Vedavyasa Institute of Technology

Computer Science & Engg.

Part A : Institutional Information

1   Name and Address of the Institution

Vedavyasa Institute of Technology,
Karadparamba PO, Via Ramanattukara

2   Name and Address of Affiliating University

AICTE

3   Year of establishment of the Institution:

2004

4   Type of the Institution:

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

5   Ownership Status:

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

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

Name of Institutions	Year of Establishment	Programs of Study	Location
Vedavyasa College of Architecture	2014	UG B.Arch	Malappuram
Vedavyasa College of Arts and Science	2015	UG BA BSc	Malappuram

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

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
B.Tech Computer Science and Engineering	UG	2004	2004	60	Yes	30	Applying first time	--	--	Yes	4

Sanctioned Intake for Last Five Years for the B.Tech Computer Science and Engineering	
Academic Year	Sanctioned Intake
2021-22	30
2020-21	30
2019-20	30
2018-19	30
2017-18	60
2016-17	60

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
M.Tech Computer Science and Engineering	PG	2011	2011	18	No	18		--	--	No	2

8   Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Science & Engg.

9   Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	14	14	18	18	19	19
Faculty in Engineering (Female)	33	33	33	33	30	30
Faculty in Maths, Science & Humanities (Male)	5	5	2	2	3	3
Faculty in Maths, Science & Humanities (FeMale)	7	7	10	10	9	9
Non-teaching staff (Male)	14	14	14	14	14	14
Non-teaching staff (FeMale)	7	7	4	4	4	4

B. Contractual* Employees (Faculty and Staff):

Items	2021-22		2020-21		2019-20	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)						
Faculty in Engineering (Female)						
Faculty in Maths, Science & Humanities (Male)						
Faculty in Maths, Science & Humanities (FeMale)						
Non-teaching staff (Male)						
Non-teaching staff (FeMale)						

10   Total number of Engineering Students:

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

Engineering and Technology- UG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	256	237	213
Total no. of Girls	158	153	130
Total	**414**	**390**	**343**

Engineering and Technology- PG Shift-1

Items	2021-22	2020-21	2019-20
Total no. of Boys	17	10	3
Total no. of Girls	41	23	6
Total	**58**	**33**	**9**

11 Vision of the Institution:

Grooming up Professional Engineers.

12 Mission of the Institution:

To launch successfully a high-tech educational package and produce holistically developed technical personalities.

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

Head of the Institution	
Name	Dr.Sangeethaa
Designation	Principal,Professor
Mobile No.	9446565077
Email ID	vvit@vedavyasa.org

☑**NBA Coordinator, If Designated**

Name	Dr. S Kavitha Murugeshan
Designation	Vice Principal,Professor
Mobile No.	9061212493
Email ID	hodcse@vedavyasa.org

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	60.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	120.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	120.00
4	STUDENTS' PERFORMANCE	150	115.53
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	180.19
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	50	50.00
8	FIRST YEAR ACADEMICS	50	41.92
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	120.00
	Total	**1000**	**938**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)   Total Marks 60.00

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

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	Grooming up Professional Engineers.		
Mission of the institute	To launch successfully a high-tech educational package and produce holistically developed technical personalities.		
Vision of the Department	To be renowned Centre for moulding eminent and successful computer professionals.		
Mission of the Department	**Mission No.**	**Mission Statements**	
	M1	To provide a learning ambience to enhance innovations, problem solving skills, leadership qualities, team spirit and ethical responsibilities in the society	
	M2	To promote hi-tech IT professionals in the emerging area of technology	

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

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Graduates shall have latest knowledge in Computer Science & Engineering along with other interdisciplinary and allied main core subjects like mathematics, science, management and technology to become IT professionals, scientists and researchers.
PEO2	Graduates shall excel in analyzing, designing and problem solving with updated skills, to develop computer applications and systems, resulting in the betterment of the society.
PEO3	Graduates shall cultivate team-spirit, ethics, social values, skills on communication and leadership, enabling them to become leaders, entrepreneurs and social reformers.

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

Total Marks 10.00

Institute Marks : 10.00

Sl. No.	Particulars	Justification
1	Department Newsletter	Department issues Biannual Newsletter every year. Department Vision, Mission and PEOs are always part of front page and disseminated to all stake holders through E mail.
2	Information Brochure	Department prepares Information e-Brochure which includes Planning of current semester and closing of previous semester. It is circulated among all students through Email at the time of commencement of semester. This Information brochure includes Vision, Mission and PEOs
3	College magazine	Institute Publishes Annual magazine to provide information about all Academic Activities and Non-Academic Activities of the year. This magazine is provided to all stakeholders at various meeting and it includes Vision, Mission and PEOs.
4	College Brochure	College Brochure is published once in a Academic year and Disseminated to all stakeholders. This Brochure includes Vision, Mission and PEOs of all the Departments of VVIT
5	Website	Department Vision, Mission PEOs are available on https://www.vedavyasa.org/vvit/computer-science-engineering.php (https://www.vedavyasa.org/vvit/computer-science-engineering.php)
6	Printed Poster	Posters of Vision, Mission and PEOs are published and made available at Department Notice Board, HoD Chamber, Classrooms, Laboratories, Corridor and Common Area
7	Orientation Lecture	Orientation lecture is conducted for each section by head of the Department to make students aware about Academic and Non-Academic Activities of the Department during SIP First day. In this orientation lecture PPT is used to disseminate information about Vision, mission and PEOs to all the students of current Academic year.
8	FDP/STTP	Vision, Mission and PEOs are integral part of each faculty Development Program to get All faculty members aware
9	Department Meeting	There are Three Committees at Department level, Class Committee, Department Assessment Committee (DAC) and Program Advisory Committee (PAC). Each Committee Conducts periodically meeting and Vision, Mission and PEOs are Discussed
10	Alumni Meet	Vision, Mission and PEOs are disseminated in Alumni meet also through interaction with Alumni and Posters
11	Zero lecture/lab	Zero lectures are conducted for each Subject and laboratory session. It is the first lecture for any subject and lab which provides general information relevance, significance and importance as well as application
12	Student Handbook	Student Handbook consists of Department Vision and Mission, PEOs, Pos and PSOs. Along with these objectives List of teaching faculty, Syllabus, Teaching Scheme and Course Outcomes of all the subjects in current semester are also mentioned in this. Student e-Hand Book is provided to the students in the beginning of each semester.
13	Course File	Department Vision, Mission, Pos are available in Course File
14	Lab Manual	Department Vision, Mission, Pos are available in Course File

Vision and Mission of the Department are conveyed to stakeholders as follows:

- Special sessions are organized before the start of the academic session, where faculty members and Lab staff are explained the vision and mission.
- The vision and mission statements are explicitly communicated to the newly enrolled students and the parents during orientation and induction program.
- Alumni are updated about any changes during Alumni interaction.
- The statements are communicated to the industry/employers through presentations during industrial visits and with other industry-institute interactions.

Additionally, dissemination of PEOs to various stakeholders of the program is done at the meetings of faculty members, Board of Studies (BOS), Program Assessment Committee (PAC) and Department Advisory Board (DAB).

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

Institute Marks : 25.00

Steps implemented in defining the Vision & Mission of the Department

Step 1: Vision & Mission of the college are considered as the reference point.

Step 2: Consultation with all the faculty in the department and other departments is the starting point where suggestions & observations from faculty are recorded by the departmental advisory committee

Step 3: Input from student and parent surveys, subject experts, alumni are also considered. Input from the Training and Placement Office is also considered to get the employer's perspective.

Step 4: The first draft of vision and mission prepared by the departmental advisory committee is discussed in the faculty meeting and suggestions are incorporated.

Step 5: This updated draft of vision and mission is also discussed with program assessment committee and again revisions are incorporated.

Step 6: Finally, the summarized views and observations are presented to the Director through HoD and finally approved by the Director.
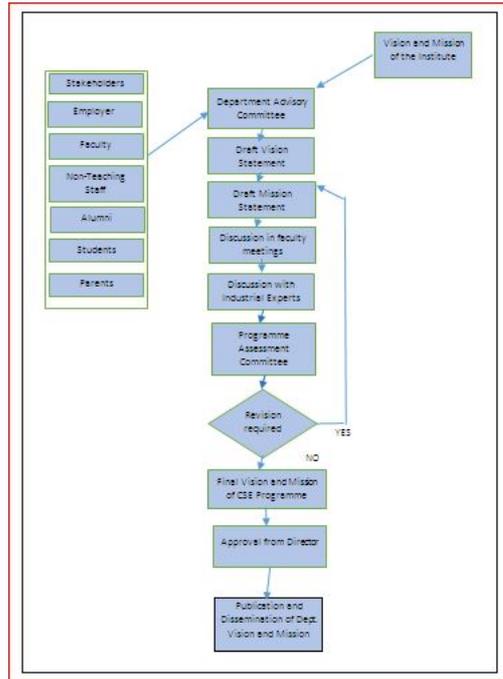

Fig 1.4 a Process of formulating vision and mission statements

Steps implemented in defining the PEOs of the Programme (CSE)

Step 1: PEOs are established in line with Vision and Mission of the Programme & College.

Step 2: Department advisory committee establishes PEOs through a consultation process involving stakeholders. At department level PEOs are discussed with all faculty & staff members through department meetings & suggestions are invited.

Step 3: This updated draft is then discussed with the program assessment committee and revisions are incorporated.

Step 4: PEOs are finally presented to the Director through HoD. And finally approved by the director.
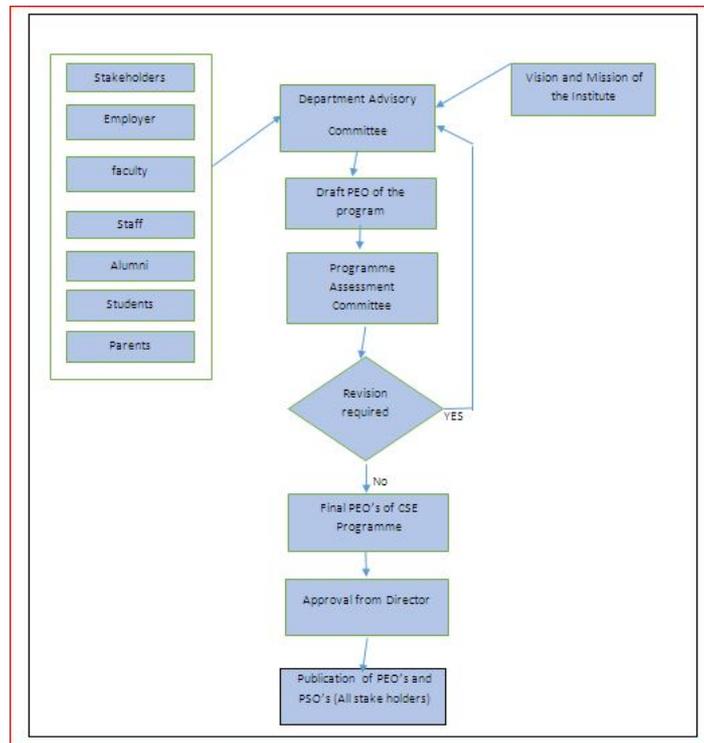

Fig 1.4 b Process of formulating PEO statements.

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

Table 1.5.a. Mission of the department

Mission of the Department 1 (M1):
To provide a learning ambience to enhance innovations, problem-solving skills, leadership qualities, team spirit, and ethical responsibili
Mission of the Department 2 (M2):
To promote hi-tech IT professionals in the emerging area of technology

Table 1.5.b. : Mission of the Department – PEOs matrix with justification and Process

PEO Statement	Weightage of Mission of the Department	Justification	
PEO1 Graduates shall have the latest knowledge in Computer Science & Engineering along with other interdisciplinary and allied main core subjects like mathematics, science, management, and technology to become IT, professionals, scientists, and researchers.	M1: **3**	PEO1 is **highly cohesive with M1**, as it focuses on the core knowledge imparted to the students by our dedicated competent staff, and hence it is assigned 3.	• Use of modern teachin • Remedial & extra class • Extra lab hours • Tutorial sessions • Inclusion of humanities • Online certifications, • Activities through stude
	M2: **3**	PEO1 is **highly cohesive with M2**, with a provision of fully equipped labs as per the curriculum defined by the affiliating university and the students undergo various training programs for their overall development, hence assigned 3.	

PEO2
 	
Graduates shall excel in analyzing, designing and problem solving with updated skills, to develop computer applications and systems, resulting in the betterment of the society.
	M1: **3**	PEO2 **highly maps with M1**, as students follow the course curriculum and develop their technical knowledge in the area of Computer Science.	• Social activities by tech
			• Participation in the soc
			• Awareness through stu
			• Awareness through cel
			• Career oriented value a
			• Classroom presentatio
			• Career based training
			  interviews, aptitude ses
			• International conferenc
			  visits, expert talks, etc.

	M2: **3**	PEO2 **highly maps with M2**, as apart from the curriculum, they are provided with various workshops on personality development and the latest technology, which would help them to meet the challenges of the competitive world.	
PEO3 Graduates shall cultivate team-spirit, ethics, social values, skills on communication and leadership, enabling them to become leaders, entrepreneurs and social reformers.	M1: **3**	PEO3 **matches highly with M1**, like workshops on entrepreneurship development help in inculcating ownership and responsiveness towards one's profession and society.	• NSS, UBA, IIC activitie • Organizing Profession activities. • Personality developme • Universal Human Valu • Awareness of global co
	M2: **3**	PEO3 is **highly cohesive with M2**, as leadership trait is nurtured in the students by exploring their strengths in research and innovative projects, which can help them, think out of the box in their respective professions and as the institute focuses on fostering and nurturing work ethics, team spirit and responsiveness, by providing trainings on soft skills and human values.	

PEO Statements
Graduates shall have latest knowledge in Computer Science & Engineering along with other interdisciplinary and allied main core subjects like mathematics, science, man technology to become IT professionals, scientists and researchers.
Graduates shall excel in analyzing, designing and problem solving with updated skills, to develop computer applications and systems, resulting in the betterment of the so
Graduates shall cultivate team-spirit, ethics, social values, skills on communication and leadership, enabling them to become leaders, entrepreneurs and social reformers.

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)

Total Marks 120.00

2.1 Program Curriculum (20)

Total Marks 20.00

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

Institute Marks : 10.00

The process of identifying compliance of the curriculum for attainment of POs and PSOs.

