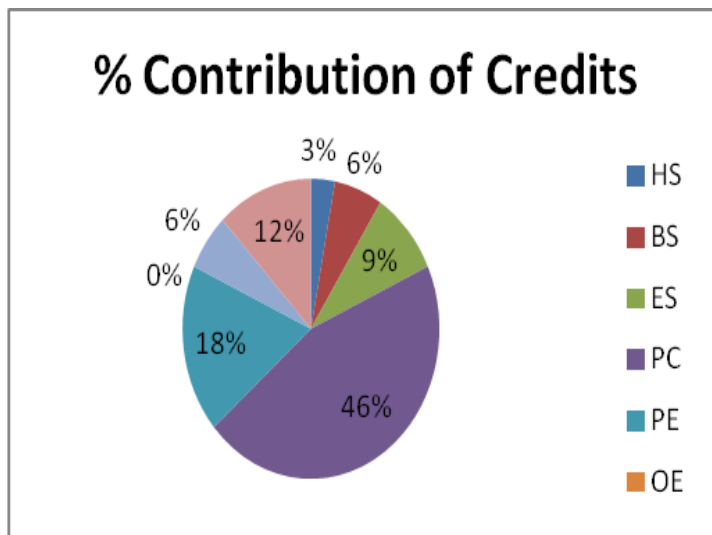
**% Contribution of Courses**



Criteria- 2

**CreditContribution:**

CourseType	% Contribution
CommunicationSkills&SocialScience(HS)	3
Basic Science(BS)	6.1
EngineeringScience(ES)	9.1
ProfessionalCore(PC)	45.5
ProfessionalElective (PE)	18.2
OpenElective(OE)	0
AuditCourse(AU)	6.1
EmploymentEnhancementCourse(EEC)	12.1

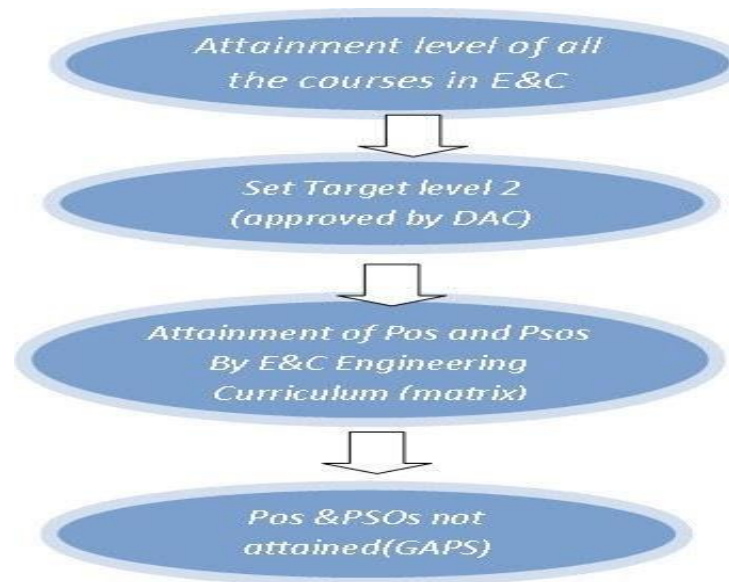


The process adopted in the Department to identify compliance of E&C Engineering program Curriculum for the attainment of PO's and PSOs is summarized below: At the outset, for all the Courses present in the curriculum the Course Outcome statements are developed by the course owner and for each COs, the mapping is made to each POs and PSOs based on the content of Course outcomes and accordingly attainment level of mapping is carried out. Then average attainment levels are computed from the aggregate attainment level of all the courses existing in the curriculum and the details are shown in Tables No 2.2 & 2.3.

The attainment level for each PO's and PSO's is worked out similarly. The attainment for PO's and PSO's is considered fully attained if the average attainment level computed from the above tables is higher than TWO.

To identify the Extent of curriculum gaps and to recognize the attainment level of PO's, PSO's a matrix is developed the courses and their attainment levels is computed for all PO's and PSO's. After mapping with all the PO's and PSO's

The details are shown in fig 2.1.



**Fig 2.1: Process to describe the mapping of PO's and PSO's with DTEC Curriculum**

**Table2.2: ProcessShowingmappingofPO's&PSO'sby all theCourseOutcomes:**

Sl. No.	SEM	Course	Course Index	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	
1	1	DE	CO101.1	3	2			1			2	3	3	
2			CO101.2	3	2	1	2				2	3	3	
3			CO101.3	3	2	1	2				2	3	3	
4			CO101.4	3				1			2	3	3	
5	1	S&A	CO102.1	3	3		3	3		3	2	2	3	
6			CO102.2	3	3		3	3		3	2	2	3	
7			CO102.3	3	3		3	3		3	2	2	3	
8			CO102.4	3	3		3	3		3	2	2	2	
9	1	CAEG	CO103.1	3			3				2	2	2	
10			CO103.2	3			3				2	2	2	
11			CO103.3	3			3				2	2	2	
12			CO103.4	3			3				2	2	2	
13	1	FEEE	CO104.1	3			3				3	3	2	
14			CO104.2	3			3				3	3	2	
15			CO104.3	3			3				3	3	2	
16			CO104.4	3			3				3	3	2	
17	1	EVS	CO105.1	3				3		3				
18			CO105.2	3					3		3			
19			CO105.3	3					3		3			
20			CO105.4	3					3		3			
21			CO105.5	3					3		3			
22			CO105.6	3					3		3			
23	2	PMS	CO105.1	3	3			2		1	1	2	3	
24			CO105.2	3	3	3				1	1	2	3	

25			CO105.3	3			3		3	1	1	2	3
26			CO105.4	3			3		3	1	1	2	3
27			CO105.5	3	3			2		1	1	2	3
28			CO105.6	3				2		1	1	2	3
29	2	EM	CO106.1	3	1					3	3	3	3
30			CO106.2	3	1					3	3	3	3
31			CO106.3	3	1					3	3	3	3
32			CO106.4	3	1	3				3	3	3	3
33			CO106.5	3	1	3				3	3	3	3
34	2	Comn Skills	CO107.1	3			3			3			
35			CO107.2	3			3			3			
36			CO107.3	3			3			3			
37			CO107.4	3			3			3			
38	2	ITSkills	CO108.1	3			3			3	2	1	3
39			CO108.2	3			3			3	2	1	3
40			CO108.3	3			3				2	1	3
41			CO108.4	3			3			3	2	1	3
42			CO108.5	3			3				2	1	3
43	2	ECD	CO109.1	3	1		2	1			3	3	3
44			CO109.2	3			2	1			3	3	3
45			CO109.3	3		1	2	1			3	3	3
46			CO109.4	3		1	2	1			3	3	3
47			CO109.5	3		1	2	1			3	3	3
48	3	AE	CO201.1	3	1	3	3		3	3	3	3	2
49			CO201.2	3	1	3	3		3	3	3	3	2
50			CO201.3	3	1	3	3	1	3	3	3	3	2

**TMAESPOLYTECHNIC(GOVTAIDED),HOSAPETE**

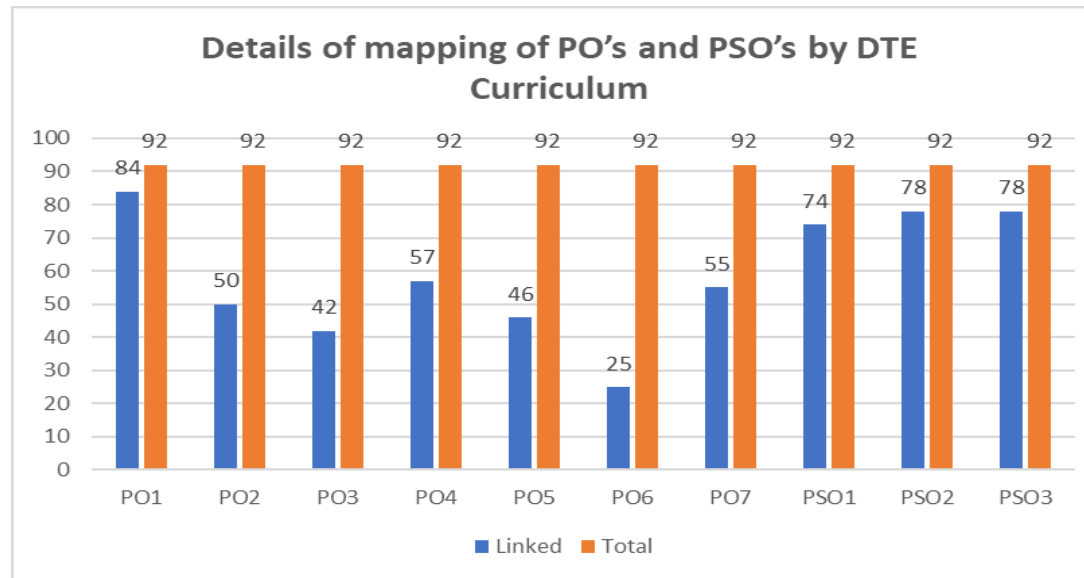
51			CO201.4	3	1	3	3	1	3	3	3	3	2	
52	3	LDV	CO202.1	3	3	3	3	1	3	3	3	3	3	
53			CO202.2	3	3	3	3		3	3	3	3	3	
54			CO202.3	3	3	3	3		3	3	3	3	3	
55			CO202.4	3	3	3	3		3	3	3	3	3	
56	3	CS	CO203.1	3	3	2	2	3	3	1	3	3	2	
57			CO203.2	3	3	2	2	3	3		3	3	2	
58			CO203.3	3	3	2	2	3	3	1	3	3	2	
59	3	EMTT	CO204.1	3	1		3	3	2	3	2	2	2	
60			CO204.2	3	1	1	3	3	2	3	2	2	2	
61			CO204.3	3	1	1	3	3	2	3	2	2	2	
62			CO204.4	3	1		3	3	2	3	2	2	2	
63	4	PCB	CO205.1	1	3						3	3	2	
64			CO205.2	1	3	3	3	1		2	3	3	2	
65			CO205.3		3	3	3	1		2	3	3	2	
66			CO205.4		3		3	1		2	3	3	2	
67	4	WC	CO206.1	3	1	1		3		2	1	3	3	
68			CO206.2	3	1	1		3		2	1	3	3	
69			CO206.3	3	1	1		3		2	1	3	3	
70			CO206.4	3				3		2	1	3	3	
71	4	ECP	CO207.1	3	3	3						2	3	
72			CO207.2	3	3	3							2	3
73			CO207.3	3	3	3			1		2		2	3
74			CO207.4						1		2		2	3
75	4	IA	CO208.1	3		3					3	3	3	
76			CO208.2	3		3		3			3	3	3	

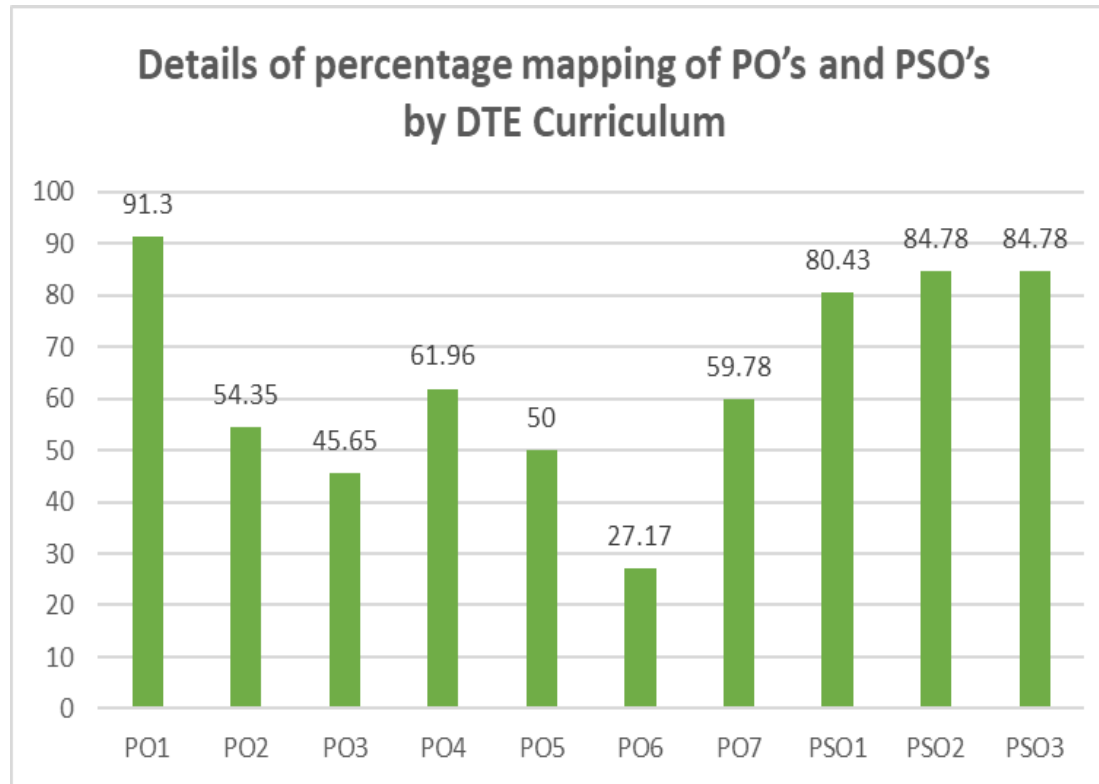


77			CO208.3	3		3		3		2	3	3	3
79			CO208.4			3		3		2	3	3	3
80	5	IC	CO209.1						3	3			
81			CO209.2						3	3			
82			CO209.3						3	3			
83			CO209.4						3	3			
84	6	A&R	CO301.1	3	2	3	2	2	1		3	3	3
85			CO301.2	3	2	3	2	2	1		3	3	3
86			CO301.3	3	2	3	2	2	1	3	3	3	3
87			CO301.4	3	2	3	2	2		3	3	3	3
88			CO301.5	3				2		3	3	3	3
78	7	Internship projectwork	CO302.1	3	3	3	3	3	3	3	3	3	3
89			CO302.2	3	3	3	3	3	3	3	3	3	3
90			CO302.3	3	3	3	3	3	3	3	3	3	3
91			CO302.4	3	3	3	3	3	3	3	3	3	3
92			CO302.5	3	3	3	3	3	3	3	3	3	3
<b>Average</b>				<b>2.95</b>	<b>2.18</b>	<b>2.45</b>	<b>2.75</b>	<b>2.27</b>	<b>2.66</b>	<b>2.58</b>	<b>2.45</b>	<b>2.59</b>	<b>2.69</b>

**Table2.3:DetailsofpercentagemappingofPO’sandPSO’sbyDTECurriculum:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
<b>Linked</b>	84	50	42	57	46	25	55	74	78	78
<b>Total</b>	92	92	92	92	92	92	92	92	92	92
<b>Percentage</b>	91.30	54.35	45.65	61.96	50.00	27.17	59.78	80.43	84.78	84.78

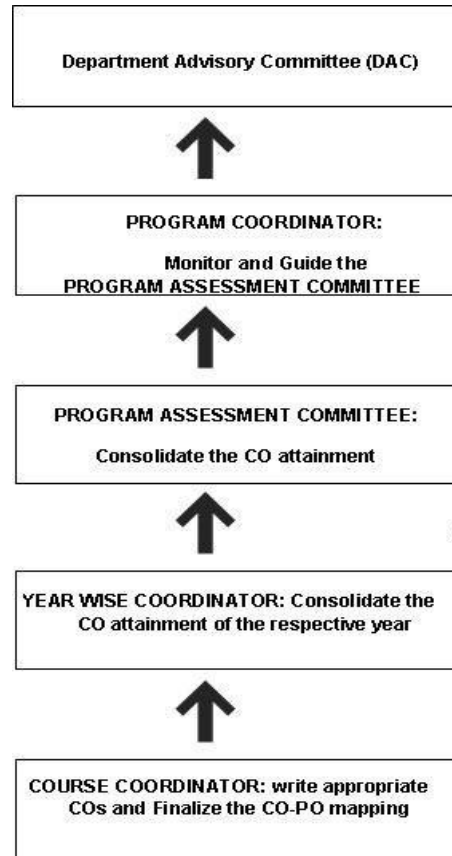




### Processinvolvedin CO-POMapping

Afterthecourse(subject)allotmentfromthedepartment,thecoursein-chargeofthecoursehastowriteappropriateCOsfortheircorrespondingcourse.Itshouldbenarrowerandmeasurable statements.Byusingthe actionverbsoflearninglevels,CO'swillbedesigned.COstatementsshoulddescribewhatthestudentsareexpectedtoknowandabletodoatthe endofeachcourse,whicharerelatedto theskills, knowledgeandbehaviorthatstudentswillacquirethrough thecourse.

The role of CO-PO mapping will be assigned to the faculty as per hierarchy followed in figure below:



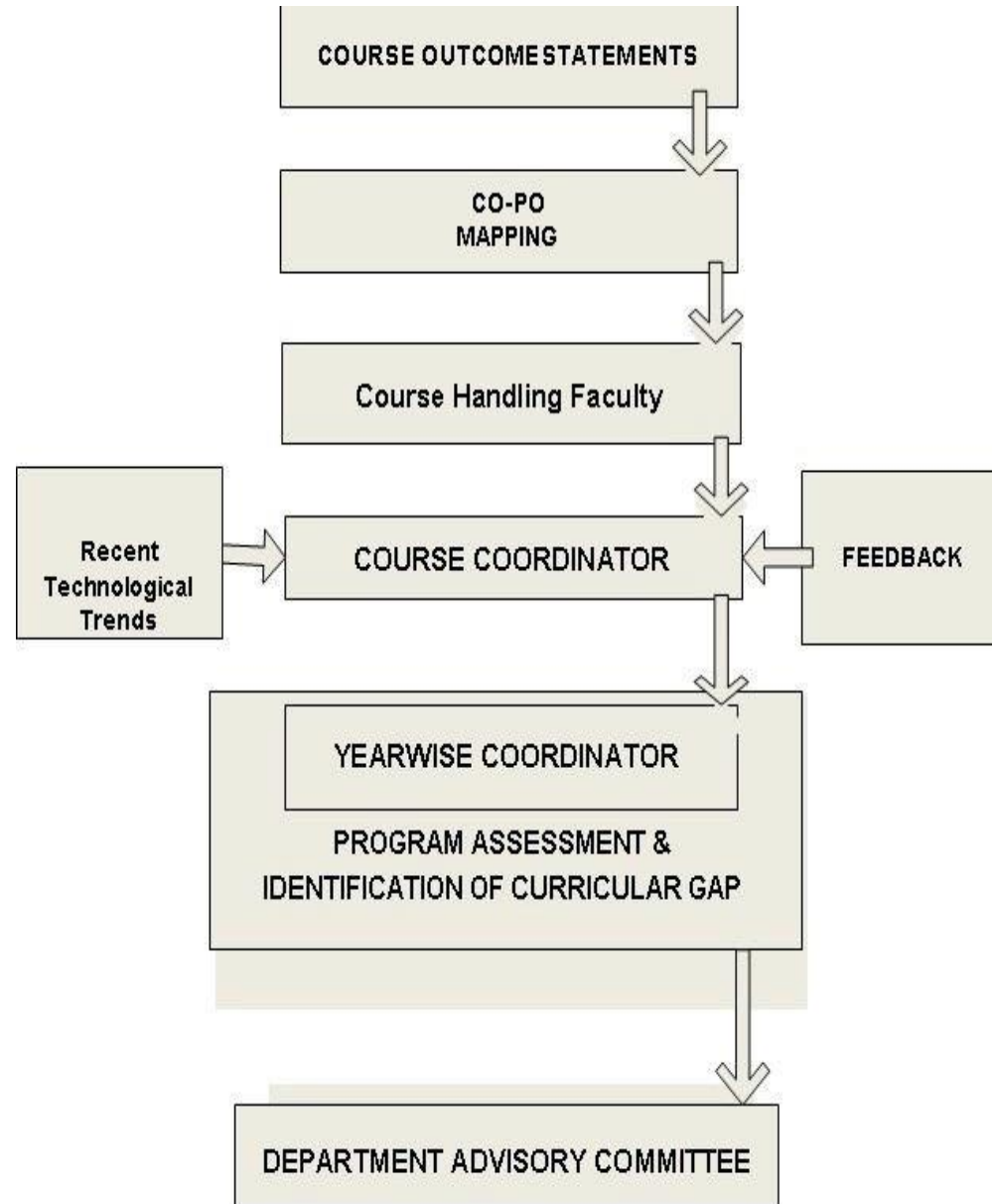
The process used to identify the curricular gaps to the attainment of COs/POs is given in figure followed by the explanation given below:

**Step-1:** The course handling faculty, after CO-PO mapping, would submit CO attainment to Course coordinator.

**Step-2:** The course coordinator would submit the CO-PO attainment along with curriculum gap identified in the course and recommendation to conduct co-curricular activities & identify content beyond the syllabus to year-wise coordinator.

**Step-3:** The year wise coordinators who are the members of the PAC would consolidate the CO attainment of the respective year along with curricular gaps and recommendation to conduct co-curricular activities reported by course coordinators.

**Step-4:** The PAC would consolidate the CO and PO attainment of the programme with all the identified gaps and submit report to DAC



**List of curricular gaps for the attainment of defined POs and PSOs**

The following POs and PSOs are partially attained by the DTE curriculum which are identified as Gaps as per computations made in the table and stakeholder combined with mapping as shown in Figure.

The following PO's and PSO's are fully Attained by the curriculum	The following PO's and PSO's are partially attained by the curriculum
<ul style="list-style-type: none"> <li>1. Basic Knowledge (PO1)</li> <li>2. Problem analysis (PO2)</li> <li>3. Design/development of solution (PO3)</li> <li>4. Life-long learning. (PO7)</li> <li>5. Program Specific Outcome 1. (PSO1)</li> <li>6. Program Specific Outcome 2 (PSO2)</li> <li>7. Program Specific Outcome 3 (PSO3)</li> </ul>	<ul style="list-style-type: none"> <li>1. Engineering tools, Experimentation and Testing (PO4)</li> <li>2. Engineering practices for society (PO5)</li> <li>3. Project Management (PO6)</li> </ul>

To fulfill the Gaps as identified in the E&C Engineering, Curriculum, the Department has conducted additional courses such as invited talks, seminars, workshops & personality development programs as exhibited in As per the curriculum mapping of PO4, PO5 & PO6 are comparatively less. Hence the following activities are identified to supplement mapping of POs & PSOs as shown in table

S.NO	Activities	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3
1	Industrial Visit	√				√	√	√	√	√	√
2	Interaction with Industry Experts	√	√			√	√	√	√	√	√
3	Work Shops	√	√		√	√		√	√	√	√
4	Projects	√	√	√	√	√	√	√	√	√	√
5	Participation in Community Services					√	√	√			
6	Yoga					√		√			
7	Programs on soft skill	√				√	√	√			
8	Participation in NSS					√		√			
9	Cultural Activities					√	√	√			

10	ParticipationinSports					√	√	√			
11	ExperimentsConductedBeyondSyllabus	√	√		√			√		√	

**1. StatementofDeliverydetailsoftheContentbeyondthesyllabusandcurriculumgapforAttainmentofPOsandPSOs(10)**

**A.Initiationtakenuptoincludeidentifiedgapsintothe curriculum.**

AmeetingofalltheMembersofDepartmentAdvisorycommittee(DAC),Constructionindustryprofessionals,Alumni’sandallotherfacultymemberswascalledintheDepartmenttoidentifythecurriculumgapsbasedontheneedsofConstructionIndustry.AfterdeliberationsmadebetweentheindustryprofessionalsandAlumniopinions,that,theGraduatesproducedfromtheInstitutesarenotcompetitiveenoughtofacethechallengesoftheindustry,astheyarenotinculcatedwithenoughtechnicalknowledgeandfield/siteproblemsexpectedtofaceintheirProfession.

DuringtheProceedingsofthemeeting,theexpertsafterdiscussionsidentifiedandsuggestedssomemodificationsintheProgramstruadvisedtomodifythesyllabusinthesucceedingboardmeetings.