Vedavyasa Institute of Technology (VVIT) is affiliated with A.P.J. Abdul Kalam Technological University (KTU) Thiruvananthapuram, Kerala State and hence the syllabus/curriculum prescribed by the university is followed. KTU is one of the renowned universities and among the top ranking (NIRF 2020: 42) universities in the country. Generally, Curriculum maintains the balance in the composition of Basic Sciences, Humanities and Social Sciences including Management courses, Engineering Sciences, Professional core and elective courses, Project work and industrial training Courses. The Institution was affiliated with University of Calicut, Calicut, Kerala till 2014. In accordance with Government of Kerala mandate, engineering colleges in Kerala came under KTU from 2015. The University subjected the curriculum to a major revision in 2019. The regulations followed in the last three academic years is shown in Table 2.1.1.a

Table 2.1.1.a. The regulations followed in the last three academic years

Year of the	Applicable Academic Regulations		
B. Tech Program	CAYm3 (2018-19)	CAYm2 (2019-2020)	CAY m1(2020-2021)
I Year	KTU Regulation 15	KTU Regulation 19	KTU Regulation 19
II Year	KTU Regulation 15	KTU Regulation 15	KTU Regulation 19
III Year	KTU Regulation 15	KTU Regulation 15	KTU Regulation 15
IV Year	KTU Regulation 15	KTU Regulation 15	KTU Regulation 15

The process used to identify the extent of compliance of university curriculum for attaining POs and PSOs i.e., the process to identify the curricular gaps is illustrated in Fig. 2.1.1.a

The extent of compliance of the University curriculum for attaining POs and PSOs is assessed based on

1)   Feedback given by Recruiters in Campus Placements and by prospective Employers

2)   Inputs given by Principal/Management in HoDs' meetings

3)   Feedback given by visiting expert committee members during University Affiliation inspection,

4)   Feedback given by industry experts visiting for guest lectures / technical fests/ Workshops/ other events organized by the Department from time to time

5)   Feedback given by external examiners from KTU during End semester Comprehensive/ Project Viva Voce Examinations

6)   Feedback given by faculty members handling the courses or attending FDPs/ STTPs

7)   Feedback given by students in exit surveys

8)   Feedback given by alumni

9)   Feedback given by Academic/ Professional Bodies
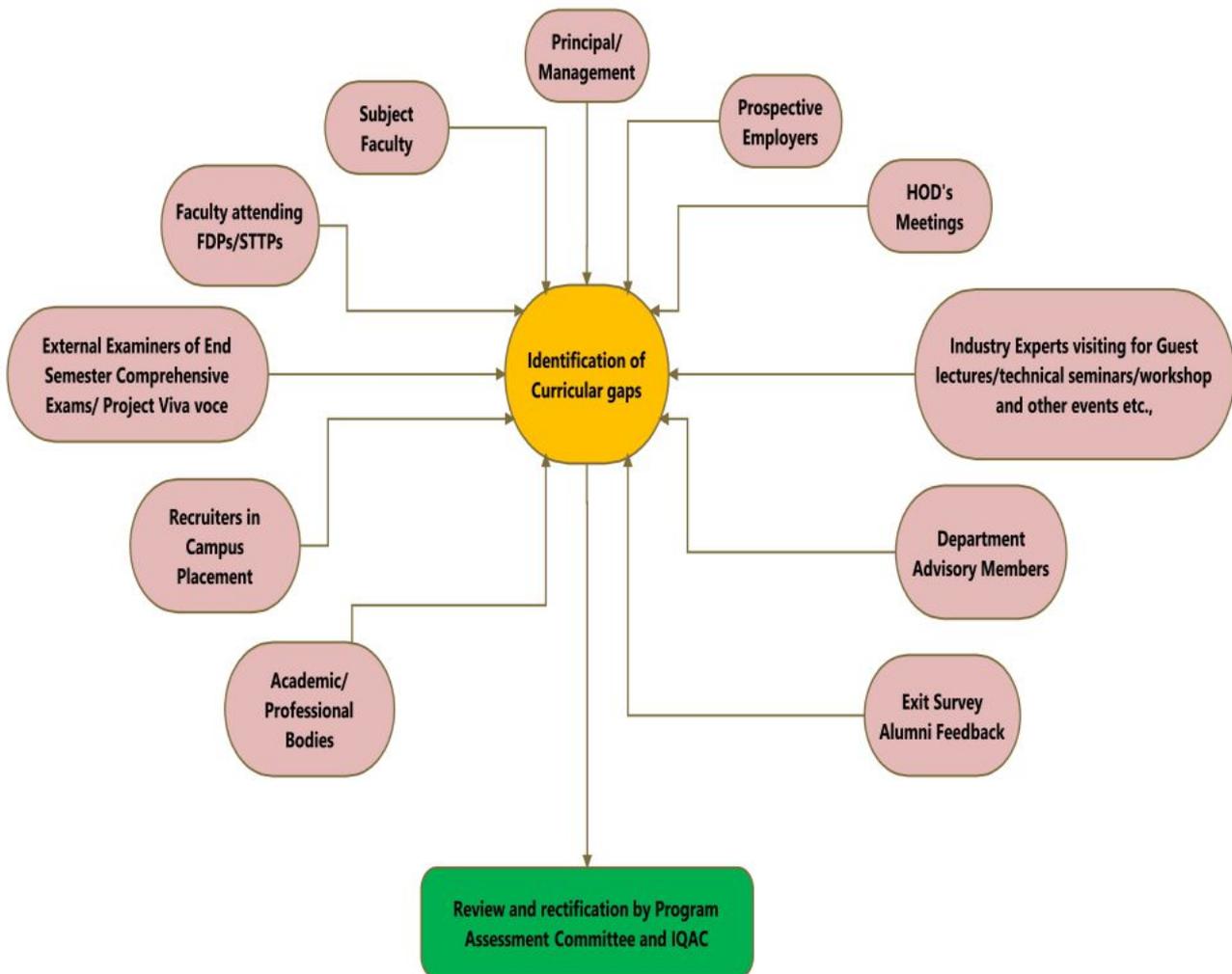
Fig. 2.1.1.a Process for Identification of Curricular gaps

During the study many pertinent questions were considered.

Why was a separate university formed for technical education in Kerala and launched in 2015? Are the engineering programs of the new university markedly different from the earlier programs? Are they relevant to the needs of society and readily subject to changes demanded by emerging technologies and changes in society? Do the programs fit graduates to industry? What are the course outcomes of the courses? Do all the courses help students attain program outcomes? The discussion showed the answers to the questions were in the affirmative.

The meeting recognized that all the courses of the B.Tech. program of CSE of the University could be roughly categorized as follows. Each category is related to some of the POs/PSOs.

(1) Humanities and Social Sciences including Management courses

(2) Basic Science courses

(3) Engineering Science Courses

(4) Program Core Courses

(5) Program Elective Courses

(6) Open Elective Courses

(7) Project work and Seminar

(8) Mandatory Non-credit Courses

In addition to the above courses of each category, a student can pursue Minor or Honours in engineering, if the student so desires. The University effected a major revision of its engineering programs in 2019. It reduced the required credits for earning B.Tech. degree from 180 to 162 credits. Student activities are part of the two curricula. The revised curriculum has mandatory non-credit courses and also optional value-added courses.

These considerations pointed to a thorough study of the curriculum for attainment of POs and PSOs. The basis used to evaluate compliance of the curriculum to attain POs/PSOs is: "Number of courses related to POs/PSOs, (each semester)."

All the faculty members of CSE Dept, aided by those of other Dept, made a complete examination of all the courses of the B.Tech. CSE engineering curriculum 2015. The final conclusion reached was that the entire curriculum addressed all the POs and PSOs. This finding was shared with the other members of the Committee. Their analyses also led to the same conclusion. Some courses are strongly oriented towards realization of some of the POs and PSOs, while others do not have as much degree of underpinning as these courses. Considered as a whole, the curriculum is in consonance with the POs and PSOs. The meeting agreed appreciatively that the new University designed an engineering curriculum that helps students attain POs and PSOs. The table 2.1.1.b shows courses that are related to POs/PSOs, each semester, along a row. All the POs/PSOs are realizable with all the courses, taken as a whole.

Table 2.1.1.b Courses that are related to POs/PSOs, each semester

Academic Year (2021 -2022) CAY

Semester	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	6	5	2	3	3	3	0	4	5	3	1	6	7	0	0
2	8	6	3	5	6	5	2	2	4	4	1	5	7	1	0
3	7	7	7	6	1	6	2	3	1	3	0	8	8	6	0
4	6	6	6	6	2	2	1	4	1	6	1	6	8	2	0
5	7	7	7	6	2	3	0	3	2	3	2	7	8	2	0
6	7	7	6	6	3	2	1	2	1	2	1	7	7	5	1
7	8	8	7	8	1	2	1	2	2	2	1	8	8	5	2
8	5	5	4	5	2	3	2	2	1	1	1	5	5	1	1
Total	54	51	42	45	20	26	9	22	17	24	8	52	58	22	4

Academic Year (2020-2021) CAYm1

Semester	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	6	5	2	3	3	3	0	4	5	3	1	6	7	0	0
2	8	6	3	5	6	5	2	2	4	4	1	5	7	1	0
3	7	7	7	6	1	6	2	3	1	3	0	8	8	6	0
4	6	6	6	6	2	2	1	4	1	6	1	6	8	2	0
5	8	8	8	8	3	2	1	2	3	5	2	8	8	6	3
6	8	9	8	6	3	4	-	5	5	5	4	9	9	6	2
7	8	8	7	8	1	2	1	2	2	2	1	8	8	5	2
8	5	5	4	5	2	3	2	2	1	1	1	5	5	1	1
Total	56	54	45	47	21	27	9	24	22	29	11	55	60	27	8

Academic Year (2019-2020) CAYm2

Semester	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	6	5	2	3	3	3	0	4	5	3	1	6	7	0	0
2	8	6	3	5	6	5	2	2	4	4	1	5	7	1	0
3	7	8	8	7	2	6	-	2	2	3	1	8	8	2	-
4	8	8	8	7	2	1	-	3	4	6	1	8	8	6	1
5	8	8	8	8	3	2	1	2	3	5	2	8	8	6	3

6	8	9	8	6	3	4	-	5	5	5	4	9	9	6	2
7	8	8	7	8	1	2	1	2	2	2	1	8	8	5	2
8	5	5	4	5	2	3	2	2	1	1	1	5	5	1	1
Total	58	57	48	49	22	26	6	22	26	29	12	57	60	27	9

Academic Year (2018-2019) CAYm3

Semester	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	9	7	4	4	4	3	1	4	7	5	4	8	9	2	1
2	10	8	5	6	7	6	4	3	5	5	2	8	10	2	2
3	7	8	8	7	2	6	-	2	2	3	1	8	8	2	-
4	8	8	8	7	2	1	-	3	4	6	1	8	8	6	1
5	8	8	8	8	3	2	1	2	3	5	2	8	8	6	3
6	8	9	8	6	3	4	-	5	5	5	4	9	9	6	2
7	8	8	7	8	1	2	1	2	2	2	1	8	8	5	2
8	5	5	4	5	2	3	2	2	1	1	1	5	5	1	1
Total	63	61	52	51	24	27	9	23	29	32	16	62	65	30	12

2018-2019-CSE CO PO mapping count

Code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
First Semester (2018 Admn)																
BE100	ENGINEERING MECHANICS	1	1											1		
BE1010S	INTRODUCTION TO COMPUTING AND PROBLEM SOLVING	1	1	1	1					1	1	1	1	1	1	
BE103	INTRODUCTION TO SUSTAINABLE ENGINEERING	1	1	1	1		1	1	1	1	1	1	1	1		
CS110	COMPUTER SCIENCE WORKSHOP	1	1							1	1	1	1	1	1	
EC100	BASICS OF ELECTRONICS ENGINEERING	1	1											1	1	
EC110	ELECTRONICS ENGINEERING WORKSHOP	1				1	1			1	1	1	1	1		
MA101	CALCULUS	1	1	1	1	1				1	1			1	1	
PH100	ENGINEERING PHYSICS	1	1							1	1			1	1	
PH110	ENGINEERING PHYSICS LAB	1					1			1	1			1		
	Total	9	7	4	4	5	3	1	4	7	5	4	8	9	2	1
second semester (2018 Admn)																
MA102	DIFFERENTIAL EQUATIONS	1	1	1	1	1				1	1			1	1	
BE110	ENGINEERING GRAPHICS	1	1		1						1			1	1	
BE102	DESIGN & ENGINEERING	1	1				1	1		1	1			1	1	1
CE100	BASICS OF CIVIL ENGINEERING	1	1		1	1	1	1						1		
CE110	CIVIL ENGINEERING WORKSHOP	1				1	1		1	1	1	1		1		
CS100	BASICS OF COMPUTER PROGRAMMING	1	1	1	1	1								1	1	1
CS120	COMPUTER PROGRAMMING LAB	1	1	1	1	1								1	1	1
CY100	ENGINEERING CHEMISTRY	1	1	1	1			1						1		
CY110	ENGINEERING CHEMISTRY LAB	1			1									1	1	
	Total	8	7	5	5	7	6	3	3	4	4	1	6	8	3	2
Third Semester(2017 Admn)																
MA201	LINEAR ALGEBRA & COMPLEX ANALYSIS	1	1	1	1					1	1			1	1	
CS201	DISCRETE COMPUTATIONAL Structures	1		1	1									1	1	
CS203	SWITCHING THEORY AND LOGIC Design	1		1	1		1							1	1	
CS205	DATA STRUCTURES	1	1	1	1									1	1	
CS207	ELECTRONICS DEVICE & CIRCUITS	1	1	1	1	1								1	1	
HS200	BUSINESS ECONOMICS		1	1	1		1		1	1	1	1		1	1	
CS231	DATA STUCTURES LAB	1	1	1	1		1							1	1	1
CS233	ELECTRONICS CIRCUITS LAB	1	1	1										1	1	
	Total	7	6	8	7	2	6	0	2	2	3	1	8	8	4	0
Fourth Semester (2017 Admn)																
MA202	PROBABILITY DISTRIBUTIONS, TRANSFORMS AND NUMERICAL M	1	1	1						1	1			1	1	
CS202	COMPUTER ORGANIZATION AND ARCHITECTURE	1	1	1	1									1	1	
CS204	OPERATING SYSTEMS	1	1	1	1						1			1	1	
CS206	OBJECT ORIENTED DESIGN AND PROGRAMMING	1	1	1	1									1	1	1
CS208	PRINCIPLES OF DATABASE DESIGN	1	1	1	1						1			1	1	
HS210	LIFE SKILLS		1	1					1	1	1	1	1	1		
CS232	FREE AND OPEN SOURCE SOFTWARE LAB	1	1	1	1	1				1	1	1		1	1	1
CS234	DIGITAL SYSTEMS LAB	1	1	1	1					1	1	1		1	1	
	Total	7	8	8	7	2	1	0	3	4	6	1	8	8	5	1
Fifth Semester (2016 Admn)																
CS301	THEORY OF COMPUTATION	1	1	1	1									1	1	
CS303	SYSTEM SOFTWARE	1	1	1	1	1								1	1	1
CS305	MICROPROCESSORS AND MICROCONTROLLERS	1	1	1	1									1	1	
CS307	DATA COMMUNICATION	1	1	1	1									1	1	
CS309	GRAPH THEORY AND COMBINATORICS	1	1	1	1									1	1	
CS331	SYSTEM SOFTWARE LAB	1	1	1	1				1		1			1	1	1
CS333	APPLICATION SOFTWARE DEVELOPMENT LAB	1	1	1	1	1	1			1	1	1		1	1	1
CS341	DESIGN PROJECT	1	1	1	1		1	1		1	1	1	1	1	1	1
CS361	SOFT COMPUTING	1	1	1	1					1	1			1	1	
	Total	9	9	9	9	3	2	1	2	3	4	2	9	9	6	3
Sixth Semester (2016 Admn)																
CS302	DESIGN AND ANALYSIS OF ALGORITHMS	1	1	1	1									1	1	1
CS304	COMPILER DESIGN	1	1	1	1	1								1	1	1
CS306	COMPUTER NETWORKS	1	1	1	1									1	1	1
CS308	SOFTWARE ENGINEERING AND PROJECT MANAGEMENT	1	1	1	1		1		1	1	1	1	1	1		
CS332	MICROPROCESSOR LAB	1	1	1	1				1		1			1	1	
CS334	NETWORK PROGRAMMING LAB	1	1	1	1				1	1	1			1	1	1
CS352	COMPREHENSIVE EXAM	1	1	1			1			1		1		1		
CS368	WEB TECHNOLOGIES	1	1	1		1			1	1	1	1		1		
HS300	PRINCIPLES OF MANAGEMENT						1		1	1	1	1		1		
	Total	8	8	8	6	3	4	0	5	5	5	4	9	9	6	2
Seventh Semester (2015 Admn)																
CS 401	Computer Graphics	1	1	1	1									1	1	1
CS 403	Programming Paradigms	1	1	1	1	1								1	1	
CS 405	Computer System Architecture	1	1	1										1	1	
CS 407	Distributed Computing	1	1	1	1									1	1	
CS 409	Cryptography & Network Security	1	1	1	1				1					1	1	1
CS 467	Machine Learning	1	1	1	1									1	1	
CS 431	Compiler Design Lab	1	1	1	1					1	1			1	1	1
CS 451	Seminar/Project Preliminary	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total	8	8	8	7	2	2	1	2	2	2	1	8	8	5	2
Eighth Semester (2015 Admn)																
CS402	Data Mining & Warehousing	1	1	1	1	1	1	1						1	1	1
CS404	Embedded Systems	1	1	1	1									1	1	
CS472	Principles of Information Security	1	1	1			1	1						1	1	
IT482	Information Storage Management	1	1		1									1	1	
CS492	Project	1	1	1	1	1	1		1	1	1	1		1	1	1
	Total	5	5	4	5	2	3	2	2	1	1	1	5	5	2	1