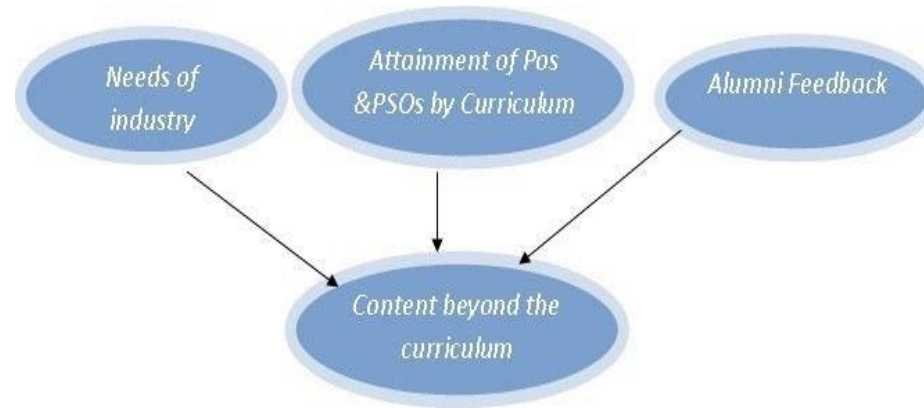
IfsomesuchCoursecontentstoattainPO’sandPSO’srenotinculcatedinthecurriculumprovidedbytheaffiliatedUniversitythenthknowledgebycoveringaspects through“**CONTENTSBEYONDSYLLABUS**”.ThedetailsareshowninFigure.

SubsequentlyaftertheIdentificationofcurriculumGapsasstatedinsection2.1.1.andtoaccomplishthesamealetterwassubmittedtoincludethecontentsofPO’s andPSO’swhicharenottainedfromtheBoardcurriculumfortheAcademicYear2016-17.Iftheboardcurriculumhigherlevel of attainmentofthePO’s&PSO’sispossibledirectlythroughthecurriculumitself.

**B. InitiationtakenupbytheDepartmenttofilltheGaps:**

**Thefollowingactivities/eventsareadoptedtofillthegapsContentbeyondthesyllabus:**

1. Workshops
2. Invitedtalks
3. Tech-festivals
4. Seminars
5. Fieldtrips/visits
6. Trainingprograms



**C. Mapping of content beyond syllabus with POs&PSOs**

Table 2.4: Programs conducted for the academic year 2019-20, 2020-21, 2021-22, 2022-23 & 23-24

Sl. No.	GAP	ACTION TAKEN	DATE /MONTH	RESOURCE PERSON(S)/INDUSTRY VISITED	MODE	NO OF STUDENTS
1	PO2, PO3	Workshop on IIoT	02/08/2023	Mr. Vinay Kumar & Rakesh	Workshop	35
2	PO6	Seminar on DCET Exams	23/06/2023	Mr. Mallikarjun, gpt, kampli	Seminar	33
3	PO6	Entrepreneurship development program	26-07-2022	Sri. Somashekar	PPT	60
4	PO4, PO6	Industrial visit	08-06-2022	Mukunda sumi		37
5	PO4, PO6	Industrial visit	2/7/22 & 4/7/22	SLR Metaliks		37
6	PO2, PO3	Workshop on pcb design & fabrication	27/1/22 & 28/01/22	Mr. Vinay Kumar & Rakesh	WORKSHOP	67
7	PO5	Participation in community services (cyclerally)	31-05-2022			
8	PO5	Yoga	21-06-2022	At College Campus		
9	PO5	Environmental day (planting trees)	05-06-2022			



10	PO7	Internetofthings	18-12-2021	Mr. RaymondIrudayaraji		55
11	PO6	Skillsettoleadyourcareer	04-10-2021	Umesh D	ORAL	66
12	PO6, PO7	Inplanttrainingonembeddedsystem	26/08/21TO 29/08/21	MrPraveenKumar		21
13	PO2& PO3	Ns2simulator	28-12-2020	PROFSharada HN	Online	FinalYear Students
14	PO2& PO3	Ns2simulator	28-12-2020	PROFSandhyaSV	Online	FinalYear Students
15	PO2,PO3	Satellitecommunication	14-09-2019	Mr. S Venkataraghavan	PPT	29
16	PO2,PO3	Wirelesscommunication	27-07-2019	Mr. UlaganathanJ	PPT	43

## 2 Teaching-LearningProcess(160)

### 2.2.1 DescribeProcessesfollowedtoensure/improvequalityofTeaching&Learningbasedonfollowingpoints(25)

**InstituteMarks25.0**

#### A. AdherencetoAcademicCalendar(3)

**InstituteMarks3.0**

Since the Institute is affiliated to DTE, Bangalore, hence all the program dates will adhere to the calendar of the BTE Bengaluru. Based on the dates prescribed by BTE, Institutional Calendar of Events will be prepared every semester. The department calendar of events will be prepared by HOD in consultation with faculty members. The department COE will be in accordance to the institutional calendar.

Department COE includes various departmental activities including meeting details to be conducted, IA test dates, parents meeting, student counseling, extracurricular activities, seminars/guest lecture/industry visit etc.,

#### B. Use of various instructional planning and delivery methods(3)

**InstituteMarks3.0**

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

1. Teaching using Black/Green/White Boards for theory classes.
2. Lecturing through Tutorials and Remedial classes
3. Powerpoint presentation

4. Models
5. Industrial tours/Field demonstrations/Real World citations
6. Demonstrations in the class room
7. Simulation based learning environment in labs

**Lecture method and Interactive learning:**

The faculty use chalk and board and audio visual aids in teaching. Students are also encouraged to actually interact during the lecture hour by getting the doubts clarified on the spot. Faculty using models, charts for interactive teaching

**Computer-assisted learning:**

The College has required number of computers, printers, projectors. These are effectively used for teaching. Many final year projects are completed through the use of software.

**C. Methodologies to support weak students and encourage bright students(4)**

**Institute Marks 4.0**

All the students in a semester are classified as Bright or debilitated in each course taking into consideration about this/her overall CGPA, previous SEE and current semester IA performance. The Mentors/Counselors regularly conduct meetings regarding progress of their mentees/students and are responsible to identify students who scored less than 50% marks in their internals.

**Benchmark to identify slow learners:**

Under the direction of HOD, the students Counselor evaluate the progress card of those students who score below 50% marks in three or more subjects and below 75% attendance are considered as **academically slow learners** and same is also intimated to their parents.

Mentor system is adopted in the department and the record is maintained as below:

Identification Criteria	Actions Taken
Students scoring less than 60% of marks in Internal Assessment.	<ol style="list-style-type: none"> <li>1. Student counselor follow their progress regularly advising students about attending classes, making up classes missed, and getting additional help.</li> <li>2. Intimating parents to counsel their wards.</li> <li>3. Conduction of remedial classes</li> </ol>

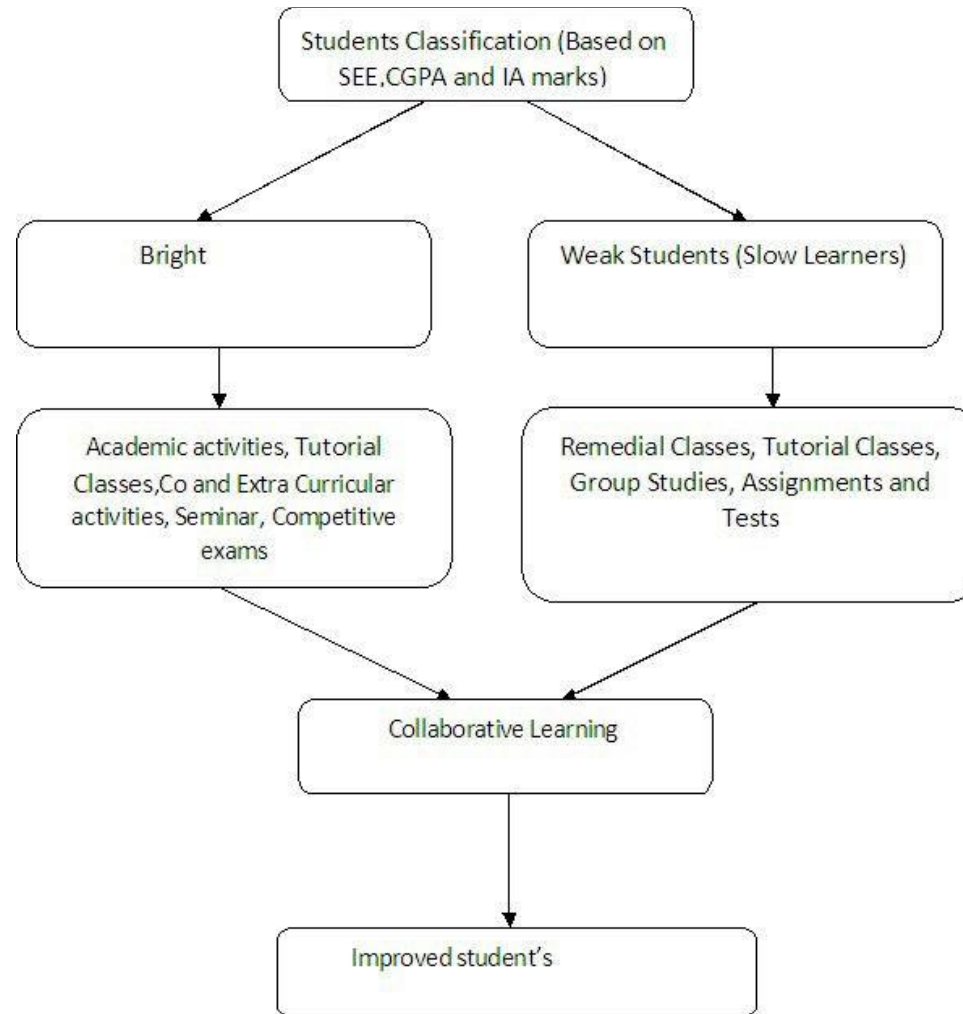
Diplomastudentswho enteredwithlessbasicsof mathematics	Conduction of remedialclasses.
Students who failinsemesterexams	Conductionof extraclassestothosewho failedinprevioussemesterssubjects.

Mentorsdiariesaremaintainedinthedepartmentfromtheacademicyear2020-

21InitiativesandimplementationdetailsofEncouragingMeritoriousStudents.

- StudentsareEncouragedtoparticipateinvariouscompetitiveexams/quest/quiz.
- InspiredtotakeupcompetitiveexaminationslikeDCETetc.,
- MeritoriousstudentsareawardedthroughFelicitationfunctionwhichwillbeorganisedonceinayear.

The methodology of the process is depicted in figure below:



#### **D. Quality of classroom teaching(3)**

**Institute Marks 3.0**

All classrooms are provided with Green Boards, All the theory courses are delivered through lectures. 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 BTE question papers are resolved in the class. BTE question paper pattern will be explained thoroughly and questions will be solved in the classroom itself.

Questions for internal tests will be prepared as following guidelines prescribed by BTE. Questionnaire will be given to students after the end of each unit. In every ongoing class some stipulated time will be spent in class to discuss about the topics dealt in previous class in order to maintain the continuity.

Based on the request from the Faculty and considering the importance of the subject, additional teaching hours are allotted in the Timetable as tutorial classes.

#### **The following innovative teaching methods are adopted by the faculty:**

- Computers are used for teaching purposes and internet facility is available to students and faculty.
- Faculty members are taking advantage of sources like National Programme on Technology Enhanced Learning (NPTEL), internet sources for effective teaching.
- Teaching will be done using Projectors for presentation, online learning encouraged for students.
- Well structured lesson plans are prepared/revised for all theory and practical courses on a period to period basis, scrutinized by HODs.

#### **E. Conduct of experiments(3)**

**Institute Marks 3.0**

All the laboratories have excellent facilities. For the experiments detailed instruction manuals are provided. The observations are checked and verified by faculty and record books are maintained systematically. One faculty member and one instructor/attendant are assigned for each practical class.

#### **Initiatives and implementation details of improving Laboratory Experience in Conducting Experiments:**

- Student Batches for each experiment are made depending on the type of experiment, laboratory and availability of equipment.
- The faculty will monitor the progress of experiments carried out by each batch of students.
- The faculty checks/verifies the observations recorded in the observation book with calculations until the results and conclusions are drawn by the students.
- The students will enter the entire observations in observation book and submit the record in the subsequent week with all the information related to the test/experiment.
- Viva questions/question bank is provided to students prior to the BTE examinations.
- At the end of the semester an internal practical test is conducted in line with DTE practical examination and marks are awarded.
- The performance of students in the laboratories are evaluated by the faculties for 25 marks as per C-15 Curriculum and 60 marks as per C-20 Curriculum

**F. Continuous Assessment in the laboratory(3)**

**Institute Marks 3.0**

Continuous assessment system is also implemented for assessment of laboratory work. The assessment is done on the basis of submission of laboratory records, understanding of the experiment through oral viva voce questions and participation in performing the experiment. Netness of the laboratory record book is also given weightage in the assessment.

Two internal tests will be conducted in a semester as per BTE norms. The scheme and schedule of CIE for C-20 for first year and second year is as below:

Sl.No	Assessment	Duration	Max marks	Conversion
1.	CIE Assessment 1 (Written Test -1-theory) - At the end of 3 <sup>rd</sup> week	60 minutes	20	Average of two written tests 20
2.	CIE Assessment 2 (Written Test -2-theory) - At the end of 13 <sup>th</sup> week	60 minutes	20	
3.	CIE Assessment 3 (Skill test) - At the end of 5 <sup>th</sup> week	3 Hours	100	Average of three skill tests 20
4	CIE Assessment 4 (Skill test) - At the end of 7 <sup>th</sup> week	3 Hours	100	
5	CIE Assessment 5 (Skill test) - At the end of 9 <sup>th</sup> week	3 Hours	100	
6	CIE Assessment 6 (Student activity) - At the end of 11 <sup>th</sup> week	-	20	20
7.	Total Continuous Internal Evaluation (CIE) Assessment			60

Sl. No	Assessment	Test Week	Duration In minutes	Max marks	Conversion
1.	CIE-1 Written Test	5	80	30	Average of three tests 30
2.	CIE-2 Written Test	9	80	30	
3	CIE-3 Written Test	13	80	30	
4.	CIE-4 Skill Test-Practice	6	180	100	Average of two skill tests 20
5	CIE-5 Skill Test-Practice	12	180	100	
6	CIE-6 Portfolio continuous evaluation of Activity through Rubrics	1-13		10	10
Total CIE Marks					60

**Implementing Quality procedures in conducting Laboratory Experiments:**

Quality of conducting experiments is improved in the Laboratory by adopting the following procedures;

- Providing Do's and Dont's (Display Board)
- Methodology to conduct experiments as per the prevailing I.S. Code procedures.
- Providing Laboratory manual
- Maintaining logbook for every laboratory (Computer Lab).
- Demonstration of experiments in the laboratory

- Continuous monitoring the students through the evaluation of the observation book and record regularly.

- An Extralaboratory class is arranged for students who remained absent for regular classes.
- Good results in laboratory SEE examination

**G. Student feedback of teaching learning process and action taken (6)**

**Institute Marks 6.0** At the middle and end

of these semester, all the students are required to fill a feedback forms about teaching learning process. Feedback forms are also provided in the institution website. the students can download the same and submit the form.

Based on the feedback received from students, concerned faculty will be informed about it and suggestions will be provided for improvement. Suggestions will be in the form of constructive comments to improve the quality of teaching and the teaching-learning process.

If required, proper counseling will be carried out by the respective HOD for those faculty members who have secured low scores and negative comments, if any, in the feedback. This motivates them to improve their skills and teaching abilities

Sample Feedback forms:

GOVERNMENT OF KARNATAKA  
Department of Technical Education  
**INTERNAL QUALITY ASSURANCE CELL**  
Mid Semester- Course feedback format  
(With Effect From 2015-16 C-15 curriculum)

Dear Student,

Give your feedback on the following different aspects. Please indicate your level of agreement with the following statement by choosing a score between 1 and 5. A Higher score indicates a stronger agreement with the statement.

Rating : A : Excellent (5), B : Very Good (4), C : Good (3),  
D : Satisfactory (2), E : Poor (1)

	1	2	3	4	5
1. Effectiveness of course content delivery					✓
2. Relevancy of course contents in attaining course outcomes					✓
3. Availability of text books / study materials for reference				✓	
4. Delivery of lecture by teacher					✓
5. Use of innovative teaching methods like PPT's, models, Videos, animation related to the topic.					✓
6. Skills of linking the subject to practical situations				✓	
7. Conduct of classroom discussions					✓
8. Accessibility of teacher for counseling/ clarification on course contents					✓
9. Guidance given to the students in conducting experiments/ workshop practices through set of instructions or demonstrations.					✓
10. Coverage of scheduled course outcomes in IA tests as specified in course assessment and evaluation chart					✓
11. Attention / guidance by the teacher towards academically poor performing students in IA tests / assignment / student activity and to conduct remedial drill					✓
12. Regularity in assessment and evaluation of laboratory log book / practical records / work shop records.					✓

From : \_\_\_\_\_  
Student Name : D. S. Uga Register No : 24571005 Signature : D. S. Uga  
Name of the Polytechnic : T.M.E.S Institution Code : 216  
Programme : ECC Semester : III  
Course Name and Code : MC 15.FC.49.T

GOVERNMENT OF KARNATAKA  
Department of Technical Education  
**INTERNAL QUALITY ASSURANCE CELL**  
COURSE SURVEY QUESTIONNAIRE (SEMESTER END)  
(With Effect From 2015-16 for C-15 curriculum)

Name of the Polytechnic : T.M.E.S Programme : ECC Semester : III  
Course Name & Code : MC 15.FC.49.T Name of the faculty : Charubhatuni S.S  
Total number of lectures in hours delivered by the teacher in the course duration : \_\_\_\_\_  
Number of classes attended by the student (%) : \_\_\_\_\_

Note : ( For each item please indicate your level of agreement with the following statement by choosing a score between 1 and 5. A Higher score indicates a stronger agreement with the statement)

Rating : A : Excellent (5), B : Very Good (4), C : Good (3),  
D : Satisfactory (2), E : Poor (1)

	1	2	3	4	5
<b>A. About Course (About Understanding)</b>					
1. Aspects of fundamentals covered in the course					✓
2. Distribution of contents in the course					✓
3. Coverage of modern / advanced topics in the course					✓
4. Benefit you derived from the course					✓
5. Enhancement of skills have in course outcomes					✓
6. Availability of text books / study materials					✓
7. Attainment of course outcomes					✓
<b>A-Total</b>					
<b>B. Delivery of Lecture (About Teaching)</b>					
1. Delivery of lecture by focusing on curriculum					✓
2. Clarity in course content instructions delivery					✓
3. Pace of the Teaching					✓
4. Use of innovative teaching methods					✓
5. Skill of linking the course to practical situations					✓
6. Conduct of class room discussions					✓
7. Accessibility of teacher for clearing the doubts					✓
8. Availability of teacher/instructor in the whole duration of laboratory hours/ work shop practice					✓
9. Guidance given to the students in conducting experiments/work practices through set of instructions or demonstrations					✓
<b>B-Total</b>					
<b>C. Assessment (About Evaluation)</b>					
1. Conduct of Continuous Internal Evaluation (CIE) as per curriculum schedule					✓
2. Coverage of course contents in IA Tests as per course outcomes					✓
3. Guidance/ Attention paid by the teacher towards academically under performed students in IA tests / assignments / Student activity and conduct of remedial drill / test.					✓
4. Level of fairness exhibited by the teacher in the evaluation of IA test/ Assignment / Quiz etc.					✓
5. Regularity in assessment and evaluation of laboratory log books / practical record / work shop records.					✓
6. Conduct of student activities and evaluation of activity records					✓
7. Relevancy of course contents in attaining course outcomes.					✓
<b>C-Total</b>					
<b>Sum of Total Marks</b>					

Student Name : D. S. Uga Register No : 24571005 Sign. of the Student : D. S. Uga



**2.2.2 Initiatives to improve the quality of semester tests and assignments (15)**

**Institute Marks 15.0**

**A. Process for Internal semester question paper setting and evaluation and effective process implementation (5)**

**Institute Marks 5.0**

**Process followed to monitor quality of internal assessment test question papers:**

The Department follows guidelines of Board of

Technical Examination (BTE) to conduct IA test and award the marks as prescribed by the board. The BTE provides compendium of rules and regulation to be followed for conducting IA tests.

**Awarding of Internal Assessment Marks:**

The following procedure is maintained to award IA marks:

The Internal Assessment test is conducted as per the prevailing schemes of the BTE in the respective academic years.

For C-

20 curriculum, total six internal tests will be conducted and maximum marks prescribed for theory exams will be 50 and for practical subjects will be 60. The Activity marks are awarded based on the performance of the student in the suggested activity. Marks will be awarded as per the Rubrics

**Conducting Procedure for Internal Assessment Test:**

HOD will nominate a faculty as an internal assessment test coordinator to monitor the whole process and he will constitute a committee, which will oversee the process of monitoring the quality of question paper, scheme of evaluation and review of the evaluation of IA books.

- List of questions will be submitted by each faculty to the Committee well before the date of internal test
- HOD will randomly select the questions among list of questions submitted by the respective faculty
- The committee gives guidelines for IA Question paper preparation.
- After preparing the final question papers, required number of photocopies will be kept in the custody of HOD.
- After the conduction of tests, concerned faculty will evaluate the books to award the marks

It is recommended to set the question paper having Bloomstaxonomy level of CO is in line with Bloomstaxonomy level of IA question paper.

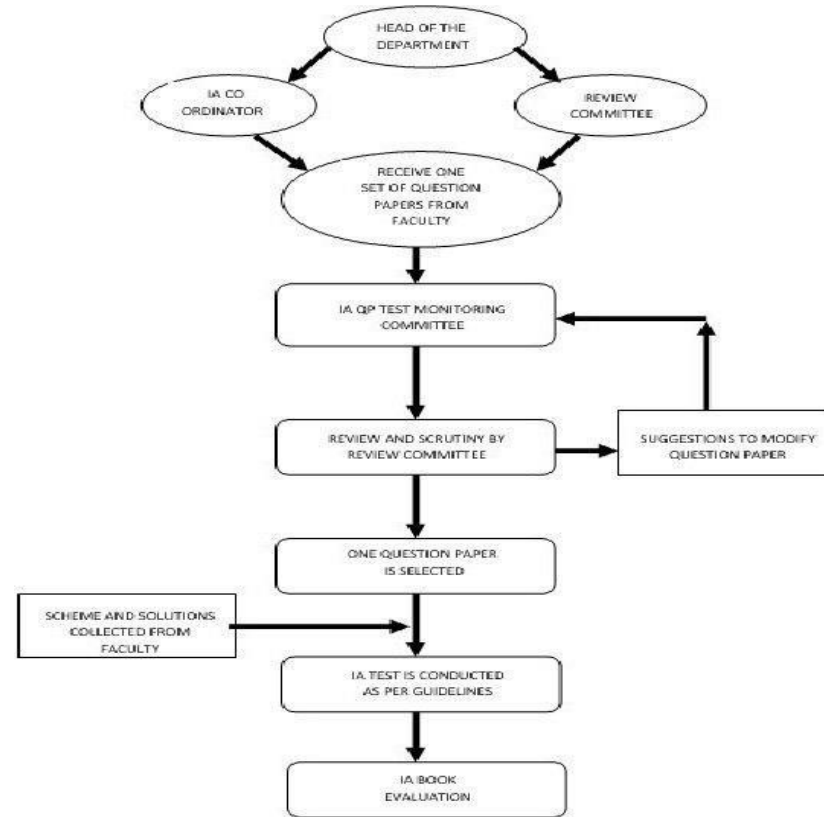


Fig2.8:FlowcharttoconductInternalAssessmentTestAwarding ofInternalMarks

**Awarding of Internal Marks:**

Based on the performance of students in Three IA Tests, final IA marks is computed as Average of the three IA tests. The above procedure of awarding the IA marks is based on the BTE Regulations. Practical courses have two Internal Assessment test.

**Makeup Internal Assessment Test:**

Makeup Internal Assessment test is allowed for those Students who have scored low Average marks, not attended internals due medical and other related issues.

**B. Question papers setting taking into account outcomes/learning levels(5)**

**Institute Marks 5.0**

In setting the internal assessment question paper Blooms Taxonomy is adopted as prescribed by the learning objectives of DCTE and attainment of PO's and PSO's. Mapping of PO's and PSO's is verified before finalizing the Question paper. The scrutiny of the question papers is made by DAC (Department Advisory Committee).

**C. CO coverage in class test/mid-term tests and assignments(5)**

**Institute Marks 5.0**

Individual student's Answer book is evaluated and question answered by student is mapped with COs and POs

**2.2.3 Quality of Experiments(15)**

**Institute Marks 9.0**

**A. Experimental methodologies(5)**

**Institute Marks 4.0**

Every laboratory in the department strives to excel in conduction of experiments. The main methodology of experiments consists of:

- Total strength is divided into two batches.
- Each batch is allotted for different laboratories which run parallel for conduction of Experiments.
- For computer labs 1:1 ratio is maintained. For other labs 3 to 4 students are allotted for Conduction.
- The apparatus or instruments are provided for students to conduct experiment with DOs, Don'ts and safety measures.
- The laboratory equipment is maintained properly in order to get correct readings, regular service and maintenance is carried out.
- Laboratory manuals are prepared by Course Coordinator prior to the start of semester and these are issued to students through book banks scheme as ready reference.

**B. Innovative experiments including industry attached practices, virtual labs(5)**

**Institute Marks 5.0**

- Knowledge enhancing classes are conducted for students during lab sessions by accessing videos.
- To provide remote access to simulation based Labs in various disciplines of science and Engineering.
- To entice students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concept through remote experiments.
- We share various other links with students and inform them to study them during their free time to gain more knowledge and clarify from respective staff if any queries arise.

**C. Relevancy to outcomes(5)**

**Institute Marks: 3.00**

The Following Students Participated & won **State Level 2<sup>nd</sup> Prize in Quiz Competition** and **3<sup>rd</sup> Prize in Paper presentation** in 3<sup>rd</sup> ISTE State level Student convention for Polytechnic on 13/12/2022 held at Government Polytechnic, Harapanahalli, Vijayanagara district

Sl/No	Reg No	Name	Competition	Award	Year
1	316EC20022	Mohammed Kaif	Quiz Competition	2 <sup>nd</sup> Prize	2022
2	316EC20032	Rishab Palrecha	Quiz Competition	2 <sup>nd</sup> Prize	2022
3	316EC20006	B A Nafisa	Paper presentation	3 <sup>rd</sup> Prize	2022
4	316EC20028	Nazima	Paper presentation	3 <sup>rd</sup> Prize	2022

## 2.2.4 Quality of Students Projects and Report Writing (35)

### A. Identification of projects and allocation methodology (3)

Institute Marks 3.0

The student's projects are selected in line with department mission, vision 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 and also encourages students to enhance the previous works.
- The faculties encourage the students to carry out in-house projects and support will be provided with all necessary software and hardware.
- The faculties encourage students to participate in project exhibitions. The project exhibition was aimed to provide common platform to exhibit their innovations and their work towards excellence in latest technology.

### Identification and allocation methodology of Projects:

The following Committee/Committee Members are constituted to make the regulations and to evaluate the Projects:

1. HOD
2. Project Review Committee
3. Project Guide
4. Project Coordinator

A Project Review Committee (PRC) is constituted by Head of the Department, along with the Project Coordinator comprising of senior Faculty members representing all specializations. The HOD nominates one of the faculties as Project Coordinator to monitor all Project related activities. An external subject expert evaluates all projects and declares best and average project based on the rubric of the project.

### Selection of Project Field:

The students are given option to choose their field of interest from different streams/fields.

### Project Batch Formation:

1. Project batches are formed based on area of interest and considering their individual grades of previous semester and overall academic background.
2. The process of initiating and offering projects for the students is made by keeping the following views and perspectives:
  - The Projects in the Department are so chosen so as to benefit the society and have direct application in the field of E&C Engineering and also that helps students to prospectively think about their higher studies and career after graduation.
  - The students are guided to select projects so that, current E&C Engineering issues or burning problems faced by construction industry are selected as Projects. Considering the possibilities of choosing fields, with a view of innovative ideas and focusing on thrust areas such as, energy, environment, and use of alternative building materials.

- The Project fields are also chosen, so as to strengthen the Attainment of Program outcomes and Program Specific outcomes which are identified as Gaps as per the table No 2.9 and also in line with the Department Mission and Vision.

**B. Types & relevance of the projects and their contribution towards attainment of POs and PSOs (5)**

**Institute Marks 5.0**

**Table 2.14: Mapping of Project Fields with POs and PSOs**

SL. NO	TYPES OF PROJECTS	In line with POs	PSO's
1	EMBEDDED REAL TIME PROJECT	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2
2	LOGIC DESIGN BASED PROJECT	PO1, PO2, PO3, PO4, PO7	PSO1, PSO2
3	PLC BASED AUTOMATION PROJECT	PO1, PO2, PO3, PO4, PO7	PSO1, PSO2
4	MONITORING & CONTROL BASED INNOVATIVE PROJECT	PO1, PO2, PO3, PO4, PO7	PSO1, PSO2
5	AUTOMOTIVE PROJECT	PO1, PO2, PO3, & PO7	PSO1, PSO2
6	CONSUMER ELECTRONICS	PO1, PO2, PO3, PO5, PO6, PO7	PSO1, PSO2
7	POWER ELECTRONICS BASED PROJECT	PO1, PO2, PO5, PO6, PO7	PSO1, PSO2
9	INTERNET OF THINGS BASED PROJECT	PO1, PO2, PO5, PO6, PO7	PSO1, PSO2

Note: The mapping of the POs and PSOs may be varied depending on the exact nature of the project work carried out.

**C. Process for monitoring and evaluation (5)**

**Institute Marks 5.0**

Process of Monitoring and Evaluation

Project Evaluation process is divided into four phases;

**Phase I:** Under this phase Literature Survey and problem identification for the project is made.

**Phase II: Preliminary studies and progress:**

Under this phase synopsis and methodology of the project is submitted by the students.

**Phase III: Evaluation of Projects:**

All the Projects are continuously monitored/evaluated by the respective Committee. General Guide line to the Guide:

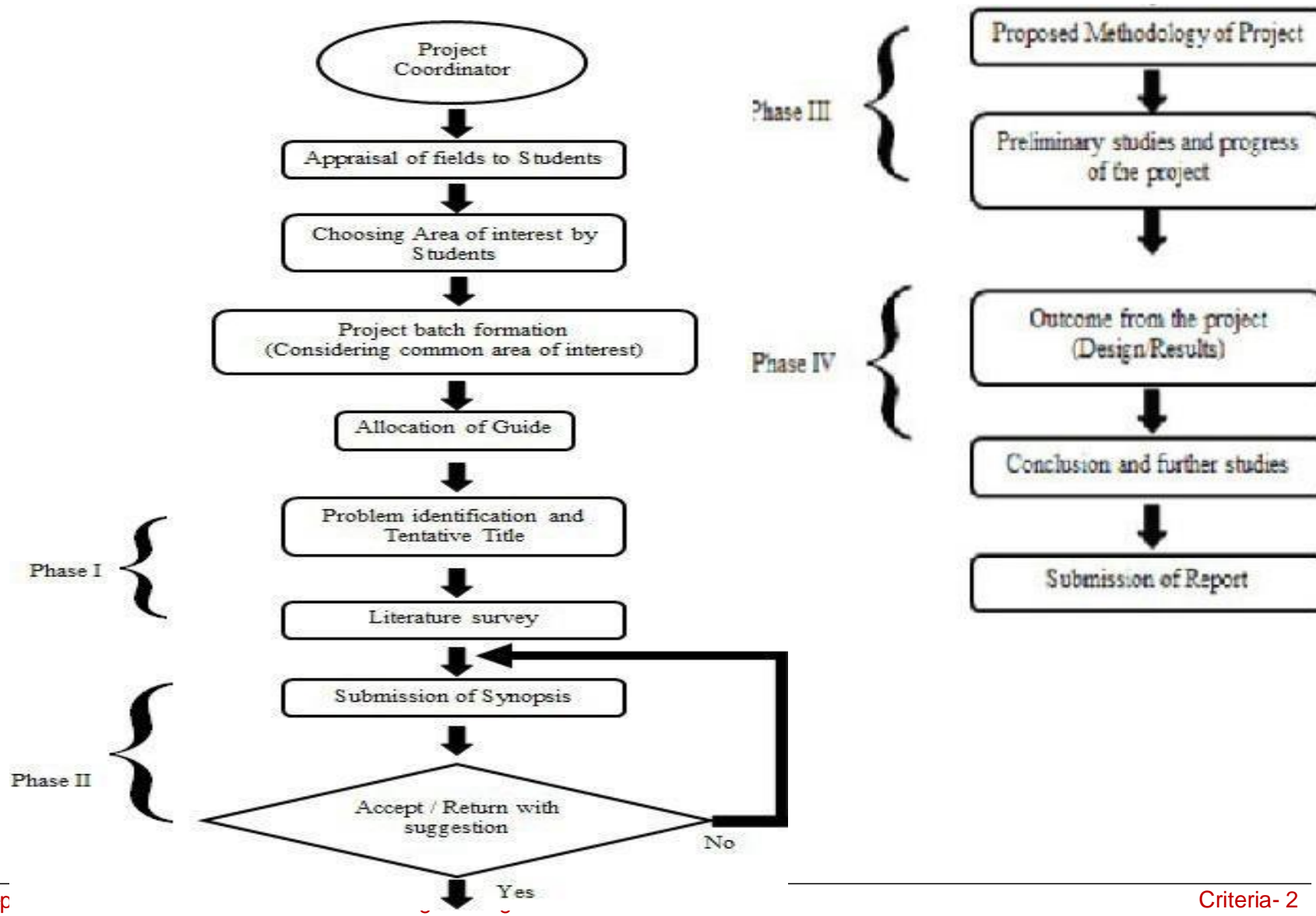
- Student's attendance is monitored by the respective Guides regularly.
- Students are instructed to maintain observation book to record all their experimental findings and observations for which the guide's signature is obtained regularly
- The evaluation of the projects is made as per the Rubrics as shown in the Table 2.2.1.

**Phase IV: Submission of the final Project report:**

Before Internalexamination the students are asked to present project findings before PEC. After presentation to PEC, the PEC will suggest any additional work to be carried out to so as to improve the same. The students have to prepare the project report in line with the DCTE guidelines for font size, style, colour of the report etc., Two copies one to the department library and one to the project guide are submitted.

**Table 2.15: Phases in the Execution of Project work**

SL. No	Phases in Project work	Schedule	Activities to be covered
1	Phase-I	Sixth week (V Semester)	1. Literature survey and identify the problem. 2. Tentative title of the Project is decided.
2	Phase-II	Tenth week (V semester)	1. Submission of Synopsis. 2. Methodology of the Project.
3	Phase-III	Fourth week (VI semester)	1. Progress of the project. 2. Final results and Conclusions of the project.
4	Phase-IV	Tenth week (VI semester)	1. Submission of the final project report.



### **Aims of Capstone Project (For 2020 curriculum):**

1. Promote integration and synthesis within the program of study.
2. Promote meaningful connections between the program of study and career experiences.
3. Improve learner's career preparation and pre-professional developments.
4. Demonstrate professional identity as learner's transition from academic to professional World.

### **Outcomes**

On successful completion of the capstone project, students will be able to:

- Write Capstone project scoping document
- Prepare a capstone project execution plan
- Manage the capstone project from start to finish meeting stated milestones and timelines
- Test and validate the findings
- Demonstrate interpersonal skills, teamwork, and effective use of appropriate technology required for the capstone project

### **Responsibilities of the Students**

Students are also required to exercise self-discipline, self-management, job coordination, teamwork, and trustworthiness to ensure the success of the capstone project.

The expected responsibilities are:

- To write the Capstone project scoping document
- To prepare a capstone project execution plan
- To adhere to the weekly meeting schedule with the cohort owner for the purpose of updating their progress and seeking advice on capstone project matters (Attendance is compulsory as per regulation) and submit weekly report
- To manage the capstone project from start to finish meeting stated milestones and timelines
- To report immediately to the cohort owner any difficulties encountered that would interrupt the work.
- To submit all reports on time

### **Group Member Roles and Contributions**

The Capstone project group often functions more effectively when group members have designated roles. Each capstone project group shall consist of not more than four students. The three core roles and responsibilities are:

- **Capstone project Lead:** One student in the group shall act as a capstone project lead, who is responsible for keeping the group on task, distributing the workload, meeting deadlines, and ensuring smooth group communication and coordination as well as accountability with the cohort owner and capstone project requirements
- **Documenter Lead:** One student in the group shall act as a documenter lead, who is responsible for recording group discussions and



decisions, documenting various aspects of the capstone project's progress, and ensuring well-formed reports and capstone project documents are produced.

- Development Lead: Two students in the group shall act as a Development lead, who are responsible for overseeing the collaborative aspects of the capstone project, troubleshooting major technical problems.

The entire capstone project team should be engaged in discussions, documentation, and development of the capstone project. All members are expected to contribute towards the capstone project.

Groups will have to rotate the roles among members for different stages of the capstone project. This will allow members to gain experience through being responsible in different areas of capstone project management.

#### **Assessment of the capstone project work**

This section is addressed to cohort owner and examiners. It provides information on assessment criteria for the capstone project work. It also provides guidance to students about what examiners will be looking for in evaluating the capstone projects. The Capstone project work will be assessed for 400 marks through formative and summative assessment tools, in formative assessment the capstone project will be evaluated for 240 marks and in summative assessment capstone project will be evaluated for 160 marks.

#### **D. Process to assess individual and team performance (5)**

**Institute Marks**

##### **5.0 Process to assess individual and team performance**

The following key factors are considered for evaluating student's individual and team coordination or harmony during the execution of a project is listed below:

##### **Rubrics for individual performance;**

- Display of skills/capabilities
- Ready to shoulder responsibilities
- Exhibiting confidence level in the project field
- Communication abilities of students during presentations
- Individual contribution to the project work

##### **Rubrics for team performance;**

- Coordination and harmony
- Involvement in the project work
- Preparation of Powerpoint presentation
- Preparation of the project work report

#### **E. Quality of deliverable, working prototypes (12)**

**Institute Marks**

##### **12.0 CRITERIA TO DEFINE BEST PROJECTS**

Guidelines for selection of Best Projects:

##### **Best Projects;**

- Project work is strictly based on Rubrics adopted in the Department.
- Project work is based on adhering to basics and fundamentals in the related field.

- Mapping of Course outcomes of project with Program Outcomes and Program Specific Outcomes is strong.
- Objective/Aim of the Project addresses current burning issues in the field of Electronics Engineering.
- The evaluation of best project award is made by one external Guest Professor

**Table 2.16: Rubrics for best and average project:**

Sl. No.	Performance Indicator	Maximum Marks	Best Project	Average Project
1	Innovativeness and addressing current burning issues	15	More than 85% maximum marks	Between 70-85% of maximum marks
2	Literature Survey and Previous studies	10		
3	Defining the problem and adhering to basics and fundamentals	25		
4	Execution, results and attainment of project objectives and PO's & PSO's	35		
5	Individual performance	15		
	Total Marks	100		

**Table 2.17: Rubrics for the projects followed in the Department**

Dimension	Scale					Marks( Example)
	1 Unsatisfactory	2 Developing	3 Satisfactory	4 Good	5 Exemplary	
1. Information search and Collection.	Does not collect information related to topic	Collects very limited information, some related to topic	Collects basic information, most referred to the topic	Collects more information, most referred to the topic	Collects a great deal of information, all referred to the topic	3
2. Full-fill team roles and duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs almost all duties	Performs all duties of assigned team roles	5
3. Shares work equally	Always relies on others to do the work	Rarely does the assigned work, often needs reminding	Usually does the assigned work, rarely needs reminding	Always does the assigned work, rarely needs reminding.	Always does the assigned work, without needing reminding	5
4. Listening Skills	Is always talking, never allows anyone to set the tone	Usually does most of the talking, rarely	Listens, but sometimes talk too much,	Listens and talks a little more than needed.	Listens and talks a fair amount	3



	speak	allows other to speak				
Total						Ceil(13/4)= 4

**F. Papers published/Awards/Recognition received by projects at State/National level(5)**

**Institute Marks 4.0**

Compulsory participating in Do it yourself project exhibition organized by DTE every year. Certain projects will be displayed for inter-department visit. Won the best prizes in project exhibition organised by nearby engineering colleges

**2.2.5 Industry Interaction and Industry Internship/Training(30)**

**Institute Marks 24.0**

**A. Industry supported Labs(2)**

**Institute Marks 0.0**

Not established any such labs. Planning to have MoU with industries support as per new curriculum in future (2023-24)

**B. Delivery of appropriate Course work by Industry experts(5)**

**Institute Marks**

**4.0 Academic Year 2022-23**

Sl. No.	Date	Topic	Guest speaker	No. of students
1	23/06/2023	Seminar on DCET Exams	Mr. Mallikarjun, Gpt, Kampli	33
2	02/08/2023	Workshop on IIoT	Mr. VINAYKUMAR & RAKESH	35
3	22/09/2023	Seminar on GPA & Credit System	Dr. H K Shankarananda	74

**Academic Year 2021-22**

Sl. No.	Date	Topic	Guest speaker	No. of students
1	26/08/21 to 29/08/21	IN PLANT TRAINING ONE MBEDDED SYSTEM	Mr. PRAVEEN KUMAR	21
2	27/1/22 & 28/01/22	WORKSHOP ON PCB DESIGN & FABRICATION	Mr. VINAYKUMAR & RAKESH	67
3	02/07/2022	INTERACTION WITH INDUSTRY EXPERTS	Sri C Jagannath Rtd Engineer Automation	50

**Industrial visits/tours for students(3)**

**Institute Marks 3.0**

**Initiatives**

- Industrial visit is a part of the engineering curriculum, during which students visit the engineering organizations and get into the operation process, various technologies used in real time production, challenges in practicing engineering principles and also get the practical aspect of the course. With an aim to go beyond academics, these visits are arranged to attain practical knowledge.
- Developing contacts, collecting the addresses of the Industries planned for the Industrial Visit.
- Prepare and send the letters approved by the Head of the Department requesting the Industry concerned to grant permission mentioning the date/time and number of students accompanied by the staff from the department concerned.

**Photos showing Industry visits:**

1. SLR Metaliks Ltd



2. Mukund Steels



3. Ideal Industry



4. Paper plate manufacturing industry



**D. Industrial training/internship(5)**

**Institute Marks 4.0**

**Internship**

**Objectives**

Internship training means a course of training in any industry or establishment undergone by the student of final year diploma in Mechanical engineering in pursuance of memorandum of understanding between industry and department of the concerned institute or department can make necessary arrangements in the local vicinity industries to expose their students for industry learning environment.

The period of internship training will be the period of one semester term for the subject. The students are sent to the industry for sixteen weeks as per the curriculum.

**Process**

Permission from industry.

The Guide allotted by the department head has liberty to select nearby organization/industry of local vicinity with prior approval of principal of the institute. Structured training to be arranged by guide and report of the same shall be submitted by the individual student, to fulfill their term work.

Prior information to students and instruction about the arrangements, safety precautions, use of protective gadgets and general discipline to be followed inside shop floor, awareness about restricted and prohibited areas and any other instructions related to that industry.

**E. Post training/internship Assessment(10)**

**Institute Marks 9.0**

Students are asked to submit the internship training report to the concerned course faculty.

The students are required to present the knowledge gained through the training in the form of PPTs.

The concerned course teacher then award marks on the basis of attendance, presentation, skill acquired, and knowledge gained.

**F. Contribution to Community related projects/activities(5)**

Following Projects are identified to be contributing to the community

1	IOT BASED AIR QUALITY MONITORING SYSTEM	This project provides a combination of processes of sensing several gas levels in the air and also the ambient temperature and humidity thus sensing the quality of air
2	ELECTRIC VEHICLE LAWN MONITOR	The purpose of this project is Collection of dried leaves and grass in maintaining the landscape management of residential areas



**2.2.6 Information Access Facilities and Student Centric Learning Initiatives(15)**

**Institute Marks 12.0**

**A. Availability of facilities & Effective Utilization; specify the facilities, materials learning, Webinars, NPTEL Podcast, MOOC setc(10)**

*and scope for self-*

**Department Library:**

The department has a library with the books related all these semesters and curriculum. Few technical magazines also kept in the library which will help them to gain extra knowledge. A separate register is maintained in the department and the books are issued to the students as and when required.

**Videos:**

Multimedia has many kinds of data such as text, audio, images, animation, video and interactive content. These make the learning complementary with the existing tools.

**QuestionBank:**EachstaffmemberwillprepareQuestionbankoftheircoursesandwillbesharedtothestudentstomakethempreforexamsthoroughly.

### SimulationTools

Freeandopensourcesimulationandsynthesistoolsareinstalledinthecomputerlabs.Thesetoolshelpthestudentstoknowtheworkingofelectroniscircuitsbeforeconductingtheexperimentusingdiscretecomponents

StudentsareinsistedtogetregisteredforNDL,SWAYAMcourses,NPTELforselflearning.Studentsareprovidedwithstudymaterials,assignments,videolinkoverGoogleclassroom(LMS)

### B. StudentCentricLearningInitiatives&EffectiveImplementation(5)

**InstituteMarks4.0**

Followingwaysareincorporatedinordertoensuretheestablishmentofstudentcentricsystem.

Sl.No.	Activity	Skills Developed
1	Internship Aftercompletionof5 <sup>th</sup> Semesteranddurin g6 <sup>th</sup> Semester	Expandtheknowledgeandunderstandingofthefields;Contactthenetworkp rofessionalsandadministratorsinthefields;andGainhands on trainingandProfessionalexperience
2	IndustryVisits	Industryvisitisapartoftheeducation,duringwhichstudentsvisitcompanies /industriesandgetinsightintotheinternalworkingenvironmentofthecomp any.
3	ProjectsandField Visits	Understandtheirssubjectbetter.Getpracticalalexperience. Havea chancetoshowcasetheirskills.Learn teamwork,c
4	GuestLectures,Seminar&Workshops	Aspartofacademicdevelopment,associationsofallthedepartmentsarrang eguestlecturesandseminarsthroughouttheyearontopicsofcoresubjects,C areerorientedlectures,recenttechnologiesandresearchareasperiodically

- Studentbeingsoulofthesystemandobjectivebeingoutcomebasededucationsystemeverystudentistreatedasspecialone.
- Awell-definedMentoringsystemisimplementedinthedepartmenttoidentifyandunderstandthestudentsproblem
- Parent-teachermeetingsarearrangedevery  
semester.Appreciation/awardsaregiventothestudentshavingexcellentalacademicorextracurricular/co-curricularachievements



**2.2.7 New Initiatives for embedding Professional Skills (15)**

**Institute Marks 14.0**

**A. Employability skill enhancement Initiatives and effective implementation (8)**

Entrepreneurship Development Cell is present in our institute under which one or two programs are conducted every year for students of all programs this helps students to enhance the Entrepreneurship skills.

Following initiatives are taken to embed professional skills in students.

Workshop on Entrepreneurship Development program was organized for final year students. The details of the programs are as follows:

**Academic Year 2022-23**

Sl.No.	Topic	Resource Person		No. of students
1	23/06/2023	Seminar on DCET Exams	Mr. Mallikarjun, Gpt, Kampli	33
2	02/08/2023	Workshop on IIoT	Mr. VINAYKUMAR & RAKESH	35
3	22/09/2023	Seminar on GPA & Credit System	Dr. H K Shankarananda	74



Academic Year 2021-22



Sl.No.	Topic	ResourcePerson	No. ofstudentsa
1	EntrepreneurshipDevelopment Program	Sri. B.SomashekharJoint Director DistrictIndustrialandCommerceDeptVi	15

**AcademicYear 2020-21**

Sl.No.	Topic	ResourcePerson	No. ofstudentsa
1	EntrepreneurshipDevelopment Program	Sri. VinodKumar,CEDOK TreasuryOfficerBallari,Vi jayanagar	39



**B. Personality development related Initiatives & effective implementation (7)**

**Institute Marks**

**7.0** Personality development programs are conducted for students in order to focus the important attributes for the soft skills development.