Fig. 2.1.1.a. Calculation Matrix - Courses that are related to POs/PSOs, each semester

The curriculum comes with course outcomes. Faculty members accept the curse outcomes provided by the University. The table above shows the number of courses in a semester that addresses a particular PO/PSO. All the courses designed by the University for B.Tech. CSE, contribute cumulatively to the attainment of POs and PSOs.Each row of the table shows the number of courses of a semester that relate to POs and PSOs

The feedback obtained as above is reviewed in faculty meetings in general and Program Assessment Committee (PA Committee) and Internal Quality Assurance Cell (IQAC) of the Department in particular and the curricular gaps are identified. The curricular gaps are identified and listed in the table 2.1.1.c belong to one or more of the following categories:

Table 2.1.1.c Curricular Gaps Identified

Gap	Description	Steps/ Action Taken
Gap 1 (I)	During placement drive we identified the gap in our students. Such gaps are reduced by the required training through bridge courses by implementing it in the placement calendar. One such gap was identified was lack of communication skills and students fear of facing the interview.	1. Extra English and aptitude classes are included in the time table slot through STEP activity through life skills course. Other arrangement included use of language lab, Group discussion and MOOC debate. 2. To know about latest trends in the fields of our students they are encouraged to select the topic for seminar. Also, we arrange expert lectures. 3. Additional training on modern tools is given to the students to make them competent among peer groups.
Gap 2 (II)	Lack of knowledge in core areas of Computer engineering.	This curriculum gap is bypassed by taking content topics beyond syllabus and by providing industrial guest lectures

Gap 3 (III)	Industry Environment and Industry Internship.	1. These gaps are covered by arranging industrial visits and promoting students for in plant training. 2. Teaching learning process in addition to regular syllabus is added so that technical and behavioral skill of our student will improve. 3. These gaps are covered by arranging industrial visits and promoting students for in plant training. 4. Students and staff mobility among institute and connected industries through MOU"s.
Gap 4 (IV)	Personality development and Team work.	Though some aspects of personality development are covered in subjects such as Professional Ethics, Life Skills, other essential skills such as interview techniques, importance of team work etc. are covered by inviting experts in respective fields. 1. Induction program for first year student. 2. Encourage to do Micro projects from first year and are expected in sub sequent semesters based on this Activity points are awarded.

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

Suggestions to the Affiliating University regarding curricular gaps

- Regular feedback & suggestions regarding the curricular gaps are passed on to the Director from departments.
- The suggestions are then shared with the university through Director. University has occasionally invited the suggestions on course curriculum from Head of the departments through mails.
- Gaps & inconsistencies in the university question papers are also shared with the university through Director.

The activities, which are in place in the Department for bridging the curricular gaps so as to attain POs and PSOs, are illustrated in Table 2.1.2a

Table 2.1.2a Activities for bridging the Curricular gaps

Sl. No.	Activities in place in the Department for bridging the Curricular gaps	Nature of curricular gap				Relevance to POs/ PSOs
		I	II	III	IV	
1	Organizing Workshops/ Guest lectures/ Symposia for students	👍	👍	👍	👍	All POs and PSOs
2	Student seminars on recent technologies	👍	👍	👍	👍	PO2 to PO7, PO10 to PO12, All PSOs
3	Student participation in Workshops/Symposia at other institutes	👍	👍	👍	👍	PO2 to PO7, PO10 to PO12, All PSOs
4	Industrial visits	👍	👍	👍	👍	All POs and PSOs
5	Coverage of Topics beyond curriculum by faculty in each subject		👍	👍		PO2-PO7, PO10PO12, All PSOs
6	Faculty seminars on topics from research journals		👍	👍	👍	PO2-PO7, PO10, PO12, All PSOs
7	Computer Science and Engineering News Letter	👍	👍	👍	👍	All POs and PSOs
8	Project work with recent technologies		👍	👍	👍	PO2 to PO7
9	Organizing FDPs/Workshops for faculty		👍	👍	👍	PO2 to PO7
10	Faculty participation in FDPs / STTPs / Conferences		👍		👍	PO2 to PO7
11	Faculty Research & Consultancy		👍	👍	👍	PO2 to PO7
12	Use of Internet by students for browsing journals, NPTEL courses, e-books and other Google resources		👍	👍	👍	All POs and PSOs
13	Solving GATE questions by students		👍	👍	👍	All POs and PSOs
14	Interaction with Alumni		👍	👍	👍	All POs and PSOs

15	Procurement of latest Equipment/Software				👍	PO5, PSO2
16	NSS programs	👍				PO6 to PO12, PSO2, PSO3
17	Student Club activities	👍	👍	👍		PO8, PO9, PO10, PO12, PSO2
18	Games and Sports events	👍	👍	👍	👍	PO8, PO9, PO10, PSO2

Nature of Curricular gap:

1. The students exhibit inadequate aptitude and communication skills (PO1, PO2, PO10, PSO1, PSO2)
2. The students exhibit inadequate knowledge of certain topics in Computer Science and Engineering (PO2, PSO1)
3. The students are unable to adequately apply their knowledge to practical problems due to inadequate exposure to real-time projects (PO6, PO7, PSO3)
4. There is need for providing exposure to students in using equipment or software currently used in the industry (PO5, PSO2)

Details of Delivery of the Content beyond the syllabus through these activities for attainment of the relevant POs and PSOs for the last three academic years are provided in Table 2.1.2b along with the relevant POs/PSOs

Tables 2.1.2b Delivery details of the Content beyond the syllabus

CAYm1 (2020-2021)

Sl. No.	Gap	Action Taken	Date-month-year	Resource Person with designation	Percentage of students	Relevance to POs, PSOs (The POs. PSOs in red indicate those identified as weak as above)
1	Webunar on Machine Learning And Applications	Expert lecture	17-10-2020	Ms .Jesna Joseph	90%	PO, 1,2,3,4,5,9,10,12 PSO: 1,2
2	My motivational story	Value added lecture	04-01-2020	Er. Akshay PK	90%	PO1,PO2,PO3,PO4,PO5,PO6,PO8,PO10,PO12,PSO1,PSO2
3	Deficiency in slow-learners	Remedial Classes	Continuous	Faculty members	90%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3
4	Value addition	Engineering Events by Student Chapters & student club (Seminars, TechTalk, Webinar)	During the semester	Faculty members & Resource persons	90%	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
5	Industrial Training & Visits	Industry interaction	During semester break	Industries	100%	PO1,PO10,PO11,PO12
6	Placement preparation Modules	Preparation Classes	During the semester	Ms.Chinjusha PO,VVIT	50%	PO1,PO9,PO10,PO11,PO12
7	Group Discussion	Confidence building classes	Semester End	All Faculty members	80%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3
8	Class room presentations	Confidence building classes	Continuous process	Faculty	100%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2
9	Value Added Session	Use of Jam Board	29-12-2020	Ms Anjana TK	90%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3

Tables 2.1.2c Delivery details of the Content beyond the syllabus

CAYm2 (2019-2020)

Sl. No.	Gap	Action Taken	Date-Month-Year	Resource Person With Designation	Percentage Of Students	Relevance To POs, PSOs (The Pos. Psos In Red Indicate Those Identified As Weak As Above)
1	Value added course	Workshop on Artificial Intelligence	9-03-2020 & 10-03-2020	Jaiden John Bose, Artificial intelligence developer and researcher	70%	PO1, PO 2, PO 3, PO 4, PO 5, PO 9, PO 10, PO 12PSO1, PSO2

2	Value added course	Seminar on Personal To Professional Excellence in the Global IT Industry	27-05-2020	Er. Mujeebur RM Sr.Management Consultant, IT Quality & Service, WIPRO TECHNOLOGIES, Bangalore.	90%	PO1,PO9,PO10,PO11,PO12
3	Value added course	Webinar on EMAIL MARKETING	21-05-2020	Dr.Kavitha S, Asso.Prof, Dept of Mngt., GRG School of Mngt Studies, PSGR Krishnammal College for Women, Coimbatore Tamilnadu	80%	PO1,PO10,PO11,PO12
4	Value added course	Webinar on CLOUD COMPUTING WITH AWS	18-06-2020	Er.Akshay P K, CODA GLOBAL ENGINEER, CHENNAIDEVOPSENGINEER, CHENNAI,	90%	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
5	Value added course	Webinar on 4IR and Data Analytics in Industry 4.0	25-06-2020	Dr. Jaget Babu, Dean Academics VVIT Dr. Venugopal, Former IBM&HP Professional	70%	PO1, PO 2, PO 3, PO 4, PO 5, PO 9, PO 10, PO 12 ,PSO1, PSO 2
6	Value added course	Live Webinar on Exploring Block Chain Applications for Education	14-07-2020	Ms.Cinthia Joy Godly Asst. Manager- Academic Matters Federation University@ IIBT Sydney, Australia	80%	PO1, PO2, PO5, PO12, PSO2
6	Group Discussions	Confidence building classes	Semester End	All Faculty members	80%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3

Tables 2.1.2.d. Delivery details of the Content beyond the syllabus

CAYm3 (2018-2019)

Sl. No.	Gap	Action Taken	Date-month-year	Resource Person with designation	Percentage of students	Relevance to POs, PSOs
1	Value Addition	Engineering Events by Student Chapters & student clubs	During the semester	Ms.Sruthi M Ms.Renya Nath Ms.Jancy M Dr.S.Kavitha Murugesan	80%	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
2	Industry Training	Industrial Training & Visits	Summer/ winter breaks/ during semester	Industrial visits	100%	PO1,PO10,PO11,PO12
3	Research-based projects	WORKSHOP ON ROBOTICS IN ASSOCIATION WITH BECON FEST(IIT DELHI EVENT)	3-8-2018	IIT DELHI	70%	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
4	Group Discussion	Confidence building classes	Semester End	All Faculty members	80%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3

5	Deficiency in slow-learners	Remedial Classes	Continuous	Faculty members	90%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3
6	Confidence building classes	Classroom presentations	Continuous Process	Faculty members	70%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2
7	Additional Course Coverage	Course topics/lab experiments beyond syllabus	Continuous Process	for all courses & labs	95-100%	PO1,PO2,PO3,PO5,PO12,PSO1,PSO2
8	Additional Course Coverage	Extra Classes	Continuous Process	For certain courses(GTC,TOC,DS,SC,DMS)	50-60%	PO1,PO2,PO3,PO5,PO12,PSO1,PSO2
9	Department activities	EXYNOS-technical fests, Expert talks etc	Continuous Process	Arranged by Dept	90-100%	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3

Tables 2.1.2e Delivery details of the Content beyond the syllabus

CAYm3 (2017-2018)

Sl. No.	Gap	Action Taken	Date-month-year	Resource Person with designation	Percentage of students	Relevance to POs, PSOs *(The POs. PSOs in red indicate those identified as weak as above)*
1.	Professional skills on Programming	Two Days Workshop on Building your own Website using JOOMLA	16th -17th December , 2017	Ms. Suvya P ,Asst. Professor, Dept. of CSE, National Institute of Technology, Calicut.	70%	PO, 1,2,3,4,5,9,10,12 PSO: 1,2
2	Value added course	Trends in Networking and PC troubleshooting	15th February, 2018	Mr.Vipin K C Technical Head,AFL IT Academy Mr.Arjun C BDE, AFL IT Academy	90%	PO1,PO2,PO3,PO4,PO5,PO12,PSO1,PSO2
3	Value added course	Expert Talk On Industry Connect - Artificial Intelligence, Wi-Fi, VoIP, Ethical Hacking	22nd February, 2018	Mr.Harsha Chandra and Team, NetSec Solutions, Calicut	90%	PO1,PO2,PO3,PO4,PO5,PSO1,PSO2
4	Conference	International Conference on Recent Research on Applied Engineering and Technology (ICRRAET-2017)	June 2017	Dept.CSE, ECE, VVIT	90%	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2
5	Tech Fest	QWERTY 2018	April 9 and 10 2018	Dept of CSE	100%	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO8,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3

6	Group Discussions	Confidence building classes	Semester End	All Faculty members	80%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3
7	Deficiency in slow-learners	Remedial Classes	Continuous	Faculty members	10%	PO1,PO2,PO3,PSO1,PSO2
8	Classroom presentations	Confidence building classes	Continuous Process	Faculty members	70%	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2

2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Webinar on Machine Learning And Applications	Expert lecture	17/10/2020	Ms .Jesna Joseph	90	PO, 1,2,3,4,5,9,10,12 PSO: 1,2
2	Value Addition	My Motivational Story	04/01/2020	Er. Akshay PK	90	PO1,PO2,PO3,PO4,PO5,PO6,PO8,PO10,PO12,PSO1,PSO2
3	Value Addition	Use of Jam Board	29/12/2020	Ms. Anjana T K	90	PO1,PO2,PO4,PO7,PO9,PO10,PO12,PSO1,PSO2,PSO3

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Professional skills on Programming	Expert lecture	06/11/2019	Mr. Noufal Ibrahim, NIT Calicut	90	PO, 1,2,3,4,5,9,10,12 PSO: 1,2
2	Value Addition	Cyber security and Ethical Hacking	22/08/2019	Mr. Kalathil Karthik	90	PO1,PO2,PO3,PO4,PO5,PO6,PO8,PO10,PO12,PSO1,PSO2

2018-19

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Value Addition	Engineering Events by Student Chapters & student clubs	03/06/2018	Ms.Sruthi M Ms.Renya Nath Ms.Jancy M Dr.S.Kavitha Murugesan	80	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3
2	Research-based projects	WORKSHOP ON ROBOTICS IN ASSOCIATION WITH BECON FEST(IIT DELHI EVENT)	03/08/2018	IIT DELHI	70	PO1,PO2,PO3,PO4,PO5,PO9,PO10,PO11,PO12,PSO1,PSO2,PSO3

2.2 Teaching - Learning Processes (100)　　　　　　　　　　　　　　　　　　　　Total Marks 100.00

2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)　　　　Institute Marks : 25.00

Improvement of quality of Teaching and Learning at VVIT is effected in the following two stages:

 I. Stage I: Teaching –Learning Foundation
 II. Stage II: Improving Instruction Methods

Stage I: Teaching –Learning Foundation

The scheme of activities/elements adopted at VVIT in stage I: the Teaching Learning Foundation is illustrated in Fig. 2.2.1a. It consists of the following activities/elements

1. Budget support
2. Faculty Recruitment
3. Providing Infrastructure
4. Procurement of Quality Equipment / Consumables
5. Academic calendar
6. Subjects' allotment
7. Quality lecture notes
8. FDP/Seminar in Teaching Methodology
9. Lesson Plan
10. Instruction Delivery
11. Lecture dairy
12. Continuous Evaluation
13. Review of Syllabus Coverage
14. End Semester Exams
15. Results Analysis

16. Assessment of CO-PO Attainment
17. Action for unattained COs/POs/PSOs
18. Faculty Annual Appraisal

These elements are briefly explained below

1) Budget Support

The resources needed for Teaching-Learning process are met by suitable Budget. Quality equipment/consumables are procured by the Department through the Department Purchase committee. Similarly the infrastructure requirements of the Department are also proposed by the Department and provided by the Principal/Management.