S. NO	EVENT	RESOURCE PERSON	MODE	NO OF STUDENTS
1	ENTREPRENEURSHIP DEVELOPMENT PROGRAM	Sri.SOMASHEKAR	PPT	60
2	WORKSHOP ON PCB DESIGN & FABRICATION	Mr. VINAYKUMAR & Mr.R	WORKSHOP	67
3	INTERACTION WITH INDUSTRY EXPERTS	Sri.CJagannath, Rtd Engineer (Automation)	SEMINAR	32
4	INTERNET OF THINGS	Mr. RAYMONDIRUDAYARAJI	SEMINAR	55
5	NS2 SIMULATOR	Prof SHARADAHN & Pr of SANDHYASV	ONLINE	23
6	ORGANIZATIONAL MANAGEMENT AND ENTREPRENEURSHIP	Mr.PRAJWALRAJM	PPT	40
7	SATELLITE COMMUNICATION	Mr.SVENKATARAGHAVAN	PPT	29
8	WIRELESS COMMUNICATION	Mr.ULAGANATHANJ	PPT	43
9	PERSONALITY DEVELOPMENT	Smt.SHAMITHA		26
10	CAREER GUIDANCE	Sri.ROHITHUM		26
11	Seminar on DCET Exams	Mr. Mallikarjun, Gpt, Kampli	Seminar	33
12	Workshop on IIoT	Mr. VINAYKUMAR & RAKESH	Workshop	35
13	Seminar on GPA & Credit System	Dr.H K Shankarananda	PPT	74





StudentcareerrelatedactivitiesorganizedforallsemesterE&Cstudents.Thedetailsareasfollows:

Sl. No.	Date	Sem	No. of students attended	Mode	Topic
1	05/02/2021	I	36	Offline	CareerPlanningWorkshop – Studentsapproach
2	16/02/2021	V	47	Offline	CareerPlanning Workshop – Studentsapproach
3	22/02/2021	V	47	Offline	CareerPlanning Workshop – Studentsapproach
4	01/03/2021	V	47	Offline	SelfManagement – Effective use ofTime&Knowledge
5	03/03/2021	V	47	Offline	ExpressYourself– Waytofindthesuccess&Interviewreadiness
6	16/03/2021	V	47	Offline	ExpressYourself– Waytofindthesuccess&Interviewreadiness
7	13/05/2021	VI	47	Offline	Studentsapproachduringlockdown
8	18/05/2021	VI	47	Offline	Studentsapproachduringlockdown
9	22/06/2021	VI	47	Offline	Effectivewaystoalign E&CSkillset – LeadingyourCareer

10	04/10/2021	IV	47	Offline	Skill set to lead your career
11	23/10/2021	I	47	Offline	Career Planning Workshop – Skill set to lead career



## 2.2.8 Co-curricular&amp;ExtraCurricularActivities(10)

InstituteMarks 8.0

Sl.No.	Date/Month	Activity	No. ofStudents participated
1	31-05-2022	PARTICIPATIONINCOMMUNITYSERVICES(CYCLERALLY)	55
2	14-03-2022	YOGA DAY	60
3	05-06-2022	ENVIRONMENTALDAY(Plantingtrees)	62
4	03-03-2023	DRUG ADDICTIONCONTROL By: District Judge&GovtMedicalOfficer	86

CycleRallyTobaccoFreeEnvironment



CelebrationofInternationalYogaDay



PlantationprogramonaccountofWorldEnvironmentDay



Seminar on DrugAddiction& Control



# Criteria – 3

## CourseOutcomes&ProgramOutcomes



**3. COURSE OUTCOMES AND PROGRAM OUTCOMES(100)**

**Institute Marks 95**

Define the Program Specific Outcomes:

**PSO1:**

Apply principles of mathematics, communication, automation and logic control to analyze different types of signals and switch in operations.

**PSO2:** Analyze, Synthesize the analog & digital circuits & to adapt for rapid changes into tools and technology through life-long learning.

**PSO3:** Design, Simulate and fabricate PCB using EDA tools for Electronics & Communication, Electrical Circuits and interface through programming.

**3.1 Establish the correlation between the courses and the POs and PSOs(20)**

**Total Marks 20**

**3.1.1 Course Outcomes(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses)**

**Institute Marks 5.0**

**Course Name: C101**

**Course Year: 2020-21**

Course Name	Statements
C101.1	Identify and apply arithmetic and conversion operations on different number systems
C101.2	Formulate, simplify and implement simple logic functions
C101.3	Build/design and analyze various combinational circuits
C101.4	Identify and select digital integrated circuits (ICs) for simple applications

**Course Name: C109**

**Course Year: 2020-21**

Course Name	Statements
C109.1	Identify and select the electronic components and devices and instruments.
C109.2	Test electronic components and devices
C109.3	Fabricate/construct discrete circuits.
C109.4	Select and analyze electronic circuits for characteristics and/or simple applications.
C109.5	Experiment the circuit characteristics/simple applications under simulated and real environment

**CourseName: C202**

**CourseYear:2020-21**

CourseName	Statements
C202.1	ListthetypesofVerilog modelingand theuseofeachmodelforspecificapplication
C202.2	Designandconstructasequentialcircuitforagivenapplicationandtestthecircuittoobtainthedesired result/output.
C202.3	CompareandcontrastcombinationalandsequentialcircuitsandsimulateagivencircuitusingVerilog descriptions to testto obtainthedesiredresult/output
C202.4	ListthevarioustypesofA toD,D to Aconvertersalongwithmemoryandfora givenapplicationselectthe appropriateconvertersand/ormemorytypepestobeusedto obtainthegivenresult/output.

**CourseName: C205**

**CourseYear: 2020-21**

CourseName	Statements
C205.1	IdentifydifferenttypesofPrintedCircuitBoard(PCB),listthedifferencesbetweenthemanditsadequacyf orspecificapplication.
C205.2	DrawtheschematicandPCBlayoutforananalogcircuitto beusedfor a givenapplication.
C205.3	Selecttherightcomponentsforadesignedcircuit,buildthecircuitandfabricateitusingtheappropriatetool s following allnecessarysafetyprotocols.
C205.4	Testthefabricatedcircuit,identifytheproblemandtroubleshoottoensurethecircuitprovidesthedesiredo utput

**CourseName: C205**

**CourseYear :2020-21**

CourseName	Statements
C301.1	DemonstrateandExplaintheConceptof Automation&Robotics,itscomponentsandapplicationsinIndustries.
C301.2	BuildandtroubleshootanyautomationsysteminasimulatedorRealenvironmentapplyingnecessaryNet workingProtocols.
C301.3	Install,troubleshootandmaintainPLC.InterfaceVFDwithHMIandPLCtocontrolmotorparameters.
C301.4	TestandtroubleshootRoboticsystemtomeetdefinedoperationalspecificationsinasimulatedor Realenvironment
C301.5	Implementthe Robot operating System forvariousapplications

<b>CourseName:</b>	<b>C302</b>	<b>CourseYear:</b>	<b>2022-23</b>
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CourseName	Statements
C302.1	WriteCapstoneprojectscopedocument
C302.2	Prepareacapstoneprojectexecutionplan
C302.3	Managethecapstoneprojectfrom startto finishmeetingstatedmilestonesandtimelines
C302.4	Testandvalidatethefindings
C302.5	Demonstrateinterpersonalskills,teamwork,andeffectiveuseofappropriatetechnologyrequiredforthecapstoneproject

**3.1.2 CO-PO matrices of courses selected in 3.1.1 (Six matrices to be mentioned; one per semester (5) Institute Marks :5.0**

**1. Course name: C101**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C101.1	3	2	-	-	1	-	-
C101.2	3	2	1	2	-	-	-
C101.3	3	2	1	2	-	-	-
C101.4	3	-	-	-	1	-	-
<b>Average</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>-</b>	

**2. Course name: C110**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C110.1	3	1	-	2	1	-	-
C110.2	3	-	-	2	1	-	-
C110.3	3	-	-	2	1	-	-
C110.4	3	-	1	2	1	-	-
C110.5	3	-	1	2	1	-	-
<b>Average</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>

**3. Course Name: 202**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C202.1	3	3	3	3	1	3	3
C202.2	3	3	3	3	-	3	3
C202.3	3	3	3	3	-	3	3
C202.4	3	3	3	3	-	3	3
<b>Average</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>3</b>

**4. Coursename:C205**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C205.1	1	3	-	-	-	-	
C205.2	1	3	3	3	1	-	2
C205.3	-	3	3	3	1	-	2
C205.4	-	3	-	3	1	-	2
<b>Average</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>-</b>	<b>2</b>

**5. Coursename:C301**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C301.1	3	2	3	2	2	1	-
C301.2	3	2	3	2	2	1	-
C301.3	3	2	3	2	2	1	3
C301.4	3	2	3	2	2	-	3
C301.5	3	-	-	-	2	-	3
<b>Average</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>3</b>

**6. CourseName:C302**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
C302.1	3	3	3	3	3	3	3
C302.2	3	3	3	3	3	3	3
C302.3	3	3	3	3	3	3	3
C302.4	3	3	3	3	3	3	3
C302.5	3	3	3	3	3	3	3
<b>Average</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>

**1. CourseName:C101**

Course	PSO1	PSO2	PSO3
C101.1	2	3	3
C101.2	2	3	3
C101.3	2	3	3
C101.4	2	3	3
<b>Average</b>	<b>2</b>	<b>3</b>	<b>3</b>

**2. CourseName 110**

Course	PSO1	PSO2	PSO3
C110.1	3	3	3
C110.2	3	3	3
C110.3	3	3	3
C110.4	3	3	3
C110.5	3	3	3
<b>Average</b>	<b>3</b>	<b>3</b>	<b>3</b>

**3. CourseName:C202**

Course	PSO1	PSO2	PSO3
C202.1	3	3	3
C202.2	3	3	3
C202.3	3	3	3
C202.4	3	3	3

**4. CourseName:C205**

Course	PSO1	PSO2	PSO3
C205.1	3	3	2
C205.2	3	3	2
C205.3	3	3	2
C205.4	3	3	2

**5. CourseName:C301**

Course	PSO1	PSO2	PSO3
C301.1	3	3	3
C301.2	3	3	3
C301.3	3	3	3
C301.4	3	3	3
C301.5	3	3	3
<b>Average</b>	<b>3</b>	<b>3</b>	<b>3</b>

**6.CourseName:C302**

Course	PSO1	PSO2	PSO3
C302.1	3	3	3
C302.2	3	3	3
C302.3	3	3	3
C302.4	3	3	3
C302.5	3	3	3
<b>Average</b>	<b>3</b>	<b>3</b>	<b>3</b>

**3.1.3-AProgramlevelCourse-POmatrixofallcoursesINCLUDINGfirstyearcourses(10)**

**InstituteMarks : 10**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO101	3	2	1	2	1	-	-
CO102	3	3	1	3	3	2	3
CO103	3	-	-	3	-	-	-
CO104	3	-	-	3	-	-	-
CO105	3	-	-	-	3	-	3
CO106	3	3	3	3	2	3	1
CO107	3	1	3	-	-	-	3
CO108	3	3	-	-	-	-	3
CO109	3	-	-	3	-	-	3
CO110	3	1	1	2	1	-	2
CO201	3	1	1	3	3	2	3
CO202	3	3	3	3	1	3	3
CO203	3	3	2	3	2	3	1
CO204	3	1	1	3	3	2	3
CO205	1	3	3	3	1	-	2
CO206	3	1	1	-	3	-	2
CO207	3	3	3	-	1	-	2
CO208	3	-	3	-	3	-	2
CO209	-	-	-	-	-	3	3
CO301	3	2	3	2	2	1	3
CO302	3	3	3	3	3	3	3

**3.1.3 -BProgramlevelCourse-PSOmatrixofallcoursesINCLUDINGfirstyearcourses**

Course	PSO1	PSO2	PSO3
C101	2	3	3
C102	2	2	3
C103	2	2	2
C104	3	3	2
C105	1	2	3
C106	3	3	3
C107	-	-	-
C108	2	1	3
C109	3	3	3
C201	3	3	2
C202	3	3	3
C203	3	3	2
C204	2	2	2
C205	3	3	2
C206	1	3	3
C207	-	2	3
C208	3	3	3
C209	-	-	-
C301	3	3	3
C302	3	3	3

**3.2.1 AttainmentofCourseOutcomes(40)**

**InstituteMarks:37**

**3.2.1 DescribetheassessmentprocessesusedtogatherthedatauponwhichtheevaluationofCourseOutcomeisbased(10)**

**InstituteMarks : 9.0**

Assessmentprocesses:-

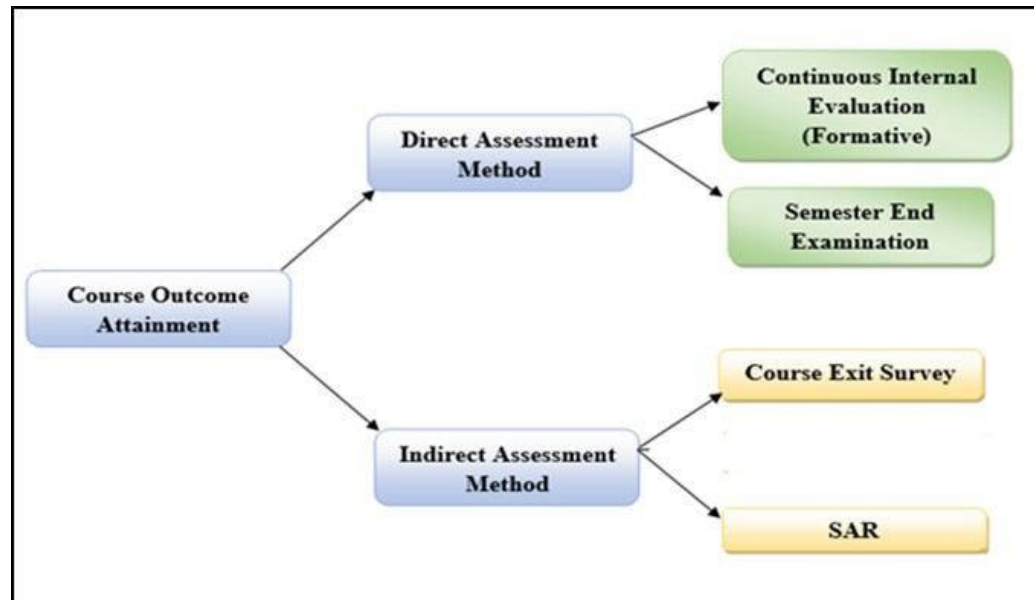
IntheOutcomeBasedEducation(OBE)system,assessmentismadethroughmorethanoneprocesses,toidentifyandcollectdatatoevaluatelevelofattainmentofthecourse tools used are:

- DirectMethod
- Indirect Method

Directmethodsdisplaythestudent’sknowledgeandskillsfromtheirperformanceinthecontinuousinternalassessmenttests,classrooms,laboratoryassignments,seminarsandsemesterendexaminations.

Thesemethodsprovideinformationaboutstudents’knowledgeandprovideevidenceofstudentlearningperformance.

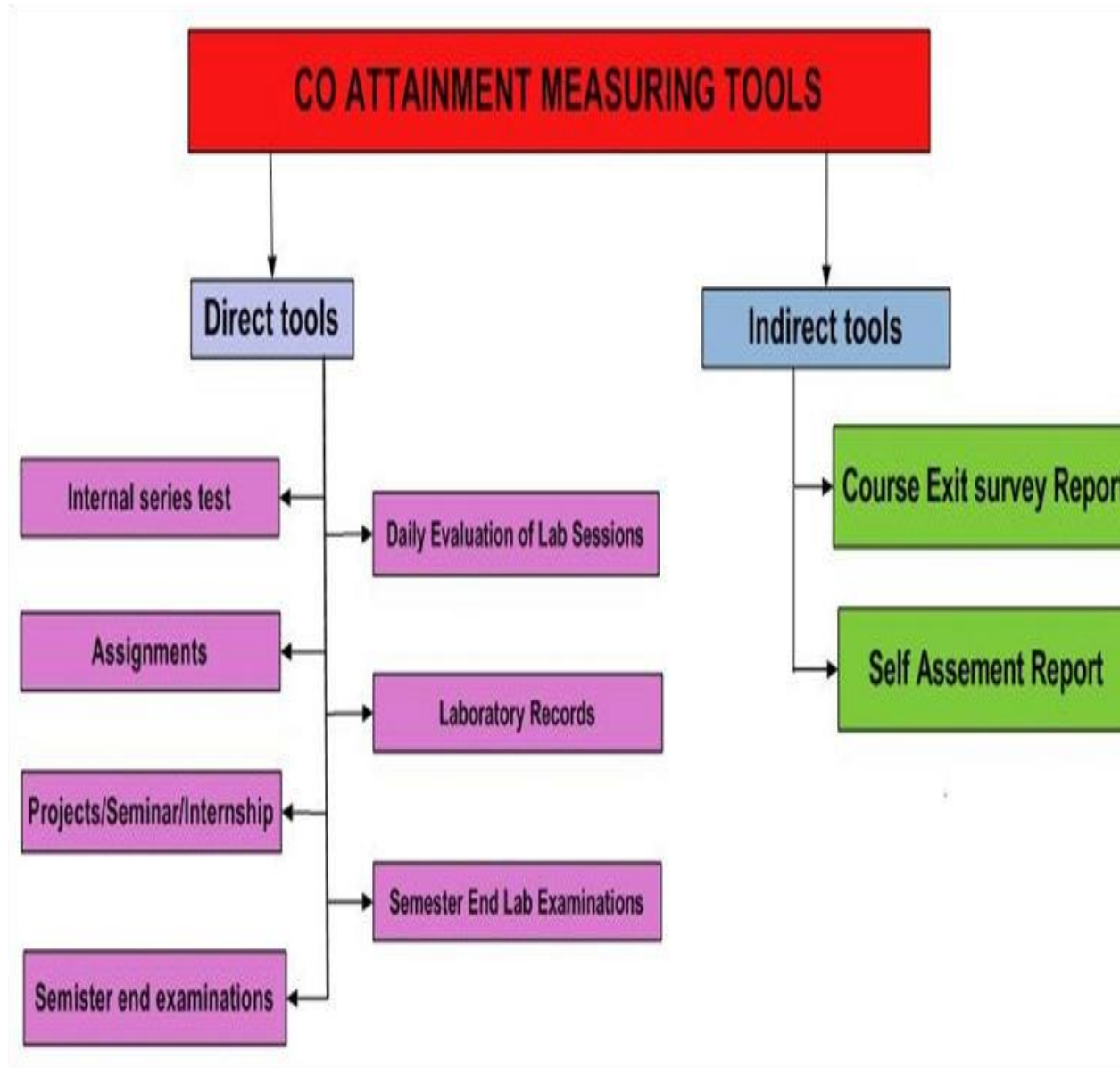
IndirectmethodsadoptedtoassessPOorcourseexitsurveyandself-assessmentreportthatreflectonstudents’learning.The differentstakeholdersgiveopinionorthoughtstoassessaboutthegraduate’s knowledgeorskills.





Direct Assessment Methods		
Sl.No	Assessment Method	Description
1.	Internal Assessment Test	It is a measure to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching-learning process. The Internal Assessment marks in theory papers shall be based on any two tests out of three, generally conducted at the end of 6th, 10th and 15th week of each semester. An additional test may be conducted for the students who are desirous before the end of the semester. Average marks are awarded based on the scheme.
2.	Lab Assessment Test	Lab Assessment is a metric to mainly assess student's practical knowledge with their designing capabilities. In the case of a Practical, the IA marks shall be based on the laboratory journals/reports, conduction of experiments and one practical test.
3.	Theory Semester Examination	Semester theory examinations are the metric to assess whether all the course outcomes are attained w.r.to course objectives framed by the instructor. Semester Examination is more focused on attainment of course outcomes and uses a descriptive exam.
4.	Practical Semester Examination	Practical semester examination focuses on conduction of experiments and viva-voce.
5.	Project.	The IA marks in the case of seminars, projects and Internship work in the final year shall be based on the evaluation at the end of 6th semester by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the project/seminar guide.
6.	Project/Viva-voce	Viva-voce examination in project work shall be conducted batch-wise at the end of 6 <sup>th</sup> semester.
7.	Assignment	Assignment is a metric to mainly assess student's knowledge/skills/attitude with their designing capabilities.
Indirect Assessment Methods		
8.	Course Exit Survey	Collect information from the students to assess the learning outcomes of the course at the end of the semester.
9.	Self Assessment Report	Collect information from the students for self-assessing themselves about the course after completion of course.

Flowchart:AssessmentProcessforCOAttainment



**3.2.2 Record the attainment of course outcomes of all courses with respect to attainment levels (30 )**

**Institute Marks : 28**

Sl.No.	Assessment Method	Assessment frequency	Assessment Tool	Incharge	Reviewer
1	Internal Assessment Test(CIE-Theory)	After 3 <sup>rd</sup> , 7 <sup>th</sup> , 11 <sup>th</sup> Week	Performance tests (IA Books)	Course coordinator	HOD
2	Internal Assessment Test(CIE-Practical)	After 5 <sup>th</sup> , 9 <sup>th</sup> , 13 <sup>th</sup> Week	Performance tests (IA Books)	Course coordinator	HOD
3	Semester End Exam(SEE) (Practical)	At the end of the semester	Performance in SEE (Answer Sheets)	External & Internal Examiners appointed by BTE, Bengaluru	
4	Semester End Exam(SEE) (Theory)	At the end of the semester	Performance in SEE (Answer Sheets)	Valuer & Reviewer appointed by BTE, Bengaluru	
5	Project/Internship (CIE)	During 6 <sup>th</sup> Semester	Rubrics	Guide/Co-ordinator	HOD
6	SEE on Project/Internship and Viva	At the end of 6 <sup>th</sup> Semester	Students performance in SEE	External & Internal Examiners appointed by BTE, Bengaluru	
7	Assignments	After each CIE Test	Assignment Books/Sheets	Course coordinator	HOD
8	Course Exit Survey	End of semes	Student Survey	Course coordinator	HOD
9	Self Assessment Report	End of semes	Student Survey	Course coordinator	HOD

**3.2.3 Record the attainment of Course Outcome of all courses with respect to attainment levels(40)**

The description of the attainment levels is as explained below.

**Measuring CO attainment through Internal Assessments:**

Attainment Level V/STarget

- Attainment Level 1: 60% student scoring more than 40% marks out of the relevant maximum marks.
- Attainment Level 2: 70% student scoring more than 40% marks out of the relevant maximum marks.
- Attainment Level 3: 80% student scoring more than 40% marks out of the relevant maximum marks.

**Measuring CO attainment through Semester End Examination:**

Attainment Level V/STarget

- Attainment Level 1: 60% students scoring more than 40% marks out of the relevant maximum marks.
- Attainment Level 2: 70% students scoring more than 40% marks out of the relevant maximum marks.
- Attainment Level 3: 80% students scoring more than 40% marks out of the relevant maximum marks.

**CO Attainment has been calculated by assuming 60% weightage to SEE, and 40% weightage to Internal Assessment**

**Final CO Attainment is calculated by assuming 80% weightage to Direct Attainment and 20% weightage to Indirect Attainment**

%CO Attainment Direct									
Sl. No.	SEM	Course	Course Code	CO1	CO2	CO3	CO4	CO5	CO6
1	1	DE	C101	14.39	19.57	25.49	26.77		
2		S & A	C102	80.58	80.58	80.58	80.58		
3		CAEG	C103	73.75	76.97	76.26	73.75		
4		FEEE	C104	86.43	90.18	89.36	86.43		
5	2	PMS	C105	70.09	73.93	74.75	74.75	69.88	64
6		EM	C106	64.83	68.25	68.53	68.03	60.53	
7		CS	C107	100	100	100	100		
8		IT Skills	C108	78.99	74.83	77.57	78.99	71.86	
9		ECD	C109	70.28	74.36	79.51	70.28	63.74	
10	3	AE	C201	69.11	70.81	68.79	71.43		
11		LDV	C202	74.51	86.42	89.38	81.63		
12		Com Sys	C203	65.71	73.79	69.71			
13		EMTT	C204	59.35	54.92	57.04	60.6		
14	4	PCB	C205	69.25	65.23	77.32	68.73		
15		WC	C206	61.38	60.53	63.11	75.21		
16		ECP	C207	76.04	86.13	70.14	75.43		
17		IA	C208	90.2	95.92	86.72	86.17		
18	5	A & R	C301	78.72	80.24	79.9	68.69	72.12	
19	6	Int/Proj	C302	92.5	92.5	92.5	92.5	92.5	

%COAttainmentIndirect									
Sl. No.	SEM	Course	Course Code	CO1	CO2	CO3	CO4	CO5	CO6
1	1	DE	C101	75.26	72.48	73.72	76.97		
2		S& A	C102	80.63	79.28	80.63	80.18		
3		CAEG	C103	78.22	75.11	78.22	77.78		
4		FEEE	C104	91.26	90.74	91.26	90.74		
5	2	PMS	C105	68.65	72.8	74.07	74.07	64.81	58.33
6		EM	C106	86.42	84.44	86.91	87.96	88.97	
7		CS	C107	96.67	95	96.67	96.67		
8		ITSkills	C108	80.56	79.63	77.78	81.02	77.33	
9		ECD	C109	73.23	78.7	81.48	74.07	71.67	
10	3	AE	C201	85.42	84.55	79.67	80.49		
11		LDV	C202	90.39	94.21	96.84	96.32		
12		Com Sys	C203	80.7	83.27	79.39			
13		EMTT	C204	74.74	69.76	70.11	75.12		
14	4	PCB	C205	76.88	73.98	79.67	78.19		
15		WC	C206	69.55	69.55	69.97	82.32		
16		ECP	C207	91.07	88.81	78.99	78.99		
17		IA	C208	97.58	94.55	91.2	92.35		
18	5	A& R	C301	81.48	81.48	83.33	88.89	94.44	
19	6	Int/Proj	C302	100	100	100	100	100	

### 3.3 AttainmentofProgramOutcomesandProgramSpecificOutcomes(40)

InstituteMarks : 38

#### 3.3.1 DescribeassessmenttoolsandprocessesusedforassessingtheattainmentofeachPOsandPSOsasmentionedinAnnexure1(10)

InstituteMarks: 10

DescribeassessmenttoolsandprocessesusedforassessingtheattainmentofeachPOs&PSOsPOAssessmentTools.AssessmenttoolsarecategorizedintoDirectandIndirectmethodstoassesstheprogrammeeducationalobjectives,programoutcomesandcourseoutcomes. Directmethodsdisplaythestudents'knowledgeandskillsfromtheirperformanceinthecontinuousassessmenttests,semesterend examinations,presentations,andclassroomassignmentsetc.these methodsprovideevidenceofstudent learning performance.Indirectmethods:Asurveyisconductedincludingalumni,students'performanceininterviews,industrialist'sopinionsandother stakeholderstoknowgraduationknowledge&skills.

PO Direct Assessment Methods		
S. No.	Assessment Method	Description
1	Internal Assessment Test	It is a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching-learning process. The Internal Assessment marks in theory papers shall be conducted at the end of 3 <sup>rd</sup> , 7 <sup>th</sup> and 11 <sup>th</sup> weeks of each semester. An additional test may be conducted for the desirous students before the end of the semester to give an opportunity to such students to improve their Internal Assessment Marks. Average of the better marks obtained from the Internal Assessment Marks for the relevant subject.
2	Lab Assessment Test	Lab Assessment is a metric to mainly assess student's practical knowledge with their designing capabilities. In the case of a Practical, the IA marks shall be based on the laboratory journals/reports, conduction of experiments and done practically.
3	Semester End Examination	Semester theory examinations are the metric to assess whether all the course outcomes are attained w.r.t. course objectives framed by the instructor. Semester Examination is more focused on attainment of course outcomes and uses a descriptive exam. Practical semester examination focuses on conduction of experiments and viva-voce.
4.	Seminar/Project/ Internship	The IA marks in the case of mini projects, projects and seminars in the final year shall be based on the evaluation at the end of 6 <sup>th</sup> semester by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the project/seminar guide.
5.	Project/Internship Work Viva-voce	Viva-voce examination in project work shall be conducted batch-wise.
6.	Assignment	Assignment is a metric to mainly assess student's knowledge/skills/attitude with their designing capabilities.

**3.3.2 Provider results of evaluation of each PO & PSO (30)**

Institute Marks :

28 PO Attainment

Course	PO1		PO2		PO3		PO4		PO5		PO6		PO7	
	TV	AV	TV	AV	TV	AV	TV	AV	TV	AV	TV	AV	TV	AV
C101	3	0.83	2	0.52	1	0.30	2	0.59	1	0.26		-		
C102	3	2.9	3	2.9	1	0.97	3	2.9	3	2.9	2	1.93	3	2.9
C103	3	2.77	0	0	0	0	3	2.77	0	0	0	0	0	0
C104	3	2.78	0	0	0	0	3	2.78	0	0	0	0	0	0
C105	3								3				3	
C106	3	2.93	3	2.93	3	2.91	3	2.94	2	1.95	3	2.94	1	0.98
C107	3	2.22	1	0.74	3	2.15	0	0	0	0	0	0	3	2.22
C108	3	3	3	3	0		0		0		0		3	3
C109	3	2.84	0	0	0	0	3	2.84	0		0		3	2.84
C110	3	2.77	1	0.92	1	0.92	2	1.84	1	0.92	0	0	2	1.84
C201	3	2.44	1	0.81	1	2.44	3	2.44	3	0.84	2	2.44	3	2.44
C202	3	2.45	3	2.45	3	2.45	3	2.45	1	0.8	3	2.45	3	2.45
C203	3	2.46	3	2.46	2	1.64	3	2.46	2	1.64	3	2.46	1	0.81
C204	3	2.30	1	0.77	1	0.76	3	2.30	3	2.30	2	1.53	3	2.30
C205	1	0.85	3	2.61	3	2.65	3	2.62	1	0.87	0	0	2	1.74
C206	3	2.64	1	0.87	1	0.87	0	0	3	2.64	0	0	2	1.76
C207	3	2.65	3	2.65	3	2.65	0	0	1	0.90	0	0	2	1.80
C208	3	2.76	0	0	3	2.76	0	0	3	2.77	0	0	2	1.82
C301	3	2.67	3	1.84	3	2.76	3	1.84	3	1.78	3	0.97	3	2.50
C302	3	2.78	3	2.78	3	2.78	3	2.78	3	2.78	3	2.78	3	2.78

TV – Target value, AV – Average Value

**PO Attainment Level**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7
Direct Attainment	2.475	1.883	1.934	2.396	1.667	2.187	2.136
Indirect Attainment	2.805	2.13	2.196	2.696	1.873	2.422	2.364
PO Attainment	2.89	2.22	2.13	2.78	2.07	2.37	2.43
	<b>2.64</b>	<b>2.006</b>	<b>2.065</b>	<b>2.546</b>	<b>1.77</b>	<b>2.304</b>	<b>2.25</b>

**PSOAttainment**

Course	PSO1		PSO2		PSO3	
	TV	AV	TV	AV	TV	AV
C101	2	0.56	3	0.83	3	0.83
C102	2	1.93	2	1.93	3	2.90
C103	2	1.84	2	1.84	2	2
C104	3	2.78	3	2.78	2	3
C105						
C106	1	0.98	2	1.95	3	2.93
C107	3	2.22	3	2.22	3	2.33
C108					3	3
C109	2	1.9	1	0.95	3	1
C110	3	2.77	3	2.77	3	3
C201	3	2.44	3	2.44	2	3
C202	3	2.45	3	2.45	3	3
C203	3	2.46	3	2.46	2	3
C204	2	1.53	2	1.53	2	2
C205	3	2.61	3	2.61	2	3
C206	1	0.88	3	2.64	3	3
C207	0	0	2	1.77	3	2
C208	3	2.76	3	2.76	3	3
C301	3	2.67	3	2.67	3	2.76
C302	3	2.78	3	2.78	3	2.78

**PSOAttainmentLevel**

Course	PSO1	PSO2	PSO3
DirectAttainment	2.091	2.187	2.554
IndirectAttainment	2.337	2.478	2.567
PSOAttainment	2.47	2.61	2.68
	2.214	2.332	2.560



# Criteria - 4

## Student Performance

**4 STUDENTSPERFORMANCE (200)**

**InstituteMarks:95.4**

**IntakeInformation:**

**Table4.1**

Item	2023-24 (CAY)	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)	2019-20 (CAYm4)	2018-19 (CAYm5)
Sanctionedintakestrength of theprogram((N)	50	50	50	50	50	50
Totalnumberof students,admittedthroughstatelevelcounseling (N1)	52	53	47	37	41	37
Numberof students,admittedthroughInstitutelevelquota(N2)	3	1	0	0	3	1
Numberof students,admittedthroughLateralEntry (N3)	3	4	2	4	9	6
Totalnumberof studentsadmittedintheprogramme(N1+ N2+N3)	58	58	49	41	53	44

**Table4.2**

Yearof entry	TotalNoofstudentsadmittedintheprogram(N1+N2+N3)	Numberofstudentswhohavesuccessfully passedwithoutbacklogsinanyyearofstud y		
		Iyear	IIyear	IIIyear
2023-24	58			
2022-23	58	5		
2021-22	49	5	6	
2020-21 (LYG)	41	5	5	5
2019-20 (LYGm1)	53	10	10	10
2018-19 (LYGm2)	44	3	3	3

**Table4.3**

Yearof entry	TotalNoofstudentsadmittedinthe program(N1+N2+N3)	Numberofstudentswhohavesuccessfully graduatedinstipulatedperiodofstudy)[Total of withBacklog+ withoutBacklog]		
		Iyear	IIyear	IIIyear
2023-24	58			
2022-23	58	9		
2021-22	48	8	16	
2020-21 (LYG)	41	25	24	28
2019-20 (LYGm1)	53	15	11	16
2018-19 (LYGm2)	44	5	12	15

**4.1 EnrolmentRatio(20)**

**InstituteMarks:18.00**

	N (FromTable4.1)	N1+N2 (FromTable4.1)	EnrollmentRatio[(N1+N2/N)*100]
2023-24	50	55	110
2022-23	50	54	108
2021-22	50	47	94

Average [(ER1+ER2+ER3)/3]:104

Assessment: 20.00

**PSOAttainment**

Course	PSO1		PSO2		PSO3	
	TV	AV	TV	AV	TV	AV
C101	2	0.56	3	0.83	3	0.83
C102	2	1.93	2	1.93	3	2.90
C103	2	1.84	2	1.84	2	2
C104	3	2.78	3	2.78	2	3
C105						
C106	1	0.98	2	1.95	3	2.93
C107	3	2.22	3	2.22	3	2.33
C108					3	3
C109	2	1.9	1	0.95	3	1
C110	3	2.77	3	2.77	3	3
C201	3	2.44	3	2.44	2	3
C202	3	2.45	3	2.45	3	3
C203	3	2.46	3	2.46	2	3
C204	2	1.53	2	1.53	2	2
C205	3	2.61	3	2.61	2	3
C206	1	0.88	3	2.64	3	3
C207	0	0	2	1.77	3	2
C208	3	2.76	3	2.76	3	3
C301	3	2.67	3	2.67	3	2.76
C302	3	2.78	3	2.78	3	2.78

**PSOAttainmentLevel**

Course	PSO1	PSO2	PSO3
DirectAttainment	2.028	2.128	2.373
IndirectAttainment	2.337	2.479	2.561
PSOAttainment	2.47	2.61	2.67
	2.18	2.30	2.47

**4.2 SuccessRateinthestipulatedperiodoftheprogram(60)**

**4.2.1 Successratewithoutbacklogsinyanyearofstudy(40)**

**InstituteMarks:5.02**

Item	LastYear Graduate (2020-21)	LastYear Graduate Minus1 (2019-20)	LastYear Graduate Minus2Batch(2018-19)
TotalNumber ofstudents (X) (admittedthroughstatelevelcounseling+admittedthroughInstituteonLevelquota+admittedthroughLateralentry) (N1+N2+N3)	41	53	44
Numberofstudentswhohavegraduatedwithoutbacklogsinthestipulatedperiod(Y)	5	10	3
SuccessIndex[SI=Y/X]	0.121	0.188	0.068

AverageSI[(SI1+ SI2+SI3)/3]:0.125

Assessment[40\*AverageSI]:5.026

**4.2.2 Successrateinstipulatedperiod(20)**

**InstituteMarks:8.80**

Item	LatestYearof Graduate LYG(2020-21)	Latest YearofGraduationminus1,LYGm1 (2019-20)	Latest YearofGraduationminus2LYGm2 (2018-19)
TotalNumber ofstudents (X) (admittedthroughstatelevelcounseling+admittedthroughInstituteonLevelquota +admittedthroughLateralentry)( N1+N2 + N3)	41	53	44
Numberofstudentswhohavepassedinthestipulatedperiod(Y)	28	16	15
SuccessIndex[SI=Y/X]	0.68	0.301	0.340

AverageSI[(SI1+ SI2+SI3)/3]:0.440

Assessment[20\*AverageSI]:8.806

**4.3 AcademicPerformanceinFirstYear(25)**

**InstituteMarks:7.162**

AcademicPerformance	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (LYG)
MeanofCGPAormeanpercentageofallsuccessfulstudents (X)	7.727	7.84	7.71
Totalnumberofsuccessfulstudents(Y)	9	8	25
Totalnumberofstudentsappearedintheexamination(Z)	39	43	36
API[X*(Y/Z)]:	1.783	1.458	5.354

AverageAPI [(AP1+AP2+AP3)/3]:2.865

Assessment[2.5\*Average API]:7.162

#### 4.4 AcademicPerformanceinSecondYear(20)

InstituteMarks:6.38

AcademicPerformance	2021-22 (CAYm2)	2020-21 (LYG)	2019-20 (LYGm1)
MeanofCGPAormeanpercentageofallsuccessfulstudents (X)	7.136	7.01	7.71
Totalnumberofsuccessfulstudents(Y)	16	24	11
Totalnumberofstudentsappearedintheexamination(Z)	37	38	41
API[X*(Y/Z)]	3.085	4.427	2.068

AverageAPI [(AP1+AP2+AP3)/3]:3.193

Assessment[2.0\*AverageAPI ]:6.386

#### 4.5 AcademicPerformanceinFinalYear(15)

InstituteMarks:7.74

AcademicPerformance	2020-21 (LYG)	2019-20 (LYGm1)	2018-19 (LYGm2)
MeanofCGPAormeanpercentageofallsuccessfulstudents(X)	8.03	7.97	7.63
Totalnumberofsuccessfulstudents(Y)	28	16	15
Totalnumberofstudentsappearedintheexamination(Z)	32	39	22
API[X*(Y/Z)]:	7.02	3.269	5.202

AverageAPI [(AP1+AP2+AP3)/3]:5.16

Assessment[1.5\*AverageAPI]:7.745

## 4.6 Placement and Higher Studies(40)

Institute Marks: 23.30

Item	2020-21 (Last Year Graduate,LYG)	2019-20 (Last Year Graduate Minus1,	2018-19 (Last Year Graduate Minus2Batch,LYGm 2)
Total No of Final Year Students(N)	32	39	22
No of students placed in the companies or government sector(X)	11	2	4
No of students admitted to higher studies(Y)	11	9	10
No. of student turned entrepreneur in the respective field of engineering/technology(Z)	0	0	0
Placement Index $[(1.25 * X) + Y + Z] / N$ :	0.773	0.294	0.681

Average Placement  $[(P1 + P2 + P3) / 3]$ : 0.582  
 Assessment [40 \* Average Placement]: 23.30

Provide the placement data in the below mentioned format with the name of the program and the assessment year (separately for CA Ym1, CA Ym2 and CA Ym3):

Program Name: Electronics & Communication Engg.

Assessment Year: 2022-23 (CA Ym1)

Sl.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Miss R Jeevitha	EC20031	Aditya Brila Ultratech cement Ltd	2001
2	Miss BANafisa	EC20006	Aditya Brila Ultratech cement Ltd	2002
3	Miss Ashwini A	EC20005	Aditya Brila Ultratech cement Ltd	2003
4	Miss Nazima	EC20028	JSW Paints private Ltd	2004

5	MissB Uma	EC20037	DanaAnand indiaPvtLtd	2005
6	MissTabasum	EC20036	DanaAnand indiaPvtLtd	2006
7	MissGangotri	EC20014	DanaAnand indiaPvtLtd	2007
8	MrVijayaKumar	EC20021	NMDC.Donimali	2008
9	MrNadeem	EC20027	QuessCorp Ltd	2009
10	MrMahanthesh	EC20026	CreativeEngineers	2010
11	MrKhasim	EC20033	Innovativecontrols(p)Ltd.	2011

**AssessmentYear: 2021-22 (CAYm2)**

Sl.No	StudentName	EnrollmentNo	EmployeeName	AppointmentNo
1	Shailaja	EC19038	MukundsummiSpecialSteelsLtd,Ginigera,Koppal	1901
2	Harshavardhan	EC19021	AlphaEngg,Devanahalli,Koppal	1902

**AssessmentYear: 2020-21 (CAYm2)**

Sl.No	StudentName	EnrollmentNo	EmployeeName	AppointmentNo
1	HVenkatesh	EC18010	RAMONEITCompanyBan	1801
2	N.Varun	EC18024	KirloskarFerrousIndustries	1802
3	Abhishek	EC19301	KEONICSComputerCenterKa	1803
4	HussainPashaB	EC18006	HFCDesign ServicePvt Ltd,Bengaluru	1804



**4.7 ProfessionalActivities(20)****InstituteMarks:19.00****4.7.1 ProfessionalSocieties/studentchaptersandorganizingtechnicalevents(10)****InstituteMarks:10.00****A. AvailabilityofProfessionalSocieties/Chapters&Relevantactivities(5)****InstituteMarks:5.00**

1)

**InstitutionalmembershipofIndianSocietyforTechnicalEducation(ISTE).Institutio****nalMembershipNo.:IM2146****Followingstaffmembersof E & C DepartmentarehavingLifeMembershipofISTE**

<b>Sl. No</b>	<b>NAMEOFTHE STAFF</b>	<b>Designation</b>	<b>MISTE NUMBER</b>
1	Dr. HKSHANKARANANDA	SelectionGrade Lecturer	LM21414
2	Sri.MAHESHKUMARN	SelectionGrade Lecturer	LM89296
3	Sri.CHANDRASHEKARG	SelectionGrade Lecturer	LM50460
4	Sri.SADANANDAPPAN	SelectionGrade Lecturer	LM89297
5	Smt.REKHAM	SelectionGrade Lecturer	LM89298
6	Sri.CHANDRAKUMARM	Lecturer	LM89299
7	Smt.GEETAALIASGIRIJAGADED	Instructor	LM89985



NumberofstudentsRegisteredformembership:218fortheacademicyear2021-22

2)MoUwithBestowEdutrexInternationalLLP

MEMORANDUMOFUNDERSTANDING(MoU)

For T.M.A.E.S Polytechnic, Hospet


For Bestow Edutrex International LLP

BETWEEN

T.M.A.E.S POLYTECHNIC  
BELLARY ROAD,HOSPET-583201



Name: Authorized Signatory



Dr Kumardatt A Ganjire

&

Bestow Edutrex International LLP

Mumbai : 400 064

FOR

SKILL DEVELOPMENT PROGRAM  
OUTCOME BASED TRAININGS,PLACEMENT, R&D  
SERVICESANDRELATEDSERVICES

T.M.A.E.S POLYTECHNIC	Bestow Edutrex International LLP
Bellary road ,Hospet,Vijaynagar Dist,Karnataka	S 2, 303. Malad W, Mumbai -100 064
Contact Details:9448126133	+91 9011424678
E-mail:tmeaspoly316@gmail.com	md@bestowedutrex.co.in
Web:https://tmaespolytechnichpt.com	www.bestowedutrex.co.in

**B. Number, quality of engineering events (5)****Institute Marks: 5.00**

Engineers Day will be celebrated on September 15th of every year and Toppers of previous Semester End Examinations from all the departments will be listed and are felicitated with trophies. Also distinction holders are felicitated with medals.

The students are insisted to get registered to online education applications and are encouraged to take up courses of their interest, such as Infosys Spring Board, Free LMS, etc.,

**4.7.2 Publication of technical magazines, newsletters, etc. (5)****A. Quality & Relevance of the contents and Print Material (3)****Institute Marks: 3.00**

Lab manuals have been prepared for all the labs by the concerned staff members. Copies of each manual is made available in the department. These manuals are also issued to students for reference. Lab manuals are prepared as per the curriculum contents and are ready reckoner for students and are effective tool for better understanding.

By referring the manuals, students can conduct experiment easily and they help them to understand the concept and principle and purpose of each experiment/exercise.

**Publications: NewsLetter:****NewsLetter:**

Year	Name of the Magazine	Editor(s)
CAYm1 2022-23	EC News Letter	Sri G. Chandrashekar
CAYm1 2021-22	EC News Letter	Smt Rekha M
CAYm2 2020-21	EC News Letter	Mahesh Kumar

**Department Technical Magazine:**

Year	Publication Name	Frequency of Publication
CAYm12023-24	ELECTRONIKA	Yearly
CAYm22022-23	ELECTRONIKA	Yearly

**B. Participation of Students from the program(2)**

**Institute Marks: 2.00**

S. No.	DATE	Activity
1	31-05-2022	PARTICIPATION IN COMMUNITY SERVICES (CYCLERALLY – Anti Tobacco Day)
2	14-03-2022	YOGA At Campus
3	05-06-2022	ENVIRONMENTAL DAY (Planting trees)



**7.3 Participation in inter-institute/state/national events by students of the program of study(5)****Institute Marks : 4**

Inter-

Departmental competitions are conducted every year and trophies and various prizes under different categories will be distributed to the winners. Also, our final year students attend DO IT YOURSELF project exhibition organized by

DCTE, Bengaluru. The following students participated & won **State Level 2<sup>nd</sup> Prize in Quiz Competition** and **3<sup>rd</sup> Prize in Paper presentation** in 3<sup>rd</sup> ISTE State level Student convention for Polytechnic on 13/12/2022 held at Government Polytechnic, Harapanahalli, Vijayanagar district

Sl/No	Reg No	Name	Competition	Award	Year
1	316EC20022	Mohammed Kaif	Quiz Competition	2 <sup>nd</sup> Prize	2022
2	316EC20032	Rishab Palrecha	Quiz Competition	2 <sup>nd</sup> Prize	2022
3	316EC20006	B A Nafisa	Paper presentation	3 <sup>rd</sup> Prize	2022
4	316EC20028	Nazima	Paper presentation	3 <sup>rd</sup> Prize	2022

# Criteria-5

## Faculty Information & contributions

**5. FACULTY INFORMATION AND CONTRIBUTIONS(150)**

**Institute Marks:148.00**

Name	University Degree	Area of Specialization	Contribution to the Program			Research Paper Publication	Faculty Receiving Mtech/Phd during Assessment year	Current Designation	Initial Date of Joining	Association Type	At Present Working with the Institution (yes/No)	In case No/Date of Leaving	Is Principal ?
			CAY 2023-24	CAY m1 2022-23	CAYm2 2021-22								
Dr.HK Shankarananda	M.Tech, Phd	Comp.Sci.	100	100	100	4	2022(Ph.D)	HOD	09-03-1992	Regular	Yes		No
Sri. N Mahesh Kumar	M.Tech	VLSI Design & Embedded System	100	100	100	1		SL.GrLect	14-07-1997	Regular	Yes		No
Sri. G Chandrashek	B.E.	Comp.Sci	100	100	100	1		SL.GrLect	13-07-1998	Regular	Yes		No
Sri. N Sadanandap	B.E.	E&CE	100	100	100	1		SL.GrLect	16-07-1998	Regular	Yes		No
Smt. Rekha M	B.E.	E&CE	100	100	100	1		SL.GrLect	15-11-2001	Regular	Yes		No
Sri. M Chandraku	B.E.	E&CE	100	100	100	1		SL.GrLect	01-02-2012	Regular	Yes		No
Sri. T Sathyanaraya	M.Sc.	Mathematics	0	25	25			SL.GrLect	19-07-1991	Regular	No	31/05/2023	No
Smt. Jotsna	M.Sc.	Physics	0	0	25			SL.GrLect	22-07-1991	Regular	No	30/06/2022	No
Sri. B H Shiv	M.A.PhD	English	25	25	25	1	2019(PhD)	Lecturer	07-12-2011	Regular	Yes		No
Smt. Yamuna Kulk	M.A.	Kannada	25	25	25			Lecturer	18-07-2016	Regular	Yes		No
Sri. K P Mallikarj	B.E.	Mech. Engg	25	25	25			SL.GrLect	06-12-1999	Regular	Yes		No
Miss. Vinutha SC	M.Tech.	D.E&Commn	0	100	100			Lecturer	20-07-2018	Regular	No	15/06/23	No
Miss. Nanda K M	M.Sc.	Statistics	0	25	25			Lecturer	05-01-2021	Regular	No	31/03/23	No
Sri Manjunathan S	M.Tech.	DE	100	100	0			Lecturer	01-07-2022	Regular	Yes		No
Sri T Anand	M.Sc	Mathematics	25	0	0			Lecturer	16-07-1991	Regular	Yes		No
Sri Mahesh Buddha	MSc	Comp.Sci.	25	0	0			Lecturer	01-03-2023	Regular	Yes		No



**5.1 Student-FacultyRatio(SFR)(25)**

**InstituteMarks:25.00**

Year	N	F	SFR=N/F
2023-24(CAY)	160	8.25	19.39
2022-23(CAYm1)	160	9.25	17.30
2021-22(CAYm2)	160	8.5	18.82

AverageSFR:19.46Assessmentmarks :

**5.1.1. Providetheinformationabouttheregularandcontractualfacultyaspertheformatmentionedbelow:**

Year	Totalnumberofregularfacultyinthedep	Totalnumberofcontractualfacultyinthedepartment
CAY(2023-24)	12	0
CAYm1(2022-23)	13	0
CAYm2(2021-22)	13	0

**5.2 FacultyQualification(25)**

**InstituteMarks:25.00**

**5.2.1 FacultyQualificationIndex(20)**

**InstituteMarks:20.00**

Year	X	Y	F	FQ=2x[(10X+7Y)/F]
2023-24	4	5	6.00	25.00
2022-23	5	5	6.00	28.33
2021-22	4	5	6.00	25.00

AverageAssessment:26.11

**5.2.2 AvailabilityofFaculty/principalofthatdisciplinewithPhD.Qualification(5)**

**InstituteMarks:5.00**

Dr.HKShankarananda,HODofE&CDepartmenthasdonedoctoralcourse.AwardedDoctorateon6/3/2022Dr.Shivaraj B H HODofSciDepartmenthasdonedoctoralcourse.AwardedDoctorateon / /2019