2) Faculty Recruitment

Effective Teaching-Learning process requires qualified and competent faculty members. Advertisement for Faculty/staff recruitment is published in News Papers in March every year. Eligible and shortlisted candidates will be called for interview in April. The interview panel consists of University Professor, Member of the Governing body and senior faculty member of the Department apart from the HoD, Principal and Secretary/Chairman. Selections are made purely based on merit.
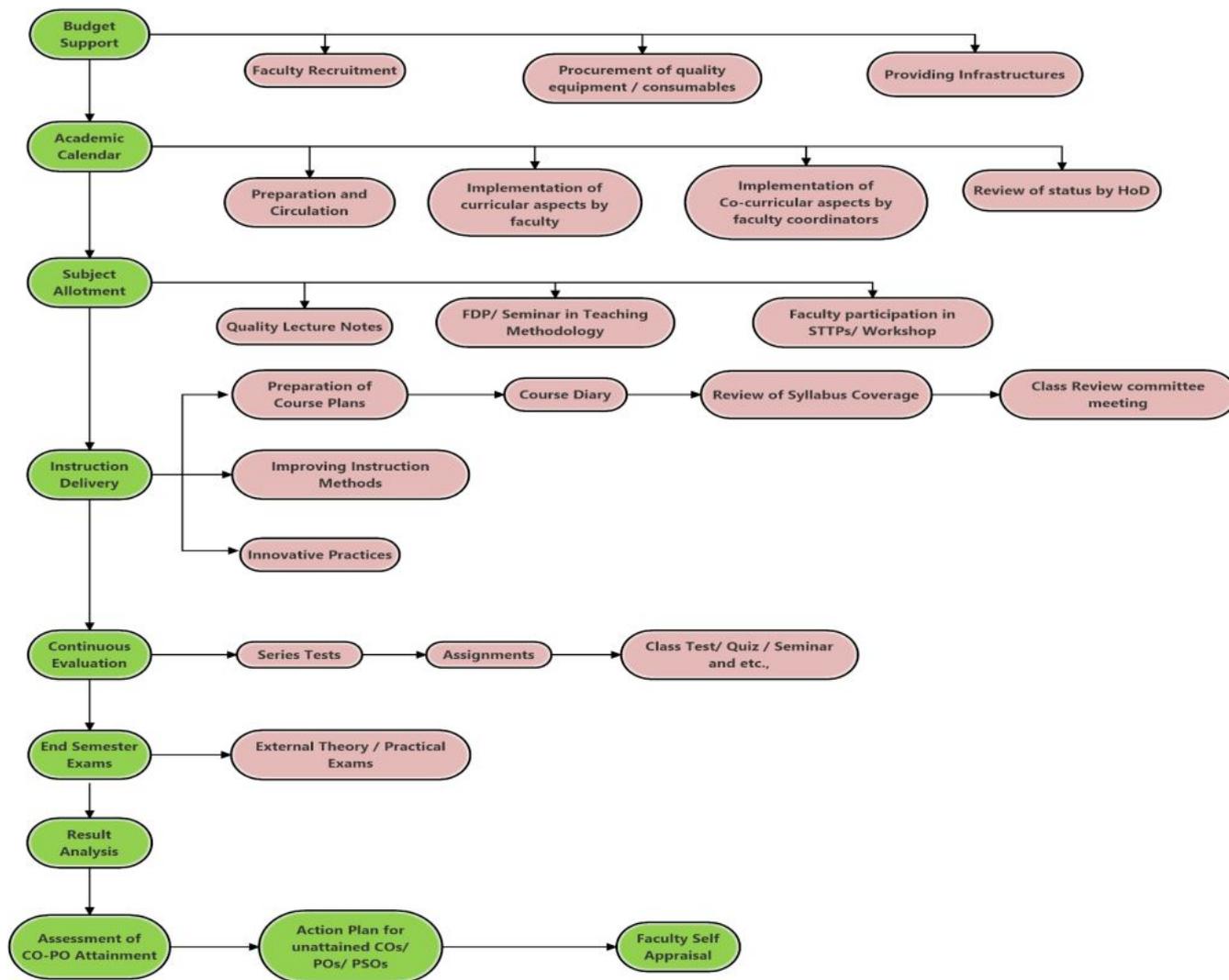
Fig. 2.2.1.a. Flow chart showing the Foundational Teaching-Learning

3) Academic Calendar

The Academic Calendar has been found to be a plan for a semester for not only teaching-learning process but also for related activities. The Department plans ahead of the semester and follows this plan along the semester, thus ensuring a smooth flow of events. The University emails to the Institute an Academic Calendar, which the Institute follows. Shown in the calendar are such events as are significant to the University as being part of a semester. The Department then adds its specific plan of events for the semester. By planning ahead, the Department prepares for systematic unfolding of the semester. With academic steps, extra and co-curricular activities, planning is carried out all the way through to the conclusion of the semester. Students find the calendar quite helpful in their plan of studies. Care is taken to ensure that adherence to the calendar is maintained without fail. Where failure occurs by reason of happenings beyond control, adjustment is made so that the goals anticipated by the calendar are realized. The calendar is useful for both faculty members and students. A sample calendar is shown here. Course delivery, assessment and other transactions are recorded in the course diary, which is a log of events. Other related events like extra-curricular, co-curricular activities, and other supplementary academic events, like visit to industry, expert talk, seminars and the like are recorded a Department register. At the end of the semester, the Head of the Department compares the academic calendar and the log of events (course diary and register) to assess adherence to the academic calendar. A note is made concerning adherence. Where a deviation is seen, adequate justification is reported in writing. This will be a stimulus for meticulous planning for the following semester. In this manner, standard of adherence to academic calendar is maintained.

4) Subjects Allotment

The list of electives is circulated to the students towards the end of the previous semester and the electives for the semester are finalized based on the students option. After finalising the lectives, Faculty members are given choice to give options 1, 2, 3... etc., for subjects allotment. Mostly faculty will be allotted one subject of their 1 choice. The second subject is also given as per the choice of the faculty, subject to the needs of the Department.

5) Quality Lecture notes

Faculty members prepare/update lecture notes for allotted subjects by

- Consulting various prescribed text books, Question banks of previous examinations, relevant NPTEL courses and other e-resources from Google.
- Participating in various workshops organized within and outside the VVIT campus to enhance the practical knowledge.
- Pursuing Ph.D.

6) FDP/Seminar in Teaching Methodology

Faculty Development program in Teaching methodology is organized in June every year, for faculty members having <2 years' experience. HoD also conducts a seminar on guidelines for effective teaching to all faculty members at the Department level. This also includes mock classes by the faculty members.

7) Course Plan

Course plans are prepared by faculty members, based on the Academic calendar, syllabus and weekly load, which is reviewed and approved by HoD.

8) Instruction Delivery

Faculty members take classes as per time table and lesson plan, duly compensating for lost lasses due to leaves, unexpected holidays, and following various teaching-learning techniques, methods etc.

9) Course Dairy

The topics covered in each class are recorded in Course dairy in the subject attendance register. The attendance registers are reviewed by HoD on a regular basis to monitor the syllabus coverage.

10) Continuous Evaluation

This consists of Series exams, Assignments, class tests etc., for theory courses and weekly viva voce, Observation and Record evaluation and internal lab exam for Laboratory courses.

11) Review of Syllabus Coverage

HoD reviews the coverage of syllabus on a regular basis in faculty meetings. Class Review Committee meetings with regular students of the class along with class faculty is organized before each Series Examination.

12) End Semester Exams

These are conducted as per the Academic calendar.

13) Results Analysis

Analysis of Results is done by faculty coordinator for drafting action for low pass percentage in any course.

14) Assessment of CO-PO Attainment

The procedure for assessment of CO-PO attainment has been evolved over a period of time in the

Department. CO attainment is done by the concerned subject faculty and PO attainment is done the concerned coordinator(s). Action plan for unattained POs/PSOs is drafted.

15) Faculty Annual Appraisal

Faculty members submit appraisal of their performance annually, in a prescribed format, which is further reviewed by HoD and Principal for award of Annual increment.

Stage II: Improving Instruction Methods

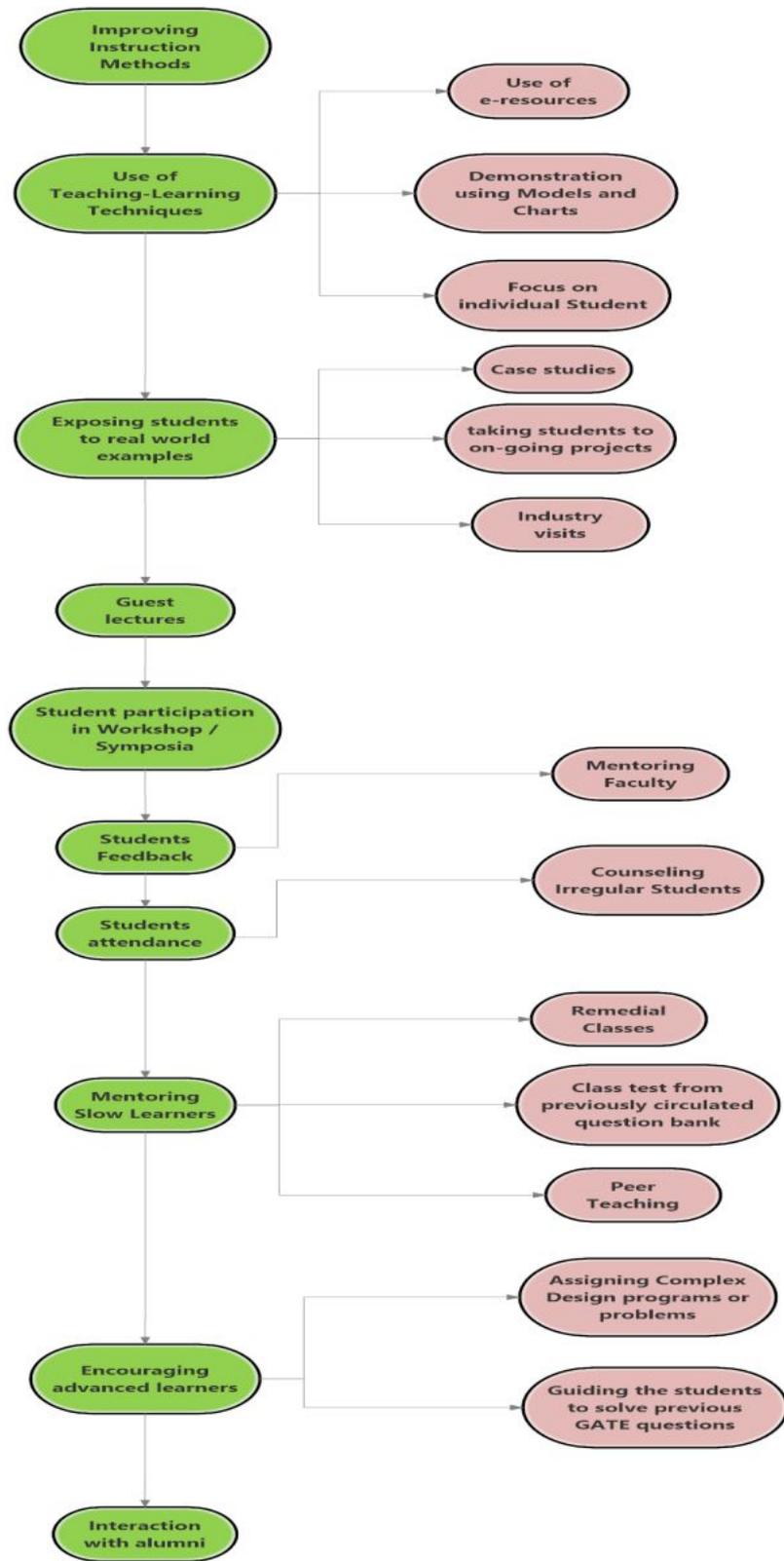The scheme of activities in place at VVIT for improving instruction methods are illustrated in Fig. 2.2.1.b

Fig. 2.2.1.b. Improving Instruction Methods

A) Pedagogical Initiatives

The faculty members/Department adopts various methods, techniques and teaching aids for improving instruction methods, as described below.

1) Use of Teaching-Learning techniques

Revising the topics covered in the previous class through simple questions and answers at the beginning of each class

- Repeating important points in each class
- Conducting Tutorial sessions for problematic subjects.
- Revision of syllabus before examinations

2) Use of e-resources and ICT

- Using attractive electronic presentations (PPT) on difficult topics for better understanding.
- Use of e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL).
- Presenting videos which show the recent technologies in computer science and engineering.

Example

- PPT is incorporated as an item in Course Plan in all subjects wherever relevant

3) Focus on individual students

- Identifying uniqueness of each student, understanding the variations among students rather than lamenting them
- Equal attention on the student, his strengths and limitations, along with the subject matter
- Effective counselling based on the student's individual social and financial background.
- Motivating students to set multiple career goals to sustain their interest in the learning process.