**5.3 Faculty Retention(20)**

**Institute Marks:20.00**

Description	2021-22(CAYm2)	2022-23(CAYm1)	2022-23(CAY)
No of Faculty Retained	13	13	12
Total No of Faculty	13	13	12
% of Faculty Retained	100	100	100

Average:100.00

**5.4 Faculty as participants in Faculty development/training activities conducted by other organizations(30)**

**Institute Marks:30.00**

Name of the faculty	Max 5 Per Faculty		
	2021-22(CAY)	2022-23(CAY)	2023-24(CAY)
Dr H.K. Shankarananda	5.00	5.00	5.00
Mahesh Kumar N	5.00	5.00	5.00
G. Chandra Shekar	5.00	5.00	5.00
N. Sadanandappa	5.00	5.00	5.00
Rekha M	5.00	5.00	5.00
M Chandra Kumar	5.00	5.00	5.00
Vinutha SC	5.00	5.00	-
Manjunathan S		5.00	5.00
TSathayanarayan Rao	--	--	--
Jotsna	--	--	--
BH Shivaraj	--	--	--
KP Mallikarjuna	--	--	--
Nanda KM	--	--	--
Yamuna Kulkarni	--	--	--
Mahesh Buddha	--	--	--
Sum	35.00	40.00	35.00
RF=Number of Faculty required to comply with 25:1 SFR as	6	6	6
Assessment [6*(Sum/0.5RF)] (Marks limited to 30)	30.00	30.00	30.00

Average assessment over 3 years (Marks limited to 30):30.00

## 5.4.a.Organized/ConductedFDPsandSTTPbythisdepartmentatState/NationalLevel(12)

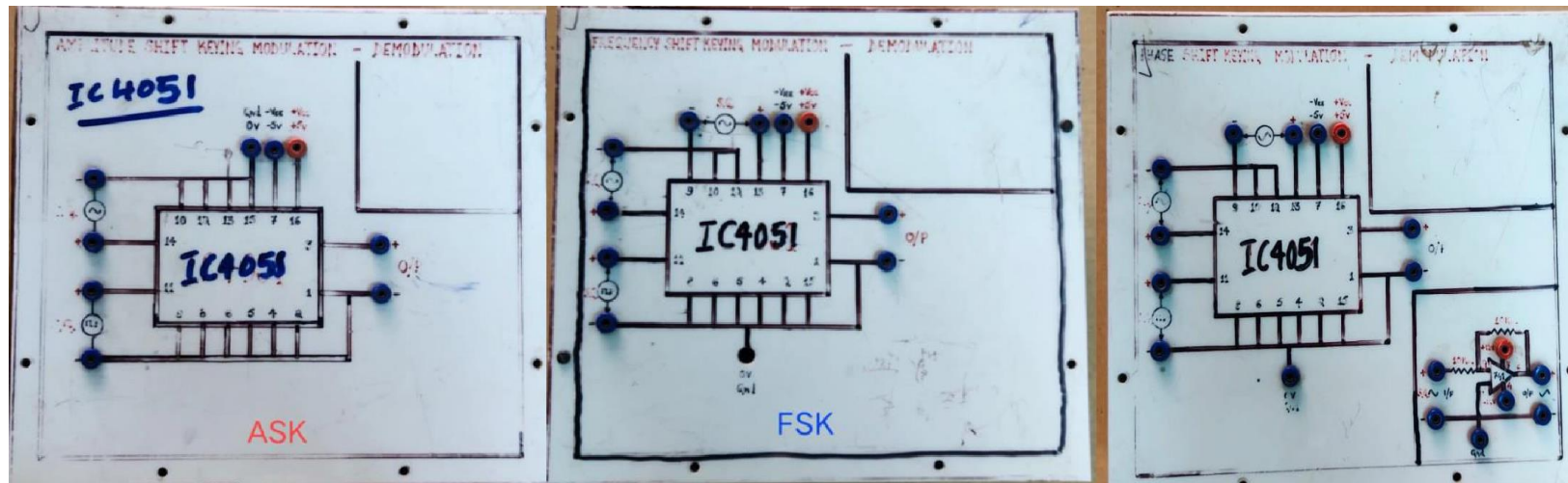
InstituteMarks:12.00

Sl.No.	AcademicYear	TotalnumberofProgramsconducted
1	2023-24	1
2	2022-23	1
3	2021-22	2

Sl.No.	Date	NameoftheEvent	NameoftheResourcePerson
<b>2023-24</b>			
1	1/1/2024to5/01/24	Industry&Internet ofThings	Mr. VinayKumar&Mr.RakeshR LogicTechnologies,Kudligi
<b>2022-23</b>			
2	20/11/23to24/11/23	Automation&Robotics	Mr. VinayKumar&Mr.RakeshR LogicTechnologies,Kudligi
<b>2021-20</b>			
1	09/8/21to13/8/21	OnlineFDPAccreditationprocessforDiplomaEngineering	Dr.SGANuradha,&Prof.RaghukumarKSRY MEC,Ballari
2	07/2/22to11/2/22	FDPon“WirelessCommunication”	Sri.UlaganathanJB ITM,Ballari Mr.RaymondIrudayrajR ylogIndustries,Ballari
<b>2020-21</b>			
3	18/1/21to22/1/21	Preparationof SARforNBA	Dr.MohammedRafiq,UBD TCollegeof Engineering, Davanagere,Dr.VeergangadharSwamyR YMEC,Ballari
4	15/7/21to9/7/21	OnlineFDPon“ITSKILLS	Mr.Srinath, TNITechnologies,Mysore Mr.KrishnaDK IndianGlobalSoftwareSolutions,B engaluru

**5.5 Product development, Consultancy, Manufacturing contracts, testing contracts(8)****Institute Marks:7.00**

Various electronics lab kits are developed with the help of faculties. Amplitude Modulation, frequency Modulation, ASK, FSK, PSK kits are prepared for carrying out different experiments in communication Labs. An IC tester is developed for Digital Electronics.

**5.6 Faculty Performance Appraisal and Development System (FPADS) (30)****Institute Marks:29.00****A. A well-defined FPADS instituted for all the assessment years (5)****Institute Marks:25.00**

Faculty members of Higher Educational Institutions today have a variety of tasks pertaining to diverse roles. Roles relate to the shouldering of administrative responsibilities and co-operation with other Faculty, Heads of Departments, and the Head of Institute.

An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance.

Faculty Performance Appraisal letter is collected from each faculty in which they need to show their roles and responsibilities in the department. The format of Faculty Performance Appraisal letter is provided by EST section. Based on the remarks by HOD and Principal, faculty will be given appraisal in the form of increment.

Appraisal is also based on the contribution of the faculty at the Department/Institute level

1. Academic audit carried by HOD during first week of the month and for every semester.
2. Contribution to the department in the previous academic year
3. Result of the subject handled
4. Role of Staff member at the institute level
5. Faculty publication in collaboration
6. Contribution to improve campus placements/higher education etc.

**B. Its implementation and effectiveness(15)**

**Institute Marks: 14.00**

Faculty appraisal form (Increment form) will be issued to all the faculty members. The form needs to be filled by concerned faculty and to be submitted to the HOD. It will be evaluated by HOD and forwarded to the principal for further evaluation of the report and recommendation and approval. If any unfavourable feedback is obtained, it will be brought to the notice of the faculty and insist them to improve. This similar process will be adopted for appraisal of HOD by the head of the institution.

**C. Detail of qualification up-gradation of faculty(10)**

**Institute Marks: 10.00**

Post graduation completed by following faculty:

Name: **N Mahesh Kumar, Selection Grade Lecturer, E&C Dept**  
M. Tech. in VLSI & Embedded System

Name of the institute: **Ballari Institute of Technology and Management, Ballari**  
Year of Completion: **2018**

Doctoral Degree awarded for following faculty: Name: **Dr.**

**HK Shankarananda, HOD, EC Dept**  
PhD in Computer Science, JJT University, Jhunjhunu, Rajasthan

Title of Thesis: **Dynamic Development of WSN to maximise network lifetime using Particle Swarm Optimization (PSO)**  
Month & Year of Award: **March 2022**

All other teaching faculty members in the department are engineering graduates. All the faculties have participated in the FDP and

different types of workshops during the three Academic Years.(CAY,CAYm1,CAYm2).

Name:**Dr.ShivarajBH,HOD, SciDept**

PhD in English Literature, Karnataka University, Dharwad

Title of Thesis: The Theme of De colonization in Ngugi Wa Thiongo's Works

# Criteria - 6

## Facilities&Technicalsupport

## PartB

## 6. FACILITIESANDTECHNICALSUPPORT(100)

InstituteMarks:95.00

## 6.1 Availabilityofadequate,wellequippedclassroomstomeetthecurriculumrequirements(10)

Institute Marks:9.00

Thedetailsoflecturehall,seminarhall&amp;roomsdetailsareasshownbelow.

SL.NO.	ROOMS	NUMBERS
1	LectureHalls	3
2	SeminarHalls	1
3	HODRoom	1
4	FacultyRoom	1

Room Description	Number of Rooms	Usage	Shared/ Exclusive	Capacity	RoomsEquippedwith	Adequacy
LH-7	01	1 <sup>st</sup> Year(I/II Sem)	Exclusive	60	Greenboard,Podium,Fans,B enches,adequatelighting.	Adequate
LH-12	01	2 <sup>nd</sup> Year(III/IV Sem)	Exclusive	60	Greenboard,Podium,Fans,B enches,adequatelighting.	Adequate
LH-18	01	3 <sup>rd</sup> Year(I/II Sem)	Exclusive	60	Greenboard,Podium,Fans,B enches,adequatelighting.	Adequate
StoreRoom	1					Adequate
HODRoom	01	AllottedforHOD	Exclusive	01	Wellfurnishedwithtable&chairs.Tu belight,fan&Laptop	Adequate
Faculty Room	01	AllottedforFaculty	Exclusive	08	Individualtablewithchairsforstaffs withracks&adequatespace.	Adequate
Seminar Hall	01	Allottedforallthestuden tswho havePPT, conductseminarsandgu estlectures	Shared	80	Whiteboard,adequatelighting,fa ns,benches,computersystem,pod ium&overhead projector	Adequate



**6.2 Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements(40)**  
**Institute Marks:38.00**  
**(Odd Sem 2020-21)**

Sl. No	Name of the laboratory	Carpet area	No. of students/batch	Name of the important equipment	Weekly utilization	Technical manpower support		
						Name of the staff	Designation	Qualification
1	CAEGLab (Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	KPMallikarjuna	Sl.Gr. Lecturer	BE(ME)
2	FEEELab (EClab)	8.9X4.9=43.61m	22	RPS, CRO,signal/functiongenerators,meters, DCB,DRB,DIB	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
3	AnalogElectronics&Communicationlab	8.8x4.9=43.61m	20	RPS, CRO,signal/functiongenerators,meters	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
4	DigitalElectronicsLab-2(Digitallab)	8.9x4.9=43.61m	20	Digitaltrainerkits,ICtester	6 days/week	B Parameshwarappa	Mech	ITI
5	C-Progg. Lab(Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)
6	ARM Controllerlab(Computerlab)	6.7X6.9=46.23m	22	PC,printer,DCmotor,steppermotor,LCDdisplaykits,UPSwithbatteries	Digitaltrainerkits,ICtester	Smt. GeethaGaded	Instructor	BE(C Sc)
7	PCBdesign&fabricationlab(Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)
8	Electronicsservicinglab(Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Arunkumar T	Asst. Instructor	DE & CE

TMAESPOLYTECHNIC(GOVTAIDED),HOSAPETE

9	Projectwork-1	AllLabs		RPS, CRO,signal/function generators,meters PC,printer,UPSwith		ArunkumarT B Parameshwarappa	Asst.Ins Mech	DE & CE ITI
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**(EvenSem2020-21)**

Sl. No	Name of the laboratory	Carpet area	No. of students/batch	Name of the important equipment	Weekly utilization	Technical manpower support		
						Name of the staff	Designation	Qualification
1	IT Skills(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)
2	Electronic Components & Devices lab (Analog lab)	8.9X4.9=43.61 m	18	RPS, CRO, signal/function generators, meters	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
3	Professional practices (Digital lab)	8.9x4.9=43.61m	20	Digital trainer kits, IC tester	6 days/week	B Parameshwarappa	Mech	ITI
4	Microcontroller Lab (Computerlab)	6.7X6.9=46.23 m	22	PC, printer, UPS with batteries	6 days/week	Smt. Geetha Gaded	Instructor	BE(C Sc)
5	DC & N Lab (Computerlab)	6.7X6.9=46.23 m	22	PC, printer, UPS with batteries	6 days/week	Smt. Geetha Gaded	Instructor	BE(C Sc)
6	Industrial Automation (Analog/Computer Lab)	8.9X4.9=43.61 m/6.7X6.9=46.23m		RPS, CRO, signal/function generators, meters	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
7	Verilog Lab Computer Lab	6.7X6.9=46.23 m	22	PC, printer, UPS with batteries	6 days/week	Smt. Geetha Gaded	Instructor	BE(C Sc)
8	Project-II	All Labs		RPS, CRO, signal/function generators, meters PC, printer, UPS with		Arunkumar T B Parameshwarappa	Asst. Ins Mech	DE & CE ITI

**(Odd Sem2021-22)**

Sl. No	Nameof thelaboratory	Carpetarea	No. of students /batch	Nameof theimportantequipment	Weeklyutilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualification
1	CAEGLab (Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	KP Mallikarjuna	Sl.Gr. Lecturer	BE(ME)
2	FEEELab (EClab)	8.9X4.9=43.61 m	22	RPS, CRO,signal/functiongenerators,meters, DCB,	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
3	AnalogElectronics(E Clab)	8.8x4.9=43.61m	20	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
4	LogicDesign UsingVerilog( Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
5	Communication Systems.(Common,Lab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
6	EMTT	8.9X4.9=43.61 m	22	RPS, CRO, signal/functiongenerators ,meters, DCB,DRB,DIB	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
7	ARM Controllerlab(Computerlab)	6.7X6.9=46.23 m	22	PC,printer, DCmotor,steppermotor,LCDdisplaykits,UPS withbatteries	Digitaltrainerkits,ICtester	Smt. GeethaGaded	Instructor	BE(C Sc)
8	PCBdesign&fabricationlab( Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
9	Electronicsservicinglab(Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
10	Projectwork-1	AllLabs		RPS, CRO,signal/functiongenerators,metersPC,printer, UPSwithbatteries,		ArunkumarT B Parameshwarappa	Asst.Ins Mech	DE & CE ITI

**(EvenSem2021-22)**

Sl. No	Nameof thelaboratory	Carpetarea	No. of students/batch	Nameof theimportantequipmen	Weeklyutilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualification
1	IT Skills(Comput	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)
2	ElectronicComponents&Deviceslab(Analoglab)	8.9X4.9=43.61m	18	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
3	PCBDesign&Fabrication(Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
4	Wirelesscommn(Commn,Lab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
5	EmbeddedCProg(Computerlab)	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
6	IndustrialAutomation(Analog/ComputerLab)	8.9X4.9=43.61m/6.7X6.9=46.23m		RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
7	IndustrialAutomation(Analog/ComputerLab)	8.9X4.9=43.61m/6.7X6.9=46.23m		RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
8	VerilogLabComputerLab	6.7X6.9=46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
9	Project-II	AllLabs		RPS, CRO,signal/functiongenerators,meters PC,printer,UPSwith		ArunkumarT B Parameshwarappa	Asst.Ins Mech	DE & CE ITI

## (Odd Sem2022-23)

Sl. No	Nameof thelaboratory	Carpetaarea	No. of students/batch	Nameof theimportantequipmen	Weeklyutilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualification
1	CAEGLab (Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	KPMallikarjuna	Sl.Gr. Lecturer	BE(ME)
2	FEEElab (EClab)	8.9X4.9=43.61 m	22	RPS, CRO,signal/functiongenerators,meters, DCB,DRB,DIB	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
3	AnalogElectronics (EC lab)	8.8x4.9=43.61m	20	RPS, CRO, signal/functiongenerators,meters	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
4	LogicDesign UsingVerilog( Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)
5	Communication Systems.(Com mn,Lab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
6	EMTT	8.9X4.9=43.61 m	22	RPS, CRO, signal/functiongenerators,meters,DC B,DRB,DIB	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
7	A&R(Computer, Lab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithbatteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)

**(EvenSem2022-23)**

Sl. No	Nameof thelaboratory	Carpetarea	No. of students/batch	Nameof theimportantequipmen	Weeklyutilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualification
1	IT Skills(Comput	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)
2	ElectronicComponents&Deviceslab(Analoglab)	8.9X4.9 =43.61m	18	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
3	PCBDesign&Fabrication(Computerlab)	6.7X6.9 =46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
4	Wirelesscommn(Commn,Lab)	6.7X6.9 = 46.23m	22	PC,printer,UPSwithbatteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
5	EmbeddedCProg(Computerlab)	6.7X6.9 =46.23m	22	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
6	Industrial Automation	8.9X4.9 =43.61m	22	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
7	Project/Internship	AllLabs		RPS, CRO,signal/functiongenerators,meters PC,printer,UPSwith		ArunkumarT B Parameshwarappa	Asst.Ins Mech	DE & CE ITI

**(Odd Sem2023-24)**

Sl. No	Nameof thelaborat ory	Carpetarea	No. of students/b atch	Nameof theimporta ntequipmen	Weekly utilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualificat ion
1	CAEGLab (Computerlab)	6.7X6.9=46.23 m	22	PC,printer,UPSwithb atteries	6 days/week	KPMallikarjuna	Sl.Gr. Lecturer	BE(ME)
2	FEEElab (EClab)	8.9X4.9=43.61 m	23	RPS, CRO,signal/function generators,meters, DCB,DRB,DIB	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
3	AnalogElectronics (EC lab)	8.8x4.9=43.61m	18	RPS, CRO, signal/functionge nerators,meters	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
4	LogicDesign UsingVerilog( Computerlab)	6.7X6.9=46.23 m	18	PC,printer,UPSwithb atteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)
5	Communication Systems.(Com mn,Lab)	6.7X6.9=46.23 m	18	PC,printer,UPSwithb atteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
6	EMTT	8.9X4.9=43.61 m	18	RPS, CRO, signal/functiongen erators,meters,DC B,DRB,DIB	6 days/week	Arunkumar T	Asst. Instructor	DE & CE
7	A&R(Computer, Lab)	6.7X6.9=46.23 m	18	PC,printer,UPSwithb atteries	6 days/week	Smt.GeethaGaded	Instructor	BE(CSc)



**(EvenSem2023-24)**

Sl. No	Nameof thelaboratory	Carpetarea	No. of students/batch	Nameof theimportantequipmen	Weeklyutilization	Technicalmanpower support		
						Nameof the staff	Designation	Qualification
1	IT Skills(Comput	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)	(Computerlab)
2	ElectronicComponents&Deviceslab(Analoglab)	8.9X4.9 =43.61m	23	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
3	PCBDesign&Fabrication(Computerlab)	6.7X6.9 =46.23m	18	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
4	Wirelesscommn(Commn,Lab)	6.7X6.9 = 46.23m	18	PC,printer,UPSwithbatteries	6 days/week	B Parameshwarappa	Asst.Mech	ITI
5	EmbeddedCProg(Computerlab)	6.7X6.9 =46.23m	18	PC,printer,UPSwithbatteries	6 days/week	Smt. GeethaGaded	Instructor	BE(C Sc)
6	Industrial Automation	8.9X4.9 =43.61m	18	RPS, CRO, signal/functiongenerators,meters	6 days/week	ArunkumarT	Asst. Instructor	DE & CE
7	Project/Internship	AllLabs		RPS, CRO,signal/functiongenerators,meters PC,printer,UPSwith		ArunkumarT B Parameshwarappa	Asst.Ins Mech	DE & CE ITI

**A. Adequacy(10)**

**InstituteMarks:10.00**

1. Departmenthasprovidedssufficientlabstolearnacademiccourses.
2. Allthepracticallabsareprovidedwithsufficienttechnicalstaffto completesyllabuswithintheprescribedtime.
3. Technicalfacilityandsupportavailablearehelpfultoprovidequalityeducation;thiswillfacilitatethestudentstogainthesufficientknowledge.
4. Studentsareabletoperformtheinnovativeandperformedactivitythroughouttheprogram.
5. Thecomputerlabisprovidedwith1:2ratiothestudents.
6. Thespecificationoftheapparatusmeetsthestandards.

**B. Quality of Labs/workshop(20)**

**Institute Marks:18.00**

1. Labs are spacious for conducting the experiments timely.
2. Laboratory experimental equipments and test kits are reliable and accurate with periodic maintenance.
3. Proper lighting and ventilation is provided in every lab.
4. Informativ notice board containing safety measures.
5. LED projector is provided for computer lab.
6. Each lab is equipped with fire extinguishers and first aid box.
7. Stock verification is done for every year to confirm the availability and working condition of the equipment.



**C. Technical Manpower support –Eligible and Adequate(10)**

**Institute Marks:10.00**

- The department has adequate well experienced technical support staff for all laboratories to support and assist teaching faculties in conducting of labs. They also involved in repair works of equipments.
- The technical staffs are well qualified and they can monitor the equipments regularly to avoid deficiency. Well technical staffs are available for maintenance of electronic equipments and software.

SL.NO.	Laboratory	No.ofstaff
1	ElectronicsLabs	1+1+1=3 (Instructor,AsstInstructor,Mechanic)
2	Computerlab	1
3	Seminarhall	1

Sl. No.	Nameof theTechnicalsupp	Designation	Dateofjoining
1	Smt.GeethaGaded	Instructor	02/07/1990
2	Sri.TArunKumar	Asst.Instructor	05/03/1992
3	Sri.BParameshwarappa	Mechanic	01/07/1991

**6.3 Additionalfacilitiescreatedforimprovingthequalityoflearningexperienceinlaboratories(20)**

**Institute Marks:19.00**

**A. Facilities(10)**

**InstituteMarks:9.00**

SL.NO.	Facilityname	Detailsoffacility
1	Solarpanel	Solarpanel,UPSwithbattery
2	Departmentlibrary	Havingcollectionoftextbooks,CD'sforallsemestersandprojectreportsarekeptindept.
3	Charts	SomeoftheE&CEngineering.Chartsaredisplayedinthelabs
4	OldprojectsofE&C Engineering.	BetteroldprojectsofE &C Engineering.Arekeptfor furtherstudiesabouttheirprojects

**B. EffectiveUtilization(5)**

**InstituteMarks:5.00**

Itisnecessaryforthetechnicalstudentstoexploreadvancedtechnologyratherthanprescribedinformationbycreatingstateofartofcentersfortheadvancedlearning.

- 1) Theentirefacilitiesaremadeavailabletothestudentsinregularacademicsweekly2to3hrsforeachbatchtomakesurethemtolearnpractically.
- 2) Thesefacilitieshasextendedacademicallytofacilitatethestudentsto build advancedlearningcapabilities

SL. NO.	Facility name	Details of facility	Reason for creating facility	Utilization	Quality of learning experience	
					Area in which the students are expected to have enhanced learning	Relevance to PO/PSO
1	Solar panel	Solar panel, UPS with battery	From this facility the students can gain the knowledge of solar cells, solar panel installation and how the non-conventional energy is utilized in domestic and electrical applications	Students of all semesters	Students are able to learn about applications of semiconductor devices such as solar cell, solar panel, UPS	PO1, PO2
2	Department library	Having collection of textbooks, CD's for all semesters and project reports are kept in dept.	To gain deep knowledge of concept using a reference books & CD's for all courses, seminar, laboratory projects	Students of all semesters	Student learning process	PO1, PO2, PO3, PO4, PO5, PO6
3	Charts	Some of the E & C Engg. Charts are displayed in the labs	To give better understanding of the electronics components & communication, networking, PLC	Students of all semesters	In all the courses of E & C Engg. From Sem1 to Sem6	PO1, PO2, PO8
4	Old projects of E & C Engg.	Better old projects of E & C Engg. Are kept for further studies about their projects	Innovation of the existing projects and learning experience for 5 <sup>th</sup> & 6 <sup>th</sup> sem students	Used by the present batches for innovation in the related projects	Innovative projects	PO1, PO2, PO4, PO8

**C. Relevance to POs/PSOs(5)**

**Institute Marks: 5.00**

SOLAR PANEL DEPARTMENT	PO1, PO2
LIBRARY WALL CHARTS	PO1, PO2, PO3, PO4, PO5, PO6
OLD PROJECT REPORTS & MODELS	PO1, PO2, PO8
	PO1, PO2, PO4, PO8

#### 6.4 Laboratories: Maintenance and overall ambience (10)

##### Institute Marks: 10.00 Maintenance of Laboratory Equipments

- Each lab is neatly maintained by regular housekeeping
- Regular checking of equipment is carried out at the end of every semester and before the start of every semester. Informatives notice board containing safety, DO's & Don'ts is properly maintained
- Well technical staffs are available for maintenance of electronic equipments and software. Maintenance of printers is being done every 6 months
- All necessary PC system's regular software like MS Office, lab software, antivirus software etc, is installed and maintained. LED projectors are provided for computer laboratory
- Each lab is equipped with fire extinguishers, equipments and first aid kits
- Stock verification is done every year to confirm the availability and working condition of the equipment

##### Overall Ambience

- Department has well furnished with well equipped equipments which shall be used by all the courses as per curriculum requirements. Conditions of chairs/benches/stools are in good condition
- All the labs are conducted and evaluated every week
- All the laboratories have sufficient natural light, good ventilation with tubes and fan arrangements. Sufficient number of windows are available for ventilation and natural light and every lab has one exit. Each lab is provided with black board
- Computer lab is provided with whiteboard, internet facility

A register is maintained in the department to record the maintenance work attended as per the schedule. The format of maintenance record is shown below.