4) Real world Examples

- Exposing students to real world through Examples
- Presenting the real-life engineering problems through case studies.
- Demonstration using Models and charts for better subject understanding.
- Providing exposure to real world of Engineering by taking students to on-going projects within and outside the campus.

5) Mentoring slow learners

Remedial classes are conducted for late-joining lateral entry students with a separate time table to cover the syllabus up to their joining time. Remedial classes are also conducted for lateral entry students in Mathematics, as they are found to be weak in Mathematics.

Class tests are conducted after a unit syllabus is completed and the slow learners are identified. Remedial classes are conducted for these slow learners before the Series exams.

6) Encouraging Advanced learners

- Assigning complex design problems individually to enhance the problem skills of students
- Giving assignments to the students on topics beyond curriculum.

7) Guest Lectures

Guest lectures are organized by industry experts which provide industry exposure to the students beyond the class room learning and curriculum. The details are provided in Sec.2.1.1 and 2.1.2 of the SAR

8) Students Participation in Workshops/symposia

Students are encouraged to participate in workshops and technical symposia organized by various

engineering colleges including IITs. This adds to the knowledge and enhances their knowledge, attitude and communication skills.

B) Students feedback

Feedback is taken from students on the effectiveness of teaching and subject learning at different points of time during the semester. Initially, feedback is taken from representative students from each class informally by HoD after 1-2 weeks of commencement of class work. Feedback is also taken during students counselling by all faculty members during the same period and communicated to the HoD. If students are facing difficulty in any subject, the concerned faculty member is informed of the same. Necessary guidance and support is given by HoD and another senior subject faculty member. This consists of asking the faculty member to give a mock class before HoD and another senior subject faculty, giving guidelines for improvement, reviewing the lecture notes and offering necessary support in the subject. After 2-3 weeks, feedback is again taken from students in the subject for necessary action. In extreme cases, where the faculty member is unable to improve up to the minimum desired standard, the faculty member is removed from service with sufficient notice.

Besides the above, on-line students Feedback is taken anonymously twice every semester. The feedback is summarized and communicated to all faculty members with necessary remarks by the Principal. This feedback is considered part of Annual Performance Appraisal of the faculty member with a weightage of 25% in Teaching-Learning and Evaluation category.

C) On-line Attendance and Counselling irregular students

The students' attendance is updated in the Attendance register on a daily basis. The students are generally counselled to maintain a minimum attendance of 85%. In the first month of each semester, the students with attendance<85% are identified and their parents are informed. These irregular students are counselled and an undertaking is taken from them duly signed by their parents. In case of students with attendance<65%, the concerned parents are called to the college to meet the Principal/HoD and sign the undertaking. The class teacher consolidates the action taken and submits a report to the HoD. The process is continued in case of students who continue to be irregular. This practice is found to significantly reduce the irregularity of the students.

D) Quality of laboratory experience

The quality of laboratory experience to students is improved through the following measures.

1. Experimental setup: student ratio 1:2 is maintained which provides good quality of laboratory experience.
2. Manuals are provided for all experiments in the laboratories.
3. Viva-voce is conducted before commencement of each lab class
4. Faculty member monitors to see that every student is involved in recording of readings/observations
5. Programming and analysis of data as well as practical significance /application of the results obtained is done by students individually
6. Use of Rubrics for assessment of students in each lab class has been initiated.

As per University guidelines experiments marked as mandatory practice sessions given in the syllabus are given high priority. Extra experiments are also conducted beyond the specified list for relevant courses wherever necessary. Well-equipped lab with updated practical sessions as per the latest technologies helps the student to update themself. Faculty members of respective specialization form a group with a team leader to discuss the preparation of manual, requirements, conduction of experiments and cycle of experiments before commencement of semester.

Laboratory manual explaining the details of the experiment, Algorithm/Procedure /design are available with the course teacher and are provided to students at the commencement of the semester. The Laboratories experiments are conducted in session of 3 hours, in each session the faculty explains the circuits/logic and design/ algorithm of the experiment. The students will write the complete algorithm concerned in the record book, and then rig up / code/debug/execute the program on the system and interpret the results.

The executed program with output, related theory and Algorithm or flowchart is documented in the record book by the students later which will be evaluated. In each subject many students are made to work on number of additional programs for the better understanding of the subject. Viva questions will be prepared in advance for all the experiment. The Laboratories are evaluated by the faculty based on their performance during the semester, attendance, internal test and record submission based on University Regulations as CIE (Continuous Internal Evaluation) and ESE (End Semester Examination). The observations/Outputs are checked and verified by faculty and record books are maintained systematically. Two faculty members and one instructor are assigned for each practical class. Students are permitted to repeat the experiments to become skilled if needed.

Some of the Experiments are done in groups thereby encouraging students to do teamwork.

Research lab established in the department is used for the experiments to be conducted with student interest in research.

The college organize inter collegiate contests, Symposiums, to encourage students to demonstrate their programming skills.

Evaluation: The teaching-learning process, after its launching at the beginning of the semester, is evaluated along the way and at the end of the semester. Students' feedback of the teaching-process is helpful in uncovering areas or deficiencies that need sharpening. Tests and assignments also point up the need for enhancement of student performance. Weak students are taught again the topics that need further reinforcement in remedial classes. The two-pronged evaluation is part of the teaching-learning process and is indispensable for continual improvement. Furthermore, an internal academic audit conducted by IQAC, after the first formal University-mandated test, shows the performance of academic course delivery, like course coverage, assessment, maintenance of course diary and others of relevance. Course end survey is made part of the process of CO attainment.

Internal Quality Assurance Cell: (IQAC) It studies the evaluation reports, audit reports and makes recommendations for raising quality level in teaching-learning process.

Encouraging bright students: Freshly enrolled students with more than 90% of marks at the qualifying Higher Secondary examination enjoy exemption from tuition fee with only payment of first year admission fee. Scholarship based on percentage of marks in Physics, Chemistry and Mathematics, is given in the form of subsidized tuition fee that proportionately decreases with increasing marks.

Students who secure full pass in the first attempt at the university engineering examination are recognized with cash award, mementoes and certificates.

Assisting weak students: They are given required books from the library over and above that fixed by rules. Special classes are set in the evening during the time between conclusion of semester and commencement of university examinations.

Summary of quality aspects for improving teaching-learning process: Course delivery manual, course diary, LMS, faculty-student mentoring, evaluation, academic audit, IQAC recommendations, pointers from previous semester, class/course committee meetings, blended learning.

Impact analysis:

(i)   Class/course committee meeting: Students are informed about the schedule of events of the semester like submission of assignments, summative test, coverage of syllabus to a timetable, assessment methods, marks, solution to student-problems, end-semester examination after just a week. Informing these things help students to use time wisely for studies.

(ii)   Course delivery manual: As it is made of syllabus, course notes, assignment and test questions, tutorial, course end survey form, a faculty member becomes fully equipped to deliver the course, making course delivery effective.

(iii)   LMS Platform: The Institute purchased an LMS named "Vedavyasa APP" which can work in android devices and in desktop systems. Every student and teacher are given a user id and password. Every student and teacher can access the app using the given user id and password.

(iv)   Features provided to students: To check their attendance, marks, notes. Submitting assignment, attending quiz/tests.

(v)   Features to teachers: To mark attendance, test marks and upload notes. Features for publishing assignments and conducting quiz and online test are also available.

(vi)   Remedial class: Slow-learners are taught again such topics as they have not grasped. Then a simple test is administered. This way such students are encouraged to progress in their studies.

(vii)   Encouragement to bright students: With the above-said incentives, students are motivated to study and to perform as best they can.

(viii)   Assisting weak students: Such students do not lose hope when they can depend upon faculty members who are more than willing to help them with studies. They are inspired to put in their best efforts and have often done with good results.

(ix)   Evaluation: Faculty evaluation shows the way to better and improved teaching. The evaluation provided by students is studied and faculty members are intimated as to the areas that need special attention for helping students attain COs, POs.

(x)   Mentoring. Mentoring by a faculty member encourages a student with his/her studies. Personal problems are dealt with in a manner helpful to students. Mentoring by a self-directed student for a slow learner inspires the latter to better performance.

(xi)   Academic audit: It assesses how a programme has been delivered. All aspects, are covered like class/course committee meeting, Advisory meetings, syllabus coverage, conduct of lab. class, conduct of internal assessment, feedback, course diary, activity of students, LMS, blended learning, report of student interaction. Gaps, spotted by the audit, are dealt with satisfactorily. Both internal and external audits are scheduled.

(xii)   IQAC recommendations: The recommendations suggested by internal audit reports are articulated and intimated to Depts for implementation for betterment.

(xiii)   Blended learning: Class-room learning is supplemented by online mode of learning. Videos and lecture notes are made available in Google Classroom. During holidays online recourse is used. Physical presence of faculty members is thus dispensed with. The additional learning should lead to tangible outcomes.

(xiv)   Lessons from previous semester: The plan of a semester may sometimes fail in some aspects. The failures and gaps provide valuable lessons for the following semester.

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

Initiatives:

Question papers for tests, assignments, summative and formative, are judiciously prepared.

Tests: Two summative tests are planned for each theory course. The content of the syllabus of each test usually covers three course outcomes. First three course outcomes will feature in test 1 and the other three in test 2. Questions in the test correspond to certain course outcomes and cognitive domain levels. The duration of each test is one and half an hours, and the maximum mark is fifty (50). The content of the syllabus for each test is one-half of the syllabus. (Amendment of university order, Jan 2020).

Test question paper: Test question papers are designed so that an average student with regular study habits will pass without much difficulty. The level of difficulty and marks are:

Easy questions (40% marks): moderately difficult questions (40% marks): Difficult questions: (20% marks).

The question paper format is similar to that of end semester university examination. The question papers for the tests and assignments are made shortly before the semester commences.

Vetting of question paper: IQAC carefully examines test question papers. Does it cover the required content of the syllabus? Does it cater to three COs? Does it adhere to cognitive domain levels? Assignment questions papers are also vetted the same way.

The Department has built a question bank over the years.

Implementation Details

The University mandated first internal test is conducted nearly half-way through the semester when one-half of the contents of the syllabus will have been delivered. The second internal test will be set at the end of the semester—all according to academic calendar. End semester university examination usually commences about ten days after test 2.

Minimum two summative assignments are given. Each assignment is intended to assess a course outcome. The maximum mark varies, but usually does not exceed 25 marks.

Assessment of practical laboratory course is conducted every week based on KTU Syllabus, output, brief report and viva voce. Student practical work performance and assessment are carried out during the lab session. There will be a terminal test along with viva voce based on Syllabus.

In addition to the summative assessments, faculty members also conduct formative assessments, to enhance learning. This takes place during class sessions. Scheduled for ten minutes. They are interposed to stimulate student participation and also for learning.

Evaluation:

Faculty members make a document of answers to test and assignment questions at the beginning of the semester. Answer-scripts are verified against these answers and marks are awarded. Marks are intimated to students within five days from the test or assignment submittal date. Answers are shared with students. Poor performers are required to study the topics on which performance has been dissatisfactory. If needed extra classes are held late in the evening to help slow learners. Marks are entered in the course diary. A meeting will be held after the test to discuss student performance. Causes for poor performance are identified and a solution for them is arrived at and implemented.

Analysis of learning levels

The University-formulated course outcomes are assimilated by faculty members and clearly set forth before students. They are informed what they should be able to do upon completion of the course. Learning for these outcomes will be assessed, and areas for improvement are identified.
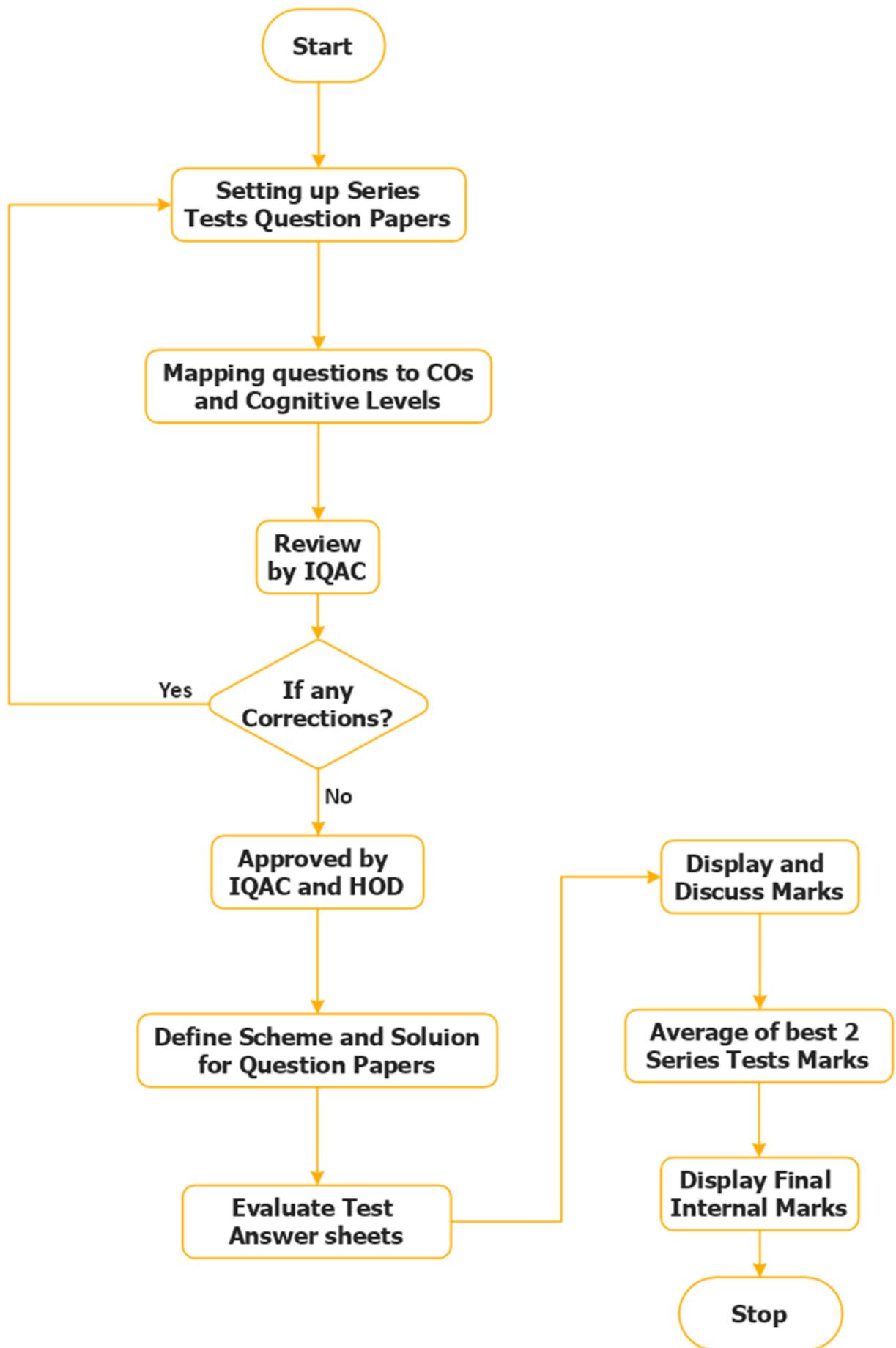
Fig. 2.2.2.a. Process for internal assessment question paper setting and evaluation

Even though the flow chart places improvement in the following semester, in practice, remedial class, online resources are offered to under-performing students at the end of the semester and before they sit the end semester university examination.

Note: The setting of internal examination papers as well as the assignments is strictly as per the COs defined for the subject. In order to maintain the quality of internal semester question papers and assignments they are reviewed during the final academic audit at the end of each semester. A sample for the internal examination and Assignment along with the CO mapping for the CS402 – Data Mining and Warehousing is given below.

VEDAVYASA INSTITUTE OF TECHNOLOGY

Name ....
Register No: ....

Series Test	2			Semester		8 th
Subject	CS402 Data Mining and Warehousing			Branch		CSE
Date of Exam	03/03/2020		Max. Marks 50	Duration		2.00Hrs

Q.No	PART A (Answer all questions)	Marks	BL	CO
1	a)Discuss the features of Decision tree induction in comparison with Neural Networks b)Formulate rule based classification techniques	2x2	4	CO4
2	a)Formulate the principle behind frequent itemset and closed itemset. b)Present the Problem Domain, Challenges and Tasks involved in Link mining.	2x2	4	CO8
3	How would you explain the principle of Apriori algorithm? How can the efficiency of an Apriori algorithm be improved?	4	4	CO7
4	a) How would you evaluate accuracy of a classifier with respect to all measures? b) Differentiate Lazy learners and eager learners with an example.	2x2	3	CO5
5	Highly accurate SVM classifiers suffer from slow processing when training with a large set of data tuples. Discuss how to overcome this difficulty and develop a scalable SVM for efficient SVM classification in large datasets.	4	5	CO6
	PART B (Answer any TWO questions)			
6	What is clustering? Describe in detail about the features of K-means partitioning method.	5	3	CO7
7	Analyse the desirable properties of Hierarchical and Density based Clustering algorithm.	5	4	CO7
8	Elaborate the current trends in data mining in any two topics . 1. Financial data analysis and Biological data analysis 2. Web content mining 3. Social Network Analysis 4. Apriori Based Approach in Graph mining	5	4	CO8
9	Compare linear regression and non-linear regression in Prediction Technique	5	2	CO5
	PART C (Answer any two)			
10	Consider that the data mining task is to cluster the following eight points A1,A2,A3,B1,B2,B3,C1AND C2(with (X,Y) representing location) into three clusters A1(2,10) , A2(2,5) , A3(8,4) , B1(5,8) , B2(7,5) , B3(6,4) , C1(1,2) , C2(4,9). The distance function is Euclidean distance.Suppose initially we assign A1, B1 and C1 as the center of each cluster, respectively. Use the K-means algorithm to show the three cluster centres after the first round of execution and the final tree clusters	10	5	CO7
11	(i)Demonstrate in detail about model based clustering methods. (4) (ii).Illustrate the topic on (6) 1. OPTICS 2. DBSCAN	10	4	CO7
12	Discuss the steps in K-means algorithm and evaluate the following table using K-means.	10	4	CO7

Subject	A	B
1	1.0	1.0
2	1.5	2.0
3	3.0	4.0
4	5.0	7.0
5	3.5	5.0
6	4.5	5.0
7	3.5	4.5

Faculty Name and Signature		Signature (Verified)		Signature (Approved)	

Fig 2.2.2.b. Sample question paper

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

1) Course Outcomes for Student Projects

The quality of student projects is ensured and assured through the achievement of the well-articulated Course outcomes, as given in Table 2.2.3.1. All student project works consider the factors such as environment, safety, ethics, cost and standards. This is ensured through proper instruction by the Project guides as well as through Project reviews, where focus is on attainment of COs.

Table 2.2.3.a. Course Outcome for Student Projects

CO Number	Course Outcome for Student Projects	Relevance to POs/ PSOs	
		PO	PSO
1	Student will be able to analyze & design solutions to complex problems by applying fundamentals of sciences and computer science and engineering.	1,2,3	1

2	Student will be able to use modern techniques and tools to design and conduct experiments, prepare and interpret plans and reports with valid conclusions and recommendations.	4,5,10	2
3	Student will be able to develop civil engineering solutions based on societal, health, safety, legal, cultural and environmental considerations for sustainable development.	6,7	3
4	Student will be able to function ethically and effectively as an individual, and as a member or leader in multidisciplinary teams and applying management principles and prepare for independent and lifelong learning.	8,9,11,12	-

2) Project Identification and Allotment

The project batches are notified to the students along with the topics offered by the faculty members (anonymously, without guide names). The students are asked to identify topics of their choice and give their options in terms of their order of preference 1, 2, 3 etc.

The project student coordinators are then called for a meeting with HoD and Project faculty Coordinator and another senior faculty member. One student is asked to pick up the batch number (say 6) from a draw of lots with batch numbers. The project coordinator of batch 6, will be awarded the 1st batch is allotted the topic of 1 option of the choice of his/her batch. He/she picks up another batch number (say 3) and the 3rd option topic is already allotted, he/she will be allotted the 2nd option of his/her respective batch. If the 1st preferred option and thus the process is completed. The allotted project topics and the corresponding guides are then notified.

After allotment of projects is completed, the respective guide gives option to the students to choose an alternate topic if any.

3) Continuous monitoring and Project reviews

The progress of the project work is continuously monitored. Three Project Reviews are conducted to review the quality and progress of the project work. The panel of examiners for Project review consists of Project guide, a subject faculty as examiner and HoD.

The project review consists of assessment of PPT presentations by the individual students about the work done along with plan of action for the remaining work. Factors including, environment, safety, ethics, cost and applicable standards as well as team work and CO-PO/PSO mapping are duly considered in the assessment. Suggestions given by the panel or other faculty members are to be incorporated by the students which will be reviewed during the subsequent assessment. The schedule of project reviews and the pro-forma for evaluation are enclosed. The evaluation format and the power point presentation made by students during the review assess both individual and team performance.

End Semester evaluation of Project work is done by a panel consisting of External examiner from KTU University and HoD along with the Project guide. Suggestions given by the external examiner are incorporated before submission of the final dissertation. The project classification type (application, product, research, or review) for last three years is shown in Table 2.2.3.1. Rubrics for Project work assessment has been incorporated from this academic year.
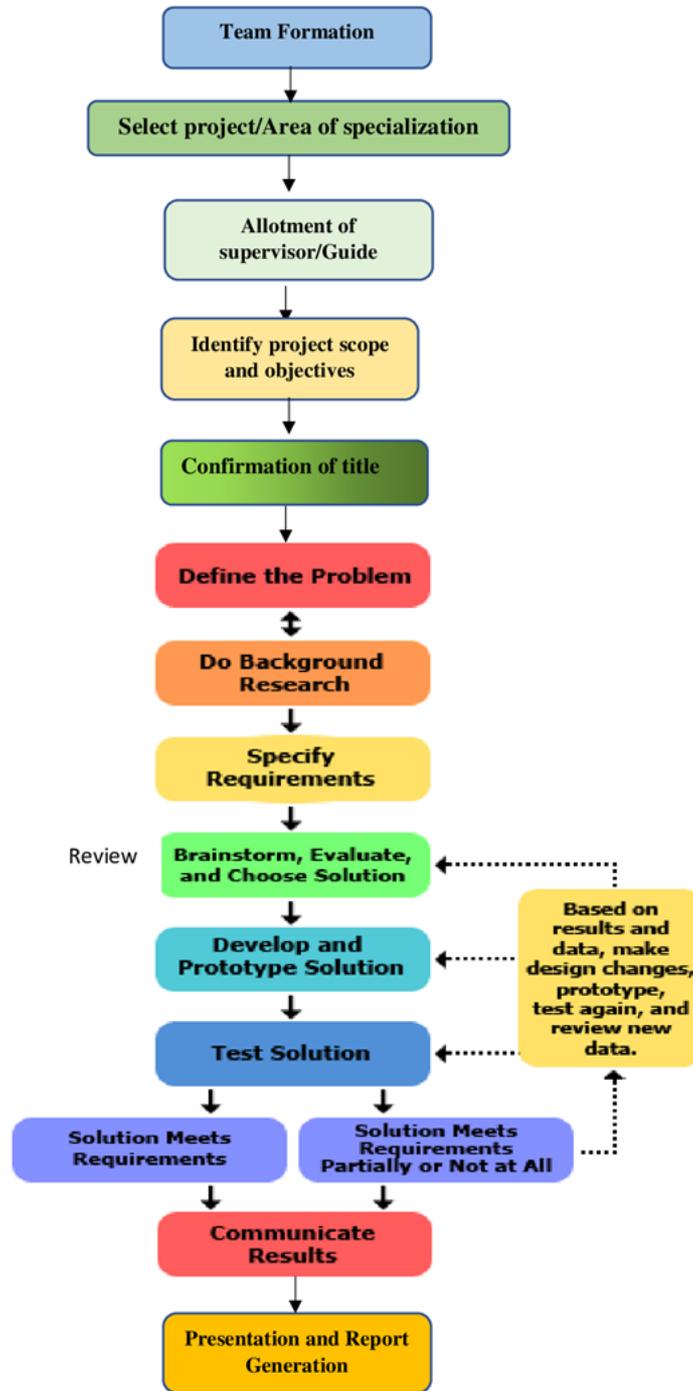
Fig. 2.2.3a. Process to define student's projects

Identification of projects and allocation methodology.

- Students are informed to form their batches and register with the project coordinators. Each project batch can have minimum two to maximum four students. On registration they will receive project batch identification number which is used as reference throughout the academic year.
- Faculty need to propose the projects in their domain. The same will be displayed in the notice board. The students based on their area of interest and competency can select the projects proposed by the faculty or their own ideas.
- The students approach the faculty and discuss their ideas. Then they are informed to submit the detailed synopsis and present before the panel.
- If any suggestions/modifications, need to be incorporated.
- HoD along with project coordinators will allocate the guides based on their domain and expertise.
- Finalized project synopsis duly signed by their concerned guide is submitted to coordinators.

Initiatives taken

- The faculty motivate the students to carry out projects in house by providing essential resources.

- Further the students are encouraged to participate in project exhibitions, present/publish their work in conferences/journals.
- Also encouraged to apply for funds under various external funding schemes such as KSCST, KTU, IEI etc.

Table 2.2.3.b Process of Identification of projects and allocation methodology

Timeline	Task	Particulars
Seventh Semester		
4th week	Call for project batch	• Students are informed to form their batch.
6th week	Call for Project titles with abstract submission	• Students are instructed to submit the title with abstract.
8th week	Presentation on Synopsis	• Presentations are reviewed by a committee consisting of Project coordinator, Head of the department and some senior faculty.
9th week	Finalization of Project and Guide allotment.	• Guide allotment based on the domain and expertise.
Eighth Semester		
5th week	First Review	• Review of progress regarding hardware, software requirements and design methodologies.
8th week	Mid-term Project Evaluation	• Review of Design and Implementation progress
12th week	Final Demonstration	• Students should demonstrate final working prototype and present the results.
13th week	Report submission	• Submission of the final report duly signed by the guide, HoD, and Principal.

Process for monitoring and evaluation

- The students should meet their respective guide once a week and update their progress.
- Using the rubrics mentioned in table, the project guides along with coordinators will evaluate the project work.

Table 2.2.3.c. Rubrics for evaluation of UG Project Work

Review No.	Agenda	Assessment	Review Assessment Weightage (Marks)
1	Project Synopsis Selection	-	-
2	First review	-	-
3	Mid-Term Project Evaluation	Rubric-1	25% (25)
4	Final Project Evaluation with Demonstration	Rubric-2	50% (50)
5	Evaluation of Project Report	Rubric-3	25% (25)
Total Weightage (Marks)			**100% (100)**

Midterm Project Evaluation

The midterm project evaluation is carried out preferably after the first internals in the 8th semester. The total weightage for this review is 25 out of 100 Marks. The marks distribution and rubrics is shown in the Table. The presentation should be given in front of the students (8th semester), coordinators and guide on the scheduled time and day of presentation. During the presentation the concerned group must clarify the questions and doubts raised by the audience.

The project coordinators along with the guide will review the presentation and demonstration. The evaluation is jointly done by guide and project coordinators.

Agenda	Max. Marks	Rubric Parameters	Level of Achievement				
			Excellent (5)	Very Good (4)	Good (3)	Average (2)	Poor (1)
Design Methodology	5	Conceptual design, Division of problem into modules, Selection of design framework.	Properly Followed & Properly Justified	Properly Followed & Justified partly	Properly followed & Not Justified	Partially Followed and Partially Justified	Partially followed and Not justified
Implementation	5	Design, Algorithm, Coding	Properly Followed & Properly implemented	Properly Followed & implemented partly	Properly followed & Not implemented	Partially Followed and Partially implemented	Partially followed and Not implemented
Presentation	5	Preparation of Slides, Presentation Consistency	Relevant and consistent	Relevant & partially consistent	Partially relevant & consistent	Partially relevant & partially consistent	Partially relevant & inconsistent
Demonstration	5	Hardware & Software modules, Working and results	Properly demonstrated & Properly Justified output	Properly demonstrated & Partially Justified output	Partially demonstrated & Justified	Partially demonstrated and Partially Justified	Partially demonstrated and no justification
Viva	5	Handling Questions	Answered all questions with proper justification	Answered 80% questions	Answered 60% questions	Answered 40% question	Answered 20% questions

Fig. 2.2.3b. Rubrics for evaluation of Midterm Project Review

R#	Agenda	Rubric Parameters	Weightage (Marks)
1	Design Methodology	Problem definition, Design approach, Selection of design framework, Division of problem into modules.	20%(5)
2	Implementation	Design, Coding and Implementation	20%(5)
3	Presentation	Organization of contents, Visual aids – text, images, graphs, Presentation consistency.	20%(5)
4	Demonstration	Hardware & Software modules designed and working as per the given specifications.	20%(5)
5	Viva	Handling question and answers	20%(5)
		Total Weightage (Marks)	100%(25)

Fig. 2.2.3c. Levels of Achievement to evaluate the Rubrics

Report Evaluation

The final draft copy of the report (in the suggested format) should be submitted immediately after the final presentation and review to their respective guides. Guides will review the report according to the given format, any discrepancies in the report is brought to the notice of the students. The students must incorporate the given suggestions in their final copy of the report. The final approved report by the guide must be submitted in hardbound as per the format prescribed by the VTU. The total weightage for this review is 20 Marks of out of 100 Marks. The marks distribution and rubrics is shown in the Figure.