(2019-20)

Sl. No.	Name of the laboratory	Name of the important system/equipment.	Log book maintained (Y/N)	Overhauling/serviced date	Maintenance schedule	
					Type of service	Due date for maintenance
1	Computer lab	PC systems	Y	27/03/2019, 24/09/2019	Refurbishing and cleaning, installation of antivirus/w for proper running	22/03/2020
2	Computer lab	UPS with batteries	Y	28//01/2019, 24/06/2019	UPS batteries are cleaned and checking the water and voltage levels	28/11/2019
3	Computer lab	Printer	Y	29/04/2019, 02/10/2019	Checking the cartridge of the printer and cleaning	25/05/2020
4	Analog lab	Signal/function generators, RPS, Meters	Y	08/03/2019, 10/09/2019	Any loose connections, knob adjustment, meter movement adjustment & manual	22/03/2020
5	Analog lab	CROs and analog experimental kits	Y	29/04/2019, 02/10/2019	All the front panel knob adjustment, display adjustment, power cord checking and cleaning	25/05/2020
6	Analog lab	Power electronics kits, Working models, PLC kits	Y	28//01/2019, 24/06/2019	Checking for loose connections, circuit connections, minor repairs	28/11/2019
7	Digital lab	IC trainer kits, IC tester	Y	27/03/2019, 24/09/2019 22/03/2020	Checking for loose connections, sockets, minor repairs	22/03/2020

(2020-21)

Sl. No.	Name of the laboratory	Name of the important system/equipment.	Log book maintained (Y/N)	Overhauling/serviced date	Maintenance schedule	
					Type of service	Due date for maintenance
1	Computer lab	PC systems	Y	22/03/2020, 29/09/2020	Refurbishing and cleaning, installation of antivirus/w for proper running	29/03/2021
2	Computer lab	UPS with batteries	Y	28/11/2019, 24/04/2020	UPS batteries are cleaned and checking the water and voltage levels	28/09/2020
3	Computer lab	Printer	Y	25/05/2020, 27/11/2020	Checking the cartridge of the printer and cleaning	30/08/2021
4	Analog lab	Signal/function generators, RPS, Meters	Y	22/03/2020, 29/09/2020	Any loose connections, knob adjustment, meter movement adjustment & manual	02/03/2021
5	Analog lab	CROs and analog experimental kits	Y	25/05/2020, 27/11/2020	All the front panel knob adjustment, display adjustment, power cord checking and cleaning	30/08/2021
6	Analog lab	Power electronics kits, Working models, PLC kits	Y	28/11/2019, 24/04/2020	Checking for loose connections, circuit connections, minor repairs	28/09/2020
7	Digital lab	IC trainer kits, IC tester	Y	22/03/2020, 29/09/2020	Checking for loose connections, sockets, minor repairs	29/03/2021

**(2021-22)**

Sl. No.	Name of the laboratory	Name of the important system/equipment.	Log book maintained (Y/N)	Overhauling/serviced date	Maintenance schedule	
					Type of service	Due date for maintenance
1	Computer lab	PC systems	Y	29/03/2021, 27/09/2021	Refurbishing and cleaning, installation of antivirus/w for proper running	27/03/2022
2	Computer lab	UPS with batteries	Y	28/09/2020, 25/02/2021	UPS batteries are cleaned and checking the water and voltage levels	30/07/2021
3	Computer lab	Printer	Y	30/08/2021, 25/01/2022	Checking the cartridge of the printer and cleaning	26/07/2022
4	Analog lab	Signal/function generators, RPS, Meters	Y	02/03/2021, 06/09/2021	Any loose connections, knob adjustment, meter movement adjustment & manual	08/03/2022
5	Analog lab	CROs and analog experimental kits	Y	30/08/2021, 25/01/2022	All the front panel knob adjustment, display adjustment, power cord checking and cleaning	26/07/2022
6	Analog lab	Power electronics kits, Working models, PLC kits	Y	28/09/2020, 25/02/2021	Checking for loose connections, circuit connections, minor repairs	30/07/2021
7	Digital lab	IC trainer kits, IC tester	Y	29/03/2021, 27/09/2021	Checking for loose connections, sockets, minor repairs	27/03/2022



**(2022-23)**

Sl. No.	Name of the laboratory	Name of the important system/equipment.	Log book maintained (Y/N)	Overhauling/serviced date	Maintenance schedule	
					Type of service	Due date for maintenance
1	Computer lab	PC systems	Y	29/09/2022, 27/03/2023	Refurbishing and cleaning, installation of antivirus/w for proper running	27/09/2023
2	Computer lab	UPS with batteries	Y	28/12/2022, 27/6/2023	UPS batteries are cleaned and checking the water and voltage levels	26/12/2023
3	Computer lab	Printer	Y	02/01/2023, 26/07/2023	Checking the cartridge of the printer and cleaning	25/01/2024
4	Analog lab	Signal/function generators, RPS, Meters	Y	13/09/2022, 25/03/2023	Any loose connections, knob adjustment, meter movement adjustment & manual	25/09/2023
5	Analog lab	CROs and analog experimental kits	Y	02/01/2023, 26/07/2023	All the front panel knob adjustment, display adjustment, power cord checking and cleaning	25/01/2024
6	Analog lab	Power electronics kits, Working models, PLC kits	Y	28/12/2022, 27/6/2023	Checking for loose connections, circuit connections, minor repairs	26/12/2023
7	Digital lab	IC trainer kits, IC tester	Y	29/09/2022, 27/03/2023	Checking for loose connections, sockets minor repairs	27/09/2023

**(2023-24)**

Sl. No.	Name of the laboratory	Name of the important system/equipment.	Log book maintained (Y/N)	Overhauling/serviced date	Maintenance schedule	
					Type of service	Due date for maintenance
1	Computer lab	PC systems	Y	02/10/2023, 25/04/2024	Refurbishing and cleaning, installation of antivirus/w for proper running	24/10/2024
2	Computer lab	UPS with batteries	Y	28/12/2023, 01/7/2023	UPS batteries are cleaned and checking the water and voltage levels	01/03/2024
3	Computer lab	Printer	Y	26/01/2024, 25/06/2024	Checking the cartridge of the printer and cleaning	22/12/2024
4	Analog lab	Signal/function generators, RPS, Meters	Y	26/09/2023, 22/03/2024	Any loose connections, knob adjustment, meter movement adjustment & manual	25/10/2024
5	Analog lab	CROs and analog experimental kits	Y	10/01/2024, 20/07/2024	All the front panel knob adjustment, display adjustment, power cord checking and cleaning	2/03/2024
6	Analog lab	Power electronics kits, Working models, PLC kits	Y	28/12/2023, 25/6/2024	Checking for loose connections, circuit connections, minor repairs	20/12/2024
7	Digital lab	IC trainer kits, IC tester	Y	29/09/2023, 20/03/2024	Checking for loose connections, sockets minor repairs	13/09/2024

**6.5 Availabilityofcomputingfacilityinthedepartment(10)****Institute Marks:10.00**

Sr. No	NoOfCom puter terminals	Students Computer Ratio	DetailsofLegalS oftware	DetailsofN etworking	DetailsofPrinters,S canneretc.
1	20	1:1	Windows 7	StandAlone	CANONLBP2900B

**6.6 Language lab(10)****InstituteMarks:9.00**

Afull-fledgeddigitallanguage labwith20studentconsolesisavailablefordevelopingcommunicationskillsof ourstudents.ThefouressentialskillsofListening,Speaking,ReadingandWritingareimpartedsystematicallywithactivities thatrequiretheiruseandaredesignedtosupportinprocess of acquiringcommunicationskillssetsquickly

Details of LanguageLab:

Detailsofcomputerspecifications	No.ofcomputersa vailale	No.of Teacher console	No.of Students console
CuteECOCPUVIEWSonicIntelAtom330proc essor,2GBRAM,320GBHarddiscdrive,wifi,nv idiagraphics/HDMI&DUI/USB3.0Windows- 7installed. ZebsterLEDmonitor15.6“HPkeyboard&mous e	20	1	20

**Features ofLanguage lab**

- Elementary,intermediateandadvancedschoollevel
- Professioncommunication skill development
- Phonetics-GeneralEnglish
- Conversation-GeneralEnglish, IntelligibleEnglish,Globalcommunicative
- Grammar-English
- Professionalcommunicationlab-Skills,presentationskills group discussion,Interviews,Publicspeaking,email soft skills etc.
- Aptitude& GK

**Utilization of language lab**

- Language lab slots have been allotted in the timetable for 1 and 2 Sem students
- A syllabus for "Communication Skills" is followed as set by BTE & labs will be conducted accordingly

# Criteria - 7

## Continuous Improvement

**7. CONTINUOUSIMPROVEMENT (75)**

InstituteMarks:62.00

**7.1 Actionstakenbasedontheresults ofevaluationofeachofthePOsandPSOs(25)**

InstituteMarks:20.00

**POsAttainmentLevelsandActionsforImprovement-(2022-23)**

POs	TargetLevel	AttainmentLevel	Observations
-----	-------------	-----------------	--------------

**PO1:BasicandDisciplinespecificknowledge**

PO1	2.89	2.47	Electronicsandcommunicationengineeringcurriculumrequires the strongfoundationof theoreticalandpracticalknowledgeofscienceandmathematics,whichthestudentsstudyintheirfirstyear,butstudent'slagsin correlatingthetheoretical
-----	------	------	--

ACTION1: Tutorialsbasedon real applicationinclusion of simulationsoftwareinteachinglearningprocess.

ACTION2: Weinspirestudentstoparticipateintechnicalevents,otherevents wheretheir basicknowledge should converttoapplicationmatchingwithdefinedleveloftheirstandards

**PO2:Problemanalysis**

PO2	2.2	1.88	Theproblemsolvingandanalyzingskillsgainedthroughfirstandsecondyearcourseshelpsthestudentstoapplyinrealtimeapplication.
-----	-----	------	--

ACTION1:Studentsareencouragedtoobserve,theirhomesandsurroundingstogaininsightintoreallifeengineeringproblemsandthink of possibleapproaches/solutionstotheseproblems.

**PO3:Design/developmentofsolutions**

PO3	2.13	1.93	Someoftheprojectsdevelopedbythestudentashobbyprojects/majorprojects(finalyear)arenotfullyconsidering the socialandenvironmentalissues.
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ACTION1:StudentsaremotivatedtoincludeallstandardparametersandconstraintsaccordingtoNationalandInternationalsafety normsandtoaddressenvironmentalconcerns

**PO4:EngineeringTools,ExperimentationandTesting**

PO4	2.78	2.39	Itisobservedthatmostoftheprojectabstractandliteraturesurveyareaddressingtheresearchbasedapproach butdoesnotendwithvalidconclusions.
-----	------	------	---

ACTION1:Academicworkshopsarecomingintopicturetoapplymoreknowledgeintermsofconductionofexperimentsandanalysisof resultsatrequiredlevel.

**PO5:Engineeringpracticesforsociety,sustainabilityandenvironment**

PO5	2.07	1.66	ItisobservedthatUp-gradationsoftoolsandresourcesarenecessarytomeettheindustrystandardsandresearch.
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ACTION1:ModernlabsaredevelopedtodemonstratetheuseofModerntoolslikeMATLAB,Arduino,LabView,Cadenceetc.tospecifyfulfillmentofrequirementinengineeringapplicationsinnewindustrial era.

**PO6:ProjectManagement**

PO6	2.37	2.18	ThecoursesofElectronicsandcommunicationEngineeringareaddressingtheneeds of,health,safetyandsocialconcernsregardingengineeringpracticesinreallife.
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ACTION1:Tounderstandthesafetyconcernsandsocialaspects,studentsvisitedindustrytoexpandtheirpracticalknowledgewiththeeffectofimprovedpracticesinengineering.

**PO7:Life-longlearning**

PO7	2.43	2.13	Theissuesofglobalandenvironmentalawarenessamongthestudentshouldbeimproved. The final year courses of the program aredemonstratingtheresourcefor
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Studentsareencouragedtoindulgeinprojects,inwhichglobalandenvironmentalissuesareimproved,withrespecttoconsumptionofenergyandutilizationofrenewableenergyresources.

**PSOsAttainmentLevels andActionsforImprovement-(2020-21)**

PSOs	TargetLevel	AttainmentLevel	Observations
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**PSO1:**Applyprinciplesofmathematics,communication,automationandlogiccontroltoanalyzedifferenttypesofsignalsandswitchingoperations.

PSO1	2.47	2.09	Thecourses of theprogram aredemonstratingtheresourcefulnessforcontemporary issues. Theprojecttitlesofthefinalyearandpre-
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ACTION1:Studentsaremotivatedtotakeupthereallifeproblemsduringtheirprojectworksothattheycandesign,analyzeandfindsolutionwhichgives exposure to latest technologies

**PSO2:**Analyze,Synthesizeanalog&digitalcircuits&toadaptforrapidchangesintoolsandtechnologythroughlife-longlearning.

PSO2	2.61	2.18	Usageofdifferenttoolsanddesignsareusedto,develop/implement,test,manufactureandmaintaintheelectronics systems for consumerelectronics/telecommunication/opticalcommunication/automobile/Industrial
ACTION1:Academicworkshopsandconferencesarecomingintopicturetoapplymoreknowledgeintermsofconductionofexperimentsandanalysisitheasrequiredlevel.			

**PSO3:**DesignElectronics&Communication,Electricalcircuits,simulateusingEDAtoolsandinterfacewithkitsormodulesthroughprogrammingandfabricatePCB.

PSO3	2.68	2.55	Toinculcateethics,goodinterpersonalrelationships,abilitytocommunicate,leadershipandprojectmanagement.
ACTION1:Careerreadinessprogramandcorporatelecturesarearrangedtomeetrequiredexpertiseinfieldofengineering.			

**7.2 ImprovementinSuccessIndexofStudentswithoutthebacklog(10)**

InstituteMarks:8.00

Items	LatestPassedoutBatch(2020-21)	LatestPassedoutBatchminus1(2019-20)	LatestPassedoutBatchminus2(2018-19)
SuccessIndex(from4.2.1)	0.121	0.188	0.068

**7.3 ImprovementinPlacementandHigherStudies(10)**

InstituteMarks:8.00

Items	LatestPassedoutBatch(2020-21)	LatestPassedoutBatchminus1(2019-20)	LatestPassedoutBatchminus2(2018-19)
PlacementIndex(from4.6)	0.773	0.294	0.681

**7.4ImprovementinAcademicPerformanceinFinalyear(10)**

InstituteMarks:8.00

Items	LatestPassedoutBatch(2020-21)	LatestPassedoutBatchminus1(2019-20)	LatestPassedoutBatchminus2(2018-19)
AcademicPerformanceIndex(from4.3)	7.02	3.269	5.202



7.5 Internal Academic Audits to Review Complete Academics & to Implement Corrective Actions on Continuous Basis (10)

Total Marks 9.00

Inst marks 9.00

Items	2021-22 (CAYm1)	2020-21 (CAYm2)	2019-20 (CAYm3)
Internal Academic Audits	02	02	02

During every semester Internal Academic Audit will be carried out by respective HODs and Principal. The process involves verification of academic documents such as Attendance Registers, Course Plans, CIE Reports, Activity Reports, and Mentor's Diary. This is done during first week of every month from the beginning and till end of semester.

An External Audit is also conducted by the official appointed by BTE, Bengaluru. The External audit will be conducted every semester during board theory exams.

7.6 New Facility created in the Program(10)

InstituteMarks:9.00

Items	2022-23(CAYm1)	2021-22(CAYm2)	2020-21(CAYm3)
New Facility Created	-	2	4

# Criteria – 8

## StudentSupportSystem

**2. PROGRAM CURRICULUM AND TEACHING-LEARNING PROCESSES (200)****Total Marks 181****1. STUDENT SUPPORT SYSTEMS**

Mentoring system to help at individual level. For students, a mentor is someone who serves as a guide throughout their institutional training. Mentors apply their guidance, experience and expertise in promoting their mentees professionally and personally, through interpersonal engagement.

In short, Mentoring aspires to transformal positive changes. It enhances self confidence, improves peer bonding and prepares mentees for career advancement.

Each faculty is assigned 15 to 20 students. The faculty monitor their progress and report to department in-charge of counselling cell. This mentoring is for overall development of the student. A counselling 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.

**Objectives of Mentoring**

Refining teacher-student communication outside classroom

Helping students understand the challenges and opportunities present in the Institute and develop smooth transition to campus life. Maintaining database of student performance, attendance details & drop outs

Ensuring regularity and punctuality of students through counselling sessions.

Supporting personal & professional growth & monitoring psychological growth & progress

**Expected Outcomes**

A healthy Learning Environment

Creation of positive communication channels among Principal, Parents, Staff & Students Enhancing a feeling of belonging among students

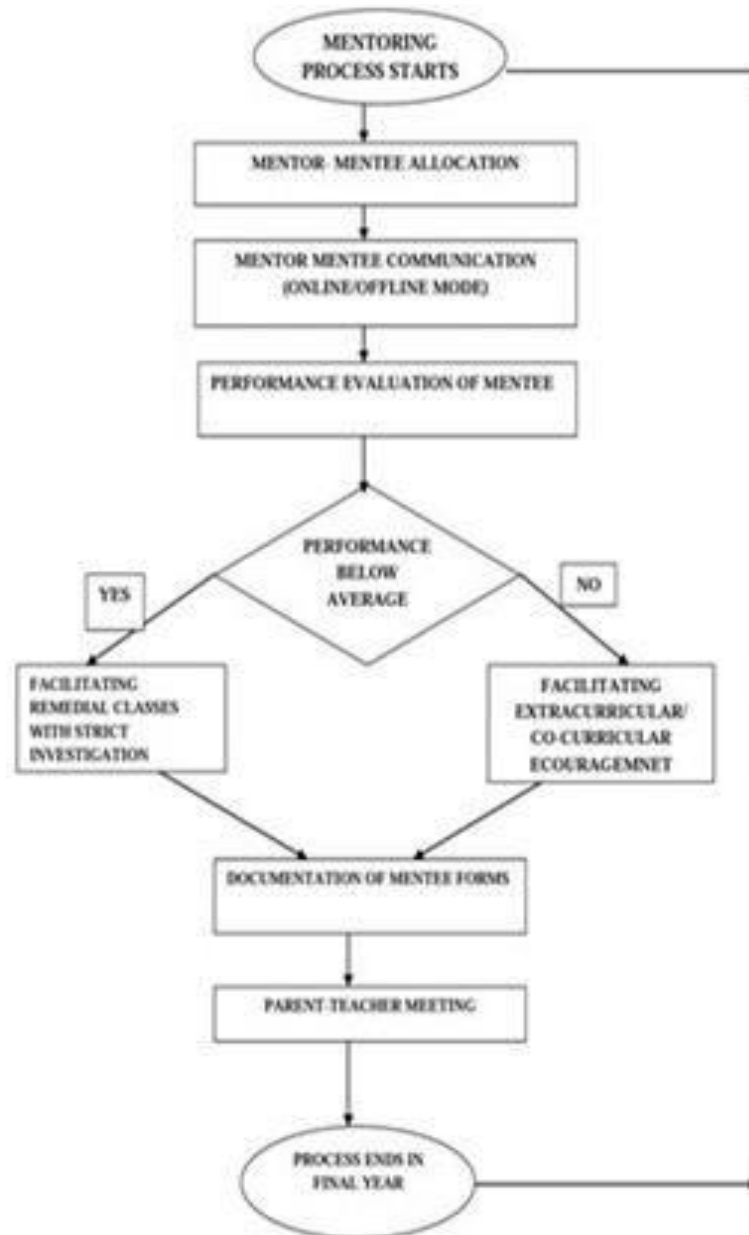
Self confident, bold & an active, enthused student community

Better attendance, lesser dropouts and good psychological health of students Confident Parents

Improved Performance

Note:MentorsDiaryismaintainedfromtheacademicyear2019-20.

Flowchartbelowshowsthe



Feedback analysis and reward/corrective measure taken, if any

Methodology being followed for feedback collection, analysis and its effectiveness

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 interdepartment faculty

**Average Percentage of Students who participates:** Students having attendance more than 75% are participated. The feedback

analysis process:

The interdepartment faculty collect the feedback from students through online and consolidated report generated online is forwarded to the Principals Office for further Corrective Measures. The same will be sent to respective HOD's.

**Table: Feedback analysis grading**

Grading	Points
Excellent	9- 10
Good	7 - 9
Average	3 -7
Poor	1 –3

The teaching performance indices are analysed by the Principals Office and the same is conveyed to the concerned. Record of corrective measure taken

**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 IA test and assignment books.
8. Ability to design Quizzes/Tests/Assignments/Examinations & projects to evaluate student understanding of the course.
9. Interact and encourage 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 Action taken:**

The faculties performing below average are trained continuously through Faculty Development Program to improve the quality of the staff.

**Feedback on facilities**

Student feedback on facilities, analysis and corrective action taken

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 colleges such as Water facility, Internet facility, Canteen facility, Sports and Gymnastic facility, etc.

The feedback is analysed 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) Feedbackcollectionprocess:**

**Differentfeedbackformsaremadeavailableonourcollegewebsites:<http://tmaespolytechnichpt.com/stakeholders-feedback-forms/>Table:Details of feedbackcollectionprocess:**

Item	Description
Feedbackcollectedonallfacilitiesprovided bythecollege.	YES
Feedbackcollectionprocess	Frominstitutewebsite
Feedbackreceiver	HODsthroughwebsitadmin

**FORMATofStudentFeedbackonFacility:**

SampleQuestionnaires:

- InteractionwiththePrincipal.
- InteractionwithHODs.
- ResponseattheReception
- Goodsupport/interactionfromOffice
- Availability ofStaffinworkingHours.
- ExtraCurricularActivities.
- DisciplineinCampus.
- InternetfacilityatInternetCentre
- HouseKeepingatCollegeCampus
- DrinkingWaterFacility
- Washroomfacilitiesandmaintenance
- SportsActivities
- Mentor-MenteeSystem
- Areyouhappy withthefoodservedinthepresentcanteen?
- Areyouawareof theNSSActivitiesinourTechnicalBoard?

RatingofScale

Poor	1 to3
Average	3.1to7
Good	7.1to 9
Excellent	9.1to 10

## Feedback Analysis

The feedback given by the students is consolidated and analysed. Principal will discuss about the consolidated report with the management and come out with necessary actions.

Corrective measures:

Corrective measures will be implemented at the college level with respect to the decision made by the management.

Career Guidance, Training, Placement

**Career guidance for the 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 counselling or career guidance process involves individuals (school or college students or professionals) exploring various career options, understanding more about the opportunities, analysing 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 regularly.

Soft skills programs will be organized for enhancing the ability of the students and to explore them in the competitive world. The career planning workshop is organized online during pandemic and also offline. Group Discussion activity is organized in the workshop.

Few organizations to name are Art of Living, Bestow education, Entrepreneurship Cell/Technology Business Incubator



# Criteria – 9

## Governance, Institutional Support and Financial Support

1.GOVERNANCE,INSTITUTIONALSUPPORT

ANDFINANCIALRESOURCESOrganization,GovernanceandTransparency

StatetheVisionandMissionheInstitute

<b>Vision:</b>
Empoweringyouthbyimpartingqualitytechnicaleducationandstrivetopreparestudentswithexcellentechnicalskills.
<b>Mission:</b>
<ol style="list-style-type: none"> <li>1. Tooffervalueaddedqualitytechnicaleducation&amp;excellenteacademictrainingtoourstudents.</li> <li>2. Toprovidestateofartinfrastructurewithlatestfacilities.</li> <li>3. Tostrengthenindustryinstituteinteraction.</li> </ol>

Governingbody,administrativesetup,functionsvariousbodies,definerrulesprocedures,recruitmentandpromotionalpolicies

Sl. No	Name	Designation
1	Sha.Bra.VARASADYOJATHASHIVACHARYAMAHASWAMIJI	PRESIDENT
2	SRIN.G.NAGANAGOUDA	VICEPRESIDENT
3	SRITMCHANDRASHEKARIAH	SECRETARY
4	DrMAHESH	MEMBER
5	DrRAMESHKUMAR	MEMBER
6	SRITMSHIVADEVIAIAH	MEMBER
7	SRIKMGURUSIDDAIAH	MEMBER
8	SRIBALARAMASHETTY	MEMBER
9	SRITMSHIVASHANKAR	MEMBER

## FunctionsofGoverningBody:

### RolesandResponsibilitiesofGoverningCouncilofTMAESPolytechnic,HosapeteasperByelawofTMAESociety,Harapanahalli

- GoverningcouncilresponsibletomonitordaytodayoverallaffairsoftheInstitution.
- GoverningcouncilresponsibletoimplementguidelinesgivenbyManagementCommitteeofTMAESociety,Harapanahalli.ItisResponsibletotakecooperation,favourandSympathyfromallstakeholders.
- TogetherFundsrequiredforManagementoftheInstitutionandmaintenanceofauditreportsoffinancialresourcesoftheinstitution.
- ToprepareandsubmitAnnualandsupplementaryBudgetproposalstotheTMAESocietyManagementforapproval.PrepareAnnualreportsandsubmitittoManagementcommitteeofTMAESocietyforapproval.
- Budgetrequirementofequipment's,constructionandmaintenanceof\BuildingandAcademicactivitiesshallbesubmittedtothemanagementcommitteeofTMAESocietyforapproval
- Extensionofserviceafterretirementofstaffmembersshallbesubmittedtothesecretarywithrecommendationifnecessary.Verifyauditstatementsfromtimetotimetochekitsauthenticityandcorrecttheauditstatementsifyanedeficiencies.
- AllexpenditureoftheinstitutionshallbewithinthebudgetapprovedbyTMAESSociety,Harapanahalli.SubmitAnnualreporttoManagementcommitteeofTMAESSociety,Harapanahalli.
- DaytodayactivitiesofTeaching,Non-TeachingandofficestaffmembersshallbemonitoredbyGoverningbodyoftheinstitutioninitiateappropriateactionifanyviolationofserviceoftheinstitution.
- AdvisinganddirectingtheinstitutesbytheManagementCommitteeofTMAESSociety,Harapanahalliforoverallgrowthoftheinstitution.
- GoverningBodyshalltakeadvicefromsenioracademicleadersandexperts,Industry,Seniorlegalluminaries,SeniorMedicalexperts,achieversandotherKnownpersonsofthesocietyforoverallgrowthoftheinstitution.
- GoverningCouncilresponsibilitytofollowdiligentlyrulesandregulationsprescribedbystatutorybodiesnamelyGovernment,DCTE,AICTE,andotherregulatoryagencies.
- ItisresponsibilityofgoverningcounciltofollowguidelinesasamendedbyTMAESSociety,timetotimetocommodatedynamicchangesintechnicaleducation,generalsocietyandotherimportantsegmentsofthesociety
- MinutesofthemeetingandactiontakenreportsCSERVICEandRecruitmentRules
- ServiceregulationsareconstitutedbyTMAESSociety,andismadeavailabletoallddepartmentsforthesakeoftheinformationtotheemployees

	Thereshallbethreecategoriesoffaculty/staffmembers:
1	Academic:HOD, SelectionGradeLecturer,Lecturer. TechnicalSupport:Instructor,AsstInstructor,Mechanic,Helper. Office Staff :OfficeSuperintendents,FDA,SDA,Attender,Group-D.
2	AppointmentsaremadeasperAICTEforteaching&Govt.C&RRulesfornonteachingpostsandtherespectivepostsareapprovedbythe Govt.ofKarnatakaaccordingly.ThepayscaleshavebeenfixedasperAICTE&StateGovernmentnorms.TheAppointing Authorityfor othernongovernmentpostsshallbeaGoverningCouncilattheinstitutionlevelincludingPrincipalastheGoverningCouncilMember. TheappointmentofstaffmembersatanInstitutionshallbemadebytheGoverningcouncil byadoptinganopenandtransparentselectionprocedurenamely:
3	IssueofattractiveadvertismentforthepostsatState-levelEnglishandKannadaDailyNews Papers; Issueofrollingannouncementofvacanciesinanappropriatesite;AdherenceofPolicymattersgivenbytheManagement/Government; ShortlistingofcandidateswillbedoneasperAICTE/DCTE/GOKNormstomeettherequirements.Inti matingeligiblecandidatesfortherecruitmentprocessaftershortlistingaspernorms SettingupScreeningCommitteestoidentifycandidatestobeinterviewed; SettingupSelectionCommitteestointerviewtheidentifiedcandidatesincludingthesubjectexpertintheconcerned domain;PlacingtheSelectionCommitteeReportsbeforetheGCforapproval;PlacingselectedcandidatesinMCMeetingatManagementLevel IssueofAppointmentLettersbytheSecretary/ChairmanoftheManagement. ListofselectedcandidateswillbesenttoGovernmentforfinalapproval(foraidedposts)
4	EachappointmentshallbenormallymadeagainstasactionedpostattheInstitute.However,theGCshallhavethepowertomakeanyother appointment/s,afterdeterminingandfixingasourceof fund fortheexpenditure.
5	TheGCmayalsoconsiderandappointwellqualified/experiencedcandidatestotheInstitutioninvariousdepartments/sections.
6	Thepayscalesadmissibletothefaculty/staffmembersattheinstitutionshallfollowtheAICTE/GOK/Management normsandstandards.
7	TheServiceConditionsforallacademic,administrativeandtechnicalstaffmembersoftheinstitutionshallbeasprescribedintheServiceRegister /ManualoftheManagement.
8	ThereshallbeaCodeofEthicstobestrictlyfollowedbyallacademic,administrativeandtechnicalstaffasprescribedbytheManagement.

### Decentralization in working and grievance redressal mechanism

List the names of the faculty members who have been delegated powers for taking administrative decisions

Sl.No	Name	Designation	Department	Role
1	Dr H K Shankarananda	Principal	Administrative	Chairman
2	Sri T M Shivashankar	Tech.Direct.	Administrative	Member
3	Sri T Naziruddeen	HOD	Mechanical	Member
4	Sri N Mahesh Kumar	HOD.	E&CE	Member
5	Sri G Chandrashekar	HOD	CS&E	Member
6	Sri Dhanujaya G H	HOD	Automobile	Member
7	Sri Shivaraj BH	HOD	Science	Member
8	Sri K Manjana Gouda	Sl.Gr.Lect	E&EE	Member
9	Sri K Laxmi Reddy	Sl.Gr.Lect	Civil	Member
10	Sri Yogananda T L	Incharge HOD	Metallurgy & Mining	Conveyor

#### Grievance Redressal Mechanism:

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 in consultation with the officer in-

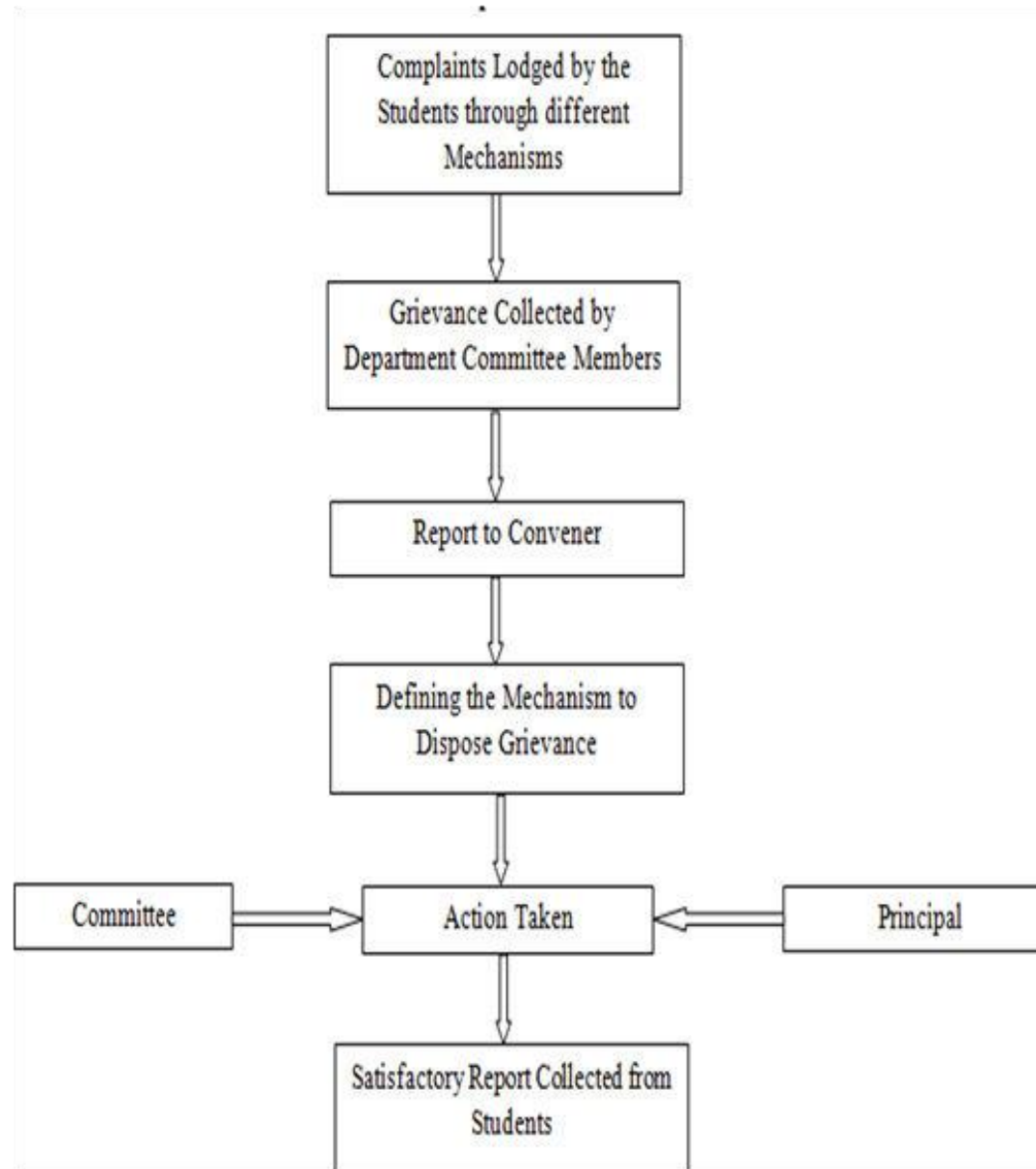
charge of the student's grievance cell. In case a person is unwilling to appear in person, a grievance may be dropped in writing at the letterbox/suggestion box of the grievance cell at the administrative block.

#### Mechanism adopted to collect the Grievances at the institute

Suggestion/complaint Box is installed in which the students, who want to remain anonymous, put in writing their Grievances and their suggestions for improvement of the Academics / Administration in the College.

Providing Online submission of Grievances in the institute website for both staff & students

Written Complaint to Principal and Committee member of the department or ally to the respective Department committee member, HODs & Principal



Sl.No	Name	Designation	Rolein thecommit
1	Dr. H. K. Shankarananda	Principal	Chairman
2	SriSrinivasMeti	CPI	Member
3	SriShivashankarBanagere	PressReporter	Member
4	SriHRaghavendraRao	NGO	Member
6	SriGChandrashekar	HOD,CS	Member
7	SriTSathyanarayanaRao	HOD, Sci	Member
8	SriTNaziruddeen	HOD,Mech	Member
9	SriDM Shivakumar	FDA	Member
10	SriT ArunKumar	AsstInstructor	Member
11	SriRishabPalrecha	Student	Member
12	SriKirnaKumar	Student	Member
13	SriSathyasaiSrinivas	Student	Member
14	SriManojSubramaniam	Student	Member
15	MsAnusha	Student	Member

#### Delegationoffinancialpowers:

- Financialpowersaredelegated/authorizedtoPrincipalbythemanagementtospenduptoRs.25,00,000(RupeesTwentyfivethousand)andtheHOD'sofallthedepartmentsofthisInstitutearealsoauthorizedtospenduptoRs.5,000(RupeesTenThousand)foracademicpurposes.
- Transparencyandavailabilityofcorrect/unambiguousinformationinpublicdomain
- DisseminationandAvailabilityofinstitute/programspecificinformationthroughtheweb:

Theinstitutehashosteditsovnwebsitewhichisupdatedregularly.TheinstituteandProgramspecificinformationismadeavailabletoallaspirantsthroughtheweb-site.Theweb-siteURLis:<https://www.tmaespolytechnichpt.com>

**Table:URLLinks**

1	InstitutionMission&Vision	<a href="http://tmaespolytechnichpt.com/vision-mission/">http://tmaespolytechnichpt.com/vision-mission/</a>
2	AuditedStatements	<a href="http://tmaespolytechnichpt.com/mandatory-disclosures/">http://tmaespolytechnichpt.com/mandatory-disclosures/</a>
3	NSS	<a href="http://tmaespolytechnichpt.com/student-support/nss/">http://tmaespolytechnichpt.com/student-support/nss/</a>
4	Placement	<a href="http://tmaespolytechnichpt.com/placements/">http://tmaespolytechnichpt.com/placements/</a>
5	AICTEMandatory	<a href="http://tmaespolytechnichpt.com/mandatory-disclosures/">http://tmaespolytechnichpt.com/mandatory-disclosures/</a>
6	ImportantLinks:AICTE/DCTE/MHRD/SWAYAM/NPTEL/NDL	<a href="http://tmaespolytechnichpt.com/important-links/">http://tmaespolytechnichpt.com/important-links/</a>



Budget Allocation, Utilization, and Public Accounting at Institute level (10)

Summary

of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years

**TABLE-Consolidated budget received-Expenditure in CFY, CFYm1, CFYm2, CFYm3**

Item	Budget in CFY 2022-23	Actual Expenditure in CFY 2022-23	Budget in CFY 2021-22	Actual Expenditure in CFY 2021-22	Budget in CFY 2020-21	Actual Expenditure in CFY 2020-21
Infrastructure Built-Up	70,000	65,086	75,000	50,000	1,40,000.00	1,36,198.00
Library	70,000	64,000	75,000	53,400		Nil
Laboratory Equipment	7,50,000	7,24,689	2,50,000	2,49,739	3,70,000.00	3,64,531.00
Laboratory Consumables	4,00,000	3,81,072	3,40,000	3,39,470	60,000.00	56,373.00
Teaching and Non Teaching Staff Salary	143000000	142825062	13,66,00,000	13,65,48,371	11,46,50,000.00	11,46,33,212.00
Maintenance and Spares	10,50,000	10,35,354	9,17,000	9,16,932	6,80,000.00	6,77,803.00
R & D				Nil		Nil
Training and Travel	2,00,000	1,75,701	30,000	26,960	35,000.00	30,470.00
Miscellaneous expenditure	110000	1,00,534	75000	73,713	65,000.00	62,295.00
others/Specify			39,00,000	38,38,083	46,20,000.00	46,13,766.00
<b>Total</b>	<b>14,56,50,000</b>	<b>14,53,71,498</b>	<b>14,22,62,000</b>	<b>14,20,96,668</b>	<b>12,06,20,000.00</b>	<b>12,05,74,648.00</b>

**Table 1–CFYm12022-23**

<i>TotalIncomein CFY</i>			<i>ActualexpensesinCFY</i>			<i>Totalno.of Studentsin CFY(1120)</i>
<i>Fee</i>	<i>Govt.Grants</i>	<i>Anyother Sources</i>	<i>Recurring including Salaries</i>	<i>Non-Recurring</i>	<i>SpecialPr ojects/Any otherspeci fy</i>	<i>Expensesper student</i>
<b>1,15,09,959.00</b>	<b>13,76,58,118.00</b>	<b>2,75,692.00</b>	<b>15,04,05,841.00</b>	<b>8,67,899.00</b>	<b>Nil</b>	<b>12,157.00</b>

**Table 2–CFYm22021-22**

<i>TotalIncomein CFY</i>			<i>ActualexpensesinCFY</i>			<i>Totalno.of Studentsin CFY(1091)</i>
<i>Fee</i>	<i>Govt.Grants</i>	<i>Anyother Sources</i>	<i>Recurring including Salaries</i>	<i>Non-Recurring</i>	<i>SpecialPr ojects/Any otherspeci fy</i>	<i>Expensesper student</i>
<b>1,03,29,409.00</b>	<b>13,11,13,647.00</b>	<b>2,51,460.00</b>	<b>14,16,40,282.00</b>	<b>2,64,425.00</b>	<b>Nil</b>	<b>9,891.00</b>

**Table 3–CFYm32020-21**

<i>TotalIncomein CFY</i>			<i>ActualexpensesinCFY</i>			<i>Totalno.ofStude ntsinCFY(999)</i>
<i>Fee</i>	<i>Govt.Grants</i>	<i>Anyother Sources</i>	<i>Recurring including Salaries</i>	<i>Non-Recurring</i>	<i>SpecialPr ojects/Any otherspeci fy</i>	<i>Expensesper student</i>
<b>88,18,408.00</b>	<b>11,05,82,250.00</b>	<b>2,58,680.00</b>	<b>12,00,73,919.00</b>	<b>5,00,729.00</b>	<b>Nil</b>	<b>10002.00</b>

### Adequacy of Budget Allocation

The Budget proposal for the academic year is prepared by the individual departments as per the guidelines by TMAE Society and 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.

### Utilization of allocated funds

#### Utilization of allocated fund during 2020-23

YEAR	2022-23	2021-22	2020-21
Utilization of the Budget (%)	92.6	93.1	73.3

Availability of the audited statements on the institute's website  
Audited statements for the financial years 2018-19, 2019-20, 2020-21, 2021-

22 are available in our institute website URL: <http://tmaespolytechnicpt.com/mandatory-disclosures/>

### Department Specific Budget Allocation, Utilization

Budget will be allocated to every department at the beginning of the academic year based on the estimations submitted by the concerned HOD. It will be sanctioned after the approval from the management.

**Table 1: CFY 2022-23**

Total Budget: 190000		Actual expenditure (till...): 176023	
NonRecurring	Recurring	NonRecurring	Recurring
150000	40000	140000	36023

**Table 2: CFYm12021-22**

Total Budget 45000		Actual expenditure (till...): 41887	
NonRecurring	Recurring	NonRecurring	Recurring
20000	25000	19588	22299

**Table 3:CFYm22020-21**

TotalBudget45000		Actualexpenditure(till...):32986	
NonRecurring	Recurring	NonRecurring	Recurring
10000	35000	--	32986

**Table 4:CFYm32019-20**

TotalBudget40000		Actualexpenditure(till...):26557	
NonRecurring	Recurring	NonRecurring	Recurring
10000	30000	--	26557

**AdequacyofBudgetAllocation(2)**

Theadequatebudgetwillbesanctionedbythemanagementforthepurchaseofequipmentsandconsumablesatthebeginningofeveryfinancialyear.

Theprincipalcallsforindentfromeachdepartment.TheHODsmeetingwillbecalledbytheprincipalto discussaboutbudgetavailabilityandtherequirementsfortheacademicyear.Aconsolidatedreportwillbepreparedbytheprincipalafterthemeetingandthesamewillbeforwardedtothe management.Themanagementwillscrutinizethebudgetrequirementand asanctionletter willbesenttotheprincipal

**Utilizationofallocatedfunds(3)**

Year	Non-RecurringBudget		RecurringBudget		Utilization	
	Sanctioned	Expenditure	Sanctioned	Expenditure	Non-Recurring	Recurring
2020-21	10000	0	35000	32986	0	94.2%
2021-22	20000	19588	25000	22299	97.9%	89.1%
2022-23	150000	140000	40000	36023	93.3%	90.1%

**LibraryandInternet(20)**

(Itisassumedthatzerodeficiencyreportwasreceivedbytheinstitution,Effectiveavailabilityandutilizationtobedemonstrated)Qualityoflearnin  
ngresources(hard/soft)(10)

Ourinstitutelibraryhassufficientnumberofbooks,Journals,TechnicalMagazines;E-

BooksareavailableinDigitalLibrary(LanguageLab).OurfacultymembersareregisteredwithNDL.Studentsareinsistedtogetregisteredto  
NDL.

ThedetailsofBooks&Journalsavailabilityisgivenbelow:

<b>Department</b>	<b>Titles</b>	<b>Volumes</b>
Automobile	188	950
CompScience	1002	4156
Civil	637	3583
E& C	886	4826
E& E	393	2160
Mechanical	856	6207
Metallurgy	48	291
Mining	83	492
Science	287	2223
General	84	125
<b>Total</b>	<b>4469</b>	<b>25113</b>

ListofJournalsavailableintheLibrary:

Sl. No.	TitleofJournal
1	IndianJournalofInformationSciencesandComputerApplication
2	IndianJournalofMechanicsandThermodynamics
3	IndianJournalofPhysicsandApplications
4	IndianJournalofMaterialsinCivilEngineering
5	AdvancesinWirelessandMobileCommunications
6	IndianJournalofAdvancesinElectricalEngineering
7	IndianJournalofModernAutomobileEngineering
8	IndianJournalofCivilMechanicalEngineering
9	IndianJournalofProductionandQualityTesting
10	IndianJournalofAutomobileEngineering
11	IndianJournalofConstructionEngineeringandTechnology
12	IndianJournalofMechatronics
13	IndianJournalofSimulationandWirelessCommunication
14	IndianJournalofModernSoftwareEngg.
15	IndianJournalofNetworksandApplications
16	IndianJournalofMaterialsPhysics

**Internet(10)**

NameoftheInternetprovider	BSNL FTTH
Availablebandwidth	up to100Mbps
Wi-Fiavailability	YES
Internetaccessinlabsandoffice	YES
Securityarrangements	YES

### **Institutional Contribution to the Community Development(5)**

We have NSS wing in the institute and our NSS Coordinators will identify few villages and along with volunteers organize various community development and awareness programs at identified villages regularly. These programs will be organized in every semester with the active participation of students and NSS volunteers. There will be one special camp every year. The major objective of the program is to create awareness among public regarding cleanliness, plantation, healthcare etc.,

Photographs below through some light on various activities organized under NSS camp.



Various other community development programs will be organized in every semester shown below:





2) National Voters Day Oathtaking program



3) General Healthcheckup camp for staff & students



4) CovidVaccinationProgramattheinstitutewiththesupportofLocalHealthDept:



5) CovidTest(RapidTest)ProgramtofollowtheSOPGuidelinesgivenbyHealthDept



6) Participation in Road Safety week organized by Department of Traffic Police, Hosapete



7) Free Eye Checkup Camp for the public.



8) National Youth Day celebration



INDUCTIONPROGRAMFORFIRSTSEMESTERSTUDENTSOFTHEACADEMICYEAR2023-24



YOGA&MEDITATION



SEMINARONPERSONAL HEALTHCAREFORGIRLS

STUDENTS ATTENDING LECTURE ON "SANKALPANA-2047"



SECOND SEMESTER STUDENTS AND STAFF ATTENDED THE PROGRAM ON ACCOUNT OF 161<sup>ST</sup> BIRTHDAY OF SWAMY VIVEKANANDA OUR STUDENT GOT SECOND PRIZE IN SPEECH COMPETITION ON PERSONALITY DEVELOPMENT



AlumniPerformanceandConnect

AlumniCommitteehasbeenconstitutedhavingfollowingstaffmembers

<b>Sl. No.</b>	<b>Name</b>	<b>Designation</b>	<b>RoleinAlumni Committee</b>
1	Dr.HKShankarananda	Principal	Secretary
2	Sri. TLYogananda	I/cHOD,MN/MT	JointSecretary
3	Sri.NMaheshKumar	HOD/ECDept	Coordinator/Treasurer
5	Sri.ShankarBabu	Lecturer/CEDept	Member
6	Sri.Gavisiddappa	Sl.Gr.Lecturer/MEDept	Member
7	Sri.SSSiriyannavar	Sl. Gr.Lecturer/ATDept	Member
8	Smt.RekhaM	Sl.Gr.Lecturer/ECDept	Member

Severalactivitiesorganizedincoordinationwithalmamaterbothoffline&online

Alumniconnectivityisdonethroughsocialmediaplatform.Meetingswillbeorganizedtodiscussaboutacademicprogress.

## Declaration

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

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.

It is submitted that information provided in this Self-Assessment Report is factually correct.

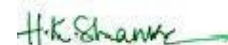
I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Head of the Institute

Name: Dr. HKSHANKARANANDA

Designation: PRINCIPAL

Signature



Seal of the Institution:



Place: HOSPETA Date:

01-02-2024