R #	Agenda	Rubric Parameters	Weightage (Marks)
1	Contents	Organization of contents	20%(5)
2	Planning of Chapters	Planning and Write-up consistency from introduction chapter to conclusion, future scope and Bibliography.	20%(5)
3	Visual aids	Visual aids – text, images, graphs their originality resolution and clarity	20%(5)
4	Inferences	Analysis of results and discussions	20%(5)
5	Conclusions	Conclusions along with future scope	20%(5)
Total Weightage (Marks)			**100%(25)**

2.2.3d. Rubrics for evaluation of Project Report

Agenda	Max. Marks	Rubric Parameters	Level of Achievement				
			Excellent (5)	Very Good (4)	Good (3)	Average (2)	Poor (1)
Contents	5	Contents & their organization	Relevant, Concise& properly organized	Relevant & moderately organized	Nearly Relevant& properly organized	Nearly Relevant & moderately organized	Nearly Relevant & not organized
Planning of Chapters	5	Planning and Write-up consistency	Appropriate and consistent	Appropriate & partially consistent	Partially Appropriate & consistent	Partially Appropriate & partially consistent	Partially Appropriate & inconsistent
Visual aids	5	Visual aids – text, images, graphs their originality	Substantially informative & clear	Informative & clear	Partially informative & clear	Partially informative & not clear	Not informative
Inferences	5	Results and discussions	Appropriate & consistent	Appropriate & partially consistent	Partially Appropriate & consistent	Partially Appropriate & partially consistent	Partially Appropriate & inconsistent
Conclusions	5	Conclusions along with future scope	Relevant & prospective	Relevant & partially consistent	Partially Relevant & consistent	Partially Relevant & partially consistent	Partially Relevant & inconsistent

Fig. 2.2.3e. Levels of Achievement to evaluate the Rubrics

2.2.4 Initiative related to industry interaction (15)   Institute Marks : 15.00

To strengthen interaction with industries and to keep our students updated with the latest trends in information science and Engineering, the Department has entered into an MOU with the following companies. These companies will coordinate in organising the workshops, seminars, internships and academic projects.

Table 2.2.4. a. Details of MOUs signed with industries

Sl. No.	Name of organization	Academic Year	Objective
1	Tech Axis	2018-2019	Train students using the state-of-the-art software from Tech Axis.
2	TCS-Eon	2018-2019	Aims to meet the challenging needs of industry, academia and society in the world of Artificial Intelligence (AI), Machine Learning, and Deep Learning.
3	Career prime Solutions	2018-2019	Organizing activities like Projects, Internships, Training, Workshops, Hackathon and International Placements
4	National Testing Agency	2018-2019	Aims to meet the challenging needs of industry, academia and society in the world of Artificial Intelligence (AI), Machine Learning, and Deep Learning.
5	CADD Centre	2018-2019	Train students using the state-of-the-art software from Hewlett Packard Enterprises. Train faculty members on as ongoing basis on emerging trends in Big Data and data Analytics.
6	NH66 Labs Pvt. Ltd.,	2019-2020	To make learning as hands-on as possible in rendering students industry-ready. Impart hands-on training in Big Data and Data analytics by incorporating them into the curriculum
7	Carampete	2020 -2021	Aims to meet the challenging needs of industry, academia and society in the world of Artificial Intelligence (AI), Machine Learning, and Deep Learning.
8	DH Academy	2020-2021	Organizing activities like Projects, Internships, Training, Workshops, Hackathon and International Placements
9	KSEDCL – ITP	2020-2021	Train students using the state-of-the-art software from Tech Axis.
10	Pupilfirst Pvt. Ltd.,	2021 - 2022	To make learning as hands-on as possible in rendering students industry-ready. Impart hands-on training in Big Data and Data analytics by incorporating them into the curriculum
11	OSCORP Technologies India Pvt. Ltd.,	2021-2022	Organizing activities like Projects, Internships, Training, Workshops, Hackathon and International Placements
12	Cyber Society of India	2021-2022	Train students using the state-of-the-art software from Tech Axis.
13	ASAP Kerala	2021-2022	Train students using the state-of-the-art software from Hewlett Packard Enterprises. Train faculty members on as ongoing basis on emerging trends in Big Data and data Analytics.
14	Zero Initiatives	2021-2022	Organizing activities like Projects, Internships, Training, Workshops, Hackathon and International Placements

2.2.5 Initiative related to industry internship/summer training (15)　　　　　　　　　　Institute Marks : 15.00

Industrial Visit

Learning from textbooks, lectures and other study material does not suffice for holistic learning. Practical and hands-on learning is essential for better understanding of work processes. Industrial visits are organised to expose the students for industry environment which enhances the practical understanding of the concepts. The department organizes industrial visits for students once in a year/semester to relevant organizations/companies to enable the students to experience the practical implementation of theoretical knowledge in real world. This gives them an insight of the work culture ethics prevailing in Industries.

Table 2.2.5.1 Industrial Visit for Students

Sl. No.	Date of Visit	Organization Visited	No. of Students Visited	Program Outcome

1	11.10.2019	CSIR – National Institute of Oceanography, Goa, India.	36	P5, P7 and P12
2	11.10.2019	Kaynes Technology India Pvt. Ltd.	32	P5, P7 and P12
3	13.01.2022	BSNL – Manjeri	40	P5, P7 and P12

Impact Analysis of Industrial visit

· Students are exposed to real time practical experience of the concepts studied in the classrooms and realized the practical importance of the subjects.

· Industrial visit creates more interest in the subjects.

· Students are inspired to do hard work and get placed in such industries.

· Students were exposed to the industry standards and workplace culture.

Initiatives related to industry internship

Students had undergone industry internship/summer training of their areas of interest/specialization at the end semester for a duration of 4 to 6 weeks. In addition to this, the department organizes training programs related to emerging industry trends and job functions. External trainers from reputed industrial organizations bring the latest technological evolutions to the students.

Initiatives / Implementation and Impact Analysis of industry Internship/ Summer Training are as under

· The internships are arranged collaboratively by the industrial internship coordinator of the department with the industry associates and student volunteers.

· A copy of the confirmation letter for training is submitted with the industrial internship coordinator / HoD/ Dean

· The Joining Report, providing the following information sent to the industrial

Table 2.2.5.2 Training Program for Students

Sl. No.	Academic Year	Topic	Company	No. of Students Registered	Duration
1	CAY	Internship	IPSR Solutions Ltd.,	45	7 Days
2	CAYm1	Internship	Sysol System Solution Pvt. Ltd.,	40	12 Days
3	CAYm1	Internship	Arion Infotech, KINFRA	30	14 Days
4	CAYm2	Internship	Enzapps Software, KINFRA	30	7 Days
5	CAYm3	Internship	RISS Technologies	28	6 Days

Impact Analysis of Internship

Internships in the industries endow the students with the following benefits.

· Hands-on experience provides a better understanding of the basic concepts

· Students learn the industrial standards, current trends, and practices

· Real environmental exposure enhances student's learning

· Training and/or testing becomes easier

· Helps in building interpersonal skills and teamwork

· Application of academia in an industrial environment.

· Students had seen live project sites and from this, they have gained practical knowledge.

· The industry standards and workplace culture is exposed to students, and they also understand the importance of being punctual and meeting the deadlines

· Communication skills of the students improved.

· Students are inspired to work hard and get placed in such industries

Student feedback on the initiative:

· For feedback from training, faculty take viva examinations of students.

· Depending upon this result those who have poor knowledge on that particular topic, faculty encourages the students to participate in industrial workshops or other field visit for increasing their core knowledge.

· Department in association with professional bodies conduct distinguished lectures, technical seminars, workshops and conferences to enhance the knowledge of students in program specific domains.

Impact Analysis of Industrial visit

- Students are exposed to real time practical experience of the concepts studied in the classrooms and realized the practical importance of the subjects.
- Industrial visit creates more interest in the subjects.
- Students are inspired to do hard work and get placed in such industries.

- Students were exposed to the industry standards and workplace culture.

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)   Total Marks 120.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)   Total Marks 20.00

:

PSO1	Basic knowledge of computer applications to model computational problems by applying mathematical concepts and design solutions using suitable data structures and algorithmic techniques.
PSO2	Design computer-based systems of varying complexity and develop software solutions by following standard software engineering principles by using suitable programming languages and platforms.
PSO3	Develop system solutions involving both hardware and software modules.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)   Institute Marks : 5.00

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

Course Name :		C2 05	Course Year :		2018-2019

Course Name		Statements
C2	05.1	To compare different programming methodologies and define asymptotic notations to analyze performance of algorithms.
C2	05.2	To understand appropriate data structures like arrays, linked list, stacks and queues to solve real world problems efficiently.
C2	05.3	To represent and manipulate data using nonlinear data structures like trees and graphs to create and design algorithms for various applications.
C2	05.4	To illustrate and compare various techniques for searching and sorting.
C2	05.5	To appreciate different memory management techniques and their significance.
C2	05.6	To apply various hashing techniques efficiently to solve real world problems.

Course Name :		C2 06	Course Year :		2018-2019

Course Name		Statements
C2	06.1	To apply object- oriented principles in software design process.
C2	06.2	To develop Java programs for real applications using java constructs and libraries.
C2	06.3	To understand and apply various object oriented features like inheritance, data abstraction, encapsulation and polymorphism to solve various computing problems using Java language
C2	06.4	To implement Exception Handling in java.
C2	06.5	To use graphical user interface and Event Handling in java
C2	06.6	To develop and deploy Applets in Java.

Course Name :		C3 01	Course Year :		2018-2019

Course Name		Statements
C3	01.1	To classify formal languages into regular, context-free, context sensitive and unrestricted languages
C3	01.2	To design finite state automata, regular grammar, regular expression and Myhill- Nerode relation representations for regular languages.
C3	01.3	To design push-down automata and context-free grammar representations for context-free languages
C3	01.4	To design Turing Machines for accepting recursively enumerable languages.
C3	01.5	To understand the notions of decidability and undecidability of Halting problem
C3	01.6	To choose and design appropriate automata for the different requirements outlined by theoretical computer science.

Course Name :		C3 08	Course Year :		2018-2019

Course Name	Statements

C3	08.1	To identify suitable life cycle models to be used.
C3	08.2	To analyze a problem and identify and define the computing requirements to the problem.
C3	08.3	To translate a requirement specification to a design using an appropriate software engineering methodology
C3	08.4	To formulate appropriate testing strategy for the given software system.
C3	08.5	To develop software projects based on current technology.
C3	08.6	To manage resources economically and keeping ethical values in a software firm.

Course Name :		C4 03	Course Year :		2018-2019

Course Name	Statements
C4 03.1	To compare scope and binding of names and analyze control flow structures in different programming languages .
C4 03.2	To appraise data types in different programming languages .
C4 03.3	To analyze different control abstraction mechanisms.
C4 03.4	To appraise constructs in functional, logic and scripting languages.
C4 03.5	To analyze object oriented constructs in different programming languages .
C4 03.6	To compare different concurrency constructs,interpret the concepts of run- time program management

Course Name :		C4 02	Course Year :		2018-2019

Course Name	Statements
C4 02.1	To identify the key process of Data mining and Warehousing
C4 02.2	To apply appropriate techniques to convert raw data into suitable format for practical data mining task.
C4 02.3	To analyze and compare various classification algorithms and apply in appropriate domain.
C4 02.4	To evaluate the performance of various classification methods using performance metrics
C4 02.5	To make use of the concept of association rule mining in real world scenario
C4 02.6	To select appropriate clustering and algorithms for various applications and extend data mining methods to the new domains of data

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

1 . course name : C205

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	3	2	2	2	-	2	-	-	-	-	-	2
C205.2	3	2	2	2	-	2	-	-	-	-	-	2
C205.3	3	2	2	2	-	2	-	-	-	-	-	2
C205.4	3	2	2	2	-	2	-	-	-	-	-	2
C205.5	3	2	2	2	-	2	-	-	-	-	-	2
C205.6	3	2	2	2	-	2	-	-	-	-	-	2
Average	3.00	2.00	2.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00

2 . course name : C206

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C206.1	3	2	2	2	-	-	-	-	-	-	-	2
C206.2	3	2	2	2	-	-	-	-	-	-	-	2
C206.3	3	2	2	2	-	-	-	-	-	-	-	2
C206.4	3	2	2	2	-	-	-	-	-	-	-	2
C206.5	3	2	2	2	-	-	-	-	-	2	-	2
C206.6	3	2	2	2	-	-	-	-	-	-	-	2
Average	3.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00

3 . course name : C301

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	2	2	-	-	-	-	-	-	-	-	-	2
C301.2	2	2	2	1	-	-	-	-	-	-	-	2
C301.3	2	2	2	1	-	-	-	-	-	-	-	2
C301.4	2	2	2	1	-	-	-	-	-	-	-	2
C301.5	2	2	-	1	-	-	-	-	-	-	-	2
C301.6	2	2	-	1	-	-	-	-	-	-	-	2
Average	**2.00**	**2.00**	**2.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**

4 . course name : C308

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C308.1	1	2	1	2	-	2	-	-	-	-	-	3
C308.2	1	3	3	3	-	3	-	-	-	2	1	2
C308.3	2	-	3	2	-	-	-	1	-	2	1	2
C308.4	3	3	3	2	-	2	-	-	1	1	2	1
C308.5	2	-	2	1	-	1	-	-	-	-	-	1
C308.6	1	-	-	1	-	1	-	-	-	1	-	1
Average	**1.66**	**2.66**	**2.00**	**1.83**	**0.00**	**1.50**	**0.00**	**1.00**	**1.00**	**1.00**	**0.66**	**1.66**

5 . course name : C403

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C403.1	2	2	-	2	-	-	-	-	-	-	-	2
C403.2	2	2	-	2	-	-	-	-	-	-	-	2
C403.3	2	-	-	-	-	-	-	-	-	-	-	2
C403.4	2	2	-	-	-	-	-	-	-	-	-	2
C403.5	2	1	-	1	-	-	-	-	-	-	-	2
C403.6	2	2	-	1	-	-	-	-	-	-	-	2
Average	**2.00**	**1.80**	**0.00**	**1.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**

6 . course name : C402

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C402.1	2	2	1	-	-	-	-	-	-	-	-	2
C402.2	1	2	2	-	-	-	-	-	-	-	-	2
C402.3	2	2	2	-	-	-	1	-	-	-	-	2
C402.4	1	2	-	-	-	-	1	-	-	-	-	2
C402.5	2	2	2	1	-	-	-	-	-	-	-	2
C402.6	2	2	3	1	1	1	-	-	-	-	-	2
Average	**1.66**	**2.00**	**2.00**	**1.00**	**1.00**	**1.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.00**

1 . Course Name : C205

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

C205.5	3	2	-
C205.6	3	2	-
Average	**3.00**	**2.00**	**0.00**

2 . Course Name : C206

Course	PSO1	PSO2	PSO3
C206.1	3	-	-
C206.2	3	2	-
C206.3	3	2	-
C206.4	3	-	-
C206.5	3	-	-
C206.6	3	2	-
Average	**3.00**	**2.00**	**0.00**

3 . Course Name : C301

Course	PSO1	PSO2	PSO3
C301.1	3	-	-
C301.2	3	-	-
C301.3	3	-	-
C301.4	3	-	-
C301.5	3	-	-
C301.6	3	-	-
Average	**3.00**	**0.00**	**0.00**

4 . Course Name : C308

Course	PSO1	PSO2	PSO3
C308.1	-	3	-
C308.2	3	-	-
C308.3	3	3	-
C308.4	1	1	-
C308.5	-	-	-
C308.6	-	-	-
Average	**2.33**	**2.33**	**0.00**

5 . Course Name : C403

Course	PSO1	PSO2	PSO3
C403.1	1	1	-
C403.2	1	1	-
C403.3	2	-	-
C403.4	1	1	-
C403.5	2	1	-
C403.6	1	-	-
Average	**1.33**	**1.00**	**0.00**

6 . Course Name : C402

Course	PSO1	PSO2	PSO3
C402.1	3	-	-

C402.2	3 ⌄	- ⌄	- ⌄		
C402.3	3 ⌄	2 ⌄	- ⌄		
C402.4	3 ⌄	2 ⌄	- ⌄		
C402.5	3 ⌄	- ⌄	- ⌄		
C402.6	3 ⌄	- ⌄	- ⌄		
Average	**3.00**	**2.00**	**0.00**		

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

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
BE100	3	3	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
BE10105	3	3	2	3	2	PO6	PO7	PO8	3	2	3	3
BE102	3	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
BE103	1	1	2	1	PO5	2	2	1	1	1	1	1
BE110	3	1	PO3	PO4	3	PO6	PO7	PO8	PO9	2	PO11	2
CE100	3	2	PO3	1	3	2	2	2	2	PO10	PO11	PO12
CE110	1	PO2	PO3	PO4	1	1	PO7	2	2	2	1	1
CS100	3	3	2	2	1	1	PO7	PO8	PO9	PO10	PO11	2
CS110	3	3	2	3	2	PO6	PO7	PO8	3	2	3	3
CS120	3	3	3	1	1	2	PO7	PO8	PO9	PO10	PO11	2
CS201	3	2	3	2	PO5	2	PO7	PO8	PO9	PO10	PO11	3
CS202	3	1	1	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS203	3	2	2	1	PO5	1	PO7	PO8	PO9	PO10	PO11	2
CS204	3	2	2	1	PO5	PO6	PO7	PO8	PO9	1	PO11	2
CS205	1	1	1	1	PO5	2	PO7	PO8	PO9	PO10	PO11	2
CS206	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS207	3	2	2	2	2	PO6	PO7	PO8	PO9	PO10	PO11	2
CS208	3	2	2	1	1	PO6	PO7	PO8	PO9	2	PO11	2
CS231	2	2	2	2	PO5	2	PO7	2	PO9	2	PO11	2
CS232	3	2	2	2	3	PO6	PO7	2	2	3	PO11	2
CS233	3	2	1	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS234	2	2	2	2	PO5	PO6	PO7	2	2	2	PO11	2
CS301	2	1	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	1
CS302	3	2	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS303	3	3	3	3	2	PO6	PO7	PO8	PO9	PO10	PO11	2
CS304	2	2	2	3	2	PO6	PO7	PO8	PO9	PO10	PO11	2
CS305	3	3	3	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS306	3	3	2	2	PO5	2	PO7	PO8	PO9	PO10	PO11	2
CS307	3	3	3	3	PO5	PO6	PO7	PO8	PO9	1	PO11	3
CS308	2	3	2	2	PO5	3	PO7	2	2	3	2	2
CS309	3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	3
CS331	3	3	2	3	PO5	PO6	PO7	3	PO9	3	PO11	2
CS332	3	2	2	2	PO5	PO6	PO7	2	PO9	3	PO11	2
CS333	3	3	3	3	3	3	PO7	3	3	3	3	3
CS334	2	2	2	2	1	PO6	PO7	2	2	2	PO11	2
CS341	3	3	3	3	PO5	2	3	PO8	3	3	3	3
CS352	3	2	2	PO4	PO5	2	PO7	PO8	2	PO10	3	2
CS361	3	3	2	3	PO5	PO6	PO7	PO8	2	2	PO11	3

CS368	3	3	2	PO4	2	PO6	PO7	2	3	2	2	3
CS401	3	2	3	2	PO5	2	PO7	PO8	PO9	PO10	PO11	3
CS402	3	2	2	2	2	2	2	PO8	PO9	PO10	PO11	3
CS403	2	2	PO3	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
CS404	3	3	3	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
CS405	3	3	2	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
CS407	3	2	2	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
CS409	3	2	3	2	PO5	PO6	PO7	3	PO9	PO10	PO11	3
CS431	3	3	3	3	PO5	PO6	PO7	PO8	3	3	PO11	3
CS451	3	3	3	3	3	3	2	3	3	3	3	2
CS467	3	3	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	3
CS472	3	3	3	2	PO5	2	PO7	3	PO9	PO10	PO11	3
CS492	3	3	3	2	3	3	1	3	3	3	3	3
CY100	1	1	1	1	2	PO6	3	PO8	PO9	PO10	PO11	PO12
CY110	3	PO2	PO3	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	3
EC100	3	1	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
EC110	1	PO2	PO3	PO4	1	1	PO7	2	2	2	1	1
HS200	PO1	2	2	2	PO5	2	PO7	2	2	2	1	2
HS210	PO1	3	2	1	PO5	1	PO7	1	2	3	1	2
HS300	2	PO2	PO3	3	3	PO6	1	PO8	3	3	3	3
IT482	3	3	PO3	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
MA101	3	3	3	3	2	1	PO7	PO8	1	2	PO11	2
MA102	3	3	3	3	2	1	PO7	PO8	1	2	PO11	2
MA201	3	3	3	3	2	1	PO7	PO8	1	2	PO11	2
MA202	3	2	2	PO4	PO5	PO6	PO7	PO8	1	2	PO11	2
PH100	3	2	PO3	PO4	PO5	PO6	PO7	1	2	PO10	PO11	1
PH110	3	PO2	PO3	PO4	2	PO6	PO7	1	2	PO10	PO11	1

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

Course	PSO1	PSO2	PSO3
BE100	1	PSO2	PSO3
BE10105	2	1	1
BE102	1	PSO2	PSO3
BE103	1	PSO2	PSO3
BE110	1	PSO2	PSO3
CE100	1	PSO2	PSO3
CE110	1	PSO2	PSO3
CS100	3	2	1
CS110	2	1	PSO3
CS120	3	2	1
CS201	2	PSO2	PSO3
CS202	2	2	PSO3
CS203	3	PSO2	PSO3
CS204	3	2	PSO3
CS205	2	PSO2	PSO3
CS206	2	2	PSO3
CS207	3	PSO2	PSO3
CS208	3	2	PSO3

CS231	3	2	PSO3
CS232	3	2	3
CS233	2	PSO2	PSO3
CS234	2	1	PSO3
CS301	1	PSO2	PSO3
CS302	3	2	PSO3
CS303	3	2	PSO3
CS304	3	2	PSO3
CS305	2	PSO2	PSO3
CS306	3	1	PSO3
CS307	2	1	PSO3
CS308	2	2	PSO3
CS309	1	PSO2	PSO3
CS331	3	2	2
CS332	3	PSO2	PSO3
CS333	3	3	3
CS334	3	1	2
CS341	3	2	3
CS352	2	PSO2	PSO3
CS361	2	2	PSO3
CS368	3	2	1
CS401	2	1	PSO3
CS402	3	2	PSO3
CS403	2	PSO2	PSO3
CS404	2	PSO2	PSO3
CS405	2	PSO2	PSO3
CS407	3	PSO2	PSO3
CS409	2	2	PSO3
CS431	2	1	1
CS451	3	3	3
CS467	2	2	PSO3
CS472	2	PSO2	PSO3
CS492	3	3	2
CY100	1	PSO2	PSO3
CY110	1	PSO2	PSO3
EC100	1	PSO2	PSO3
EC110	1	PSO2	PSO3
HS200	1	PSO2	PSO3
HS210	1	PSO2	PSO3
HS300	1	PSO2	PSO3
IT482	3	PSO2	PSO3
MA101	1	PSO2	PSO3
MA102	1	PSO2	PSO3
MA201	1	PSO2	PSO3
MA202	3	PSO2	PSO3
PH100	1	PSO2	PSO3
PH110	1	PSO2	PSO3

3.2 Attainment of Course Outcomes (50)   Total Marks 50.00

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

In Outcome Based Education, assessment is carried out by the department to identify, collect, analyze and evaluate the data towards the achievement of Course Outcomes (CO). The course outcomes are assessed based on direct assessment tools. The direct method of assessment includes the performance of the students in all the relevant assessment tools – Continuous Internal Examination (CIE) like Internal Assessments (IA), Assignments, Quizzes, Co-curricular Activity/Self Study, and Semester End Examination (SEE).
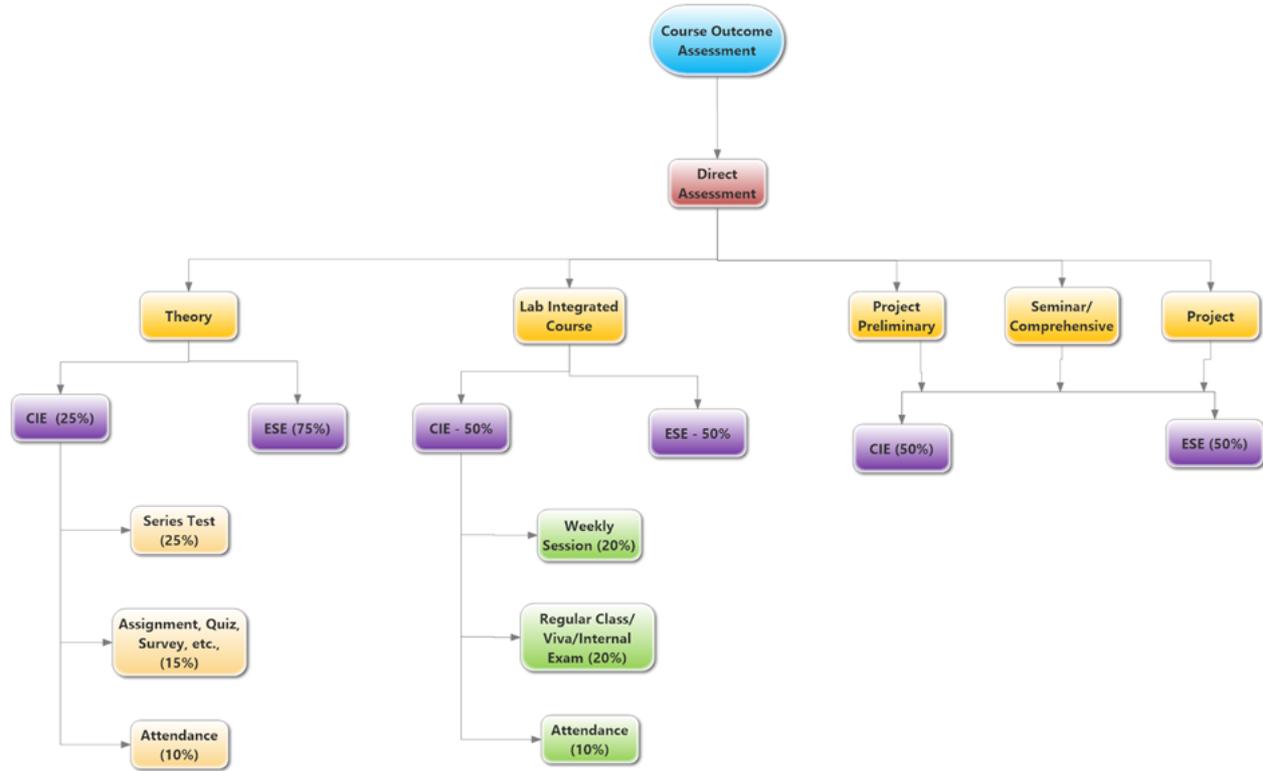
Fig 3.2.1.a. CO Assessment Tools

The evaluation process for achieving Course outcome takes place in each semester. The process for evaluation of Course Outcomes proceeds in the following way

Academic Assessment/Evaluation

- Assessment tools such as and, tutorials, and University exams are appropriately chosen.
- The relevant data are collected in accordance with Course Outcomes.
- The collected data are further analyzed.
- Whether Course outcomes meet the set level or not are verified and necessary actions are

Table 3.2.1.a. Assesment Methods

Direct Assessment methods	
Assessment tests 1, 2	The Department will conduct two continuous assessment tests, scheduled in accordance with the college calendar of events. The portions of each subject would be completed before each test based on APJ KTU norms. The Course Coordinator will prepare the Question papers for the respective course and will be submitted to IQAC for scrutinize the question paper.
Model /retest	Model examination will be conducted for 100 marks and the duration of 3 Hrs as per university pattern.
Assignments	Minimum of 2 Assignment topics in each subject will be given to students. The assignments and class tests are considered as the qualitative assessment tool designed to assess student performance.
Seminar	Student will present a topic of their interest for the seminar session. Seminar topic shall be selected from the emerging technical areas. Faculty member in charge of the seminar and another faculty member in the department nominated by the Head of the Department are the evaluators for the seminar. Distribution of marks for the seminar is as follows. Marks for the report: 30% Presentation: 40% Ability to answer questions on the topic: 30%.
Quiz	Quiz is a qualitative performance assessment tool designed to assess students knowledge of engineering practices, framework, and problem solving.

End semester exam (theory + practical)	End Semester examination carrying 100 marks. Conducted by the University.
Laboratory Evaluation	This is mainly to assess student's practical knowledge with their designing capabilities.
Final Year Projects	Students, either individually or in a small batch not exceeding four, have to do a project approved by their faculty supervisor. Evaluation scheme is given below:- i) Two progress assessments 20% by the faculty supervisor/s ii) Final Project Report 30% by the Assessment Board iii) Project presentation and Viva 50% by the Assessment Board If the project work is not completed satisfactorily, the student has to put in more work and appear again for assessment on a specified date, not earlier than one month after the first evaluation. If the student fails in the project, a fresh registration for the project for one semester is mandatory. The project assessment board shall consist of the following members. Chairman: Head of the Department Members: Project supervisor/s of the student One faculty member from the Department One faculty member from a sister Department An external expert, either from an academic/research institute or industry.
Design Project	Each student or a group of students has to take up a design project. The project topic could be arrived at in consultation with any faculty member in the department. The Evaluation of the project is to be done in two stages. Two project progress evaluations each carrying 20 marks and a final report evaluation and presentation of the project for 60 marks. The project supervisor and two other faculty members from the same or any other department, nominated by the Head of the Department form the evaluation board.
Comprehensive exam	This examination consists of two parts. Part one a written test and the other an oral one. The written examination shall be objective type of 1 hour duration and shall have 50 marks and is to be conducted by the concerned department. Chairman of the oral examination board shall be a senior faculty in the department and the members include two other faculty members of the department and an external expert from another academic institute or an industry. Oral examination shall carry 50 marks. Comprehensive examination may be conducted any time during the 6th semester with sufficient notice given to the students.
Indirect Assessment methods	
Programme outcomes assessment report	An assessment report At the end of every academic year annual report is developed where the statistics of students who have participated in professional bodies/ student chapters /workshops/seminars/conferences/paper presentations / internships /industry visit etc. is prepared. This statement is considered to indirectly assess the POs.
Alumni Survey	Collect variety of information about program satisfaction, from graduate's end. –after every 2 years.
Employer Survey	Provide information about our graduate's skills and capability. –after every 2 years.
Course end survey	To evaluate the success of program in providing students with opportunities to achieve the program outcome- every year.

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)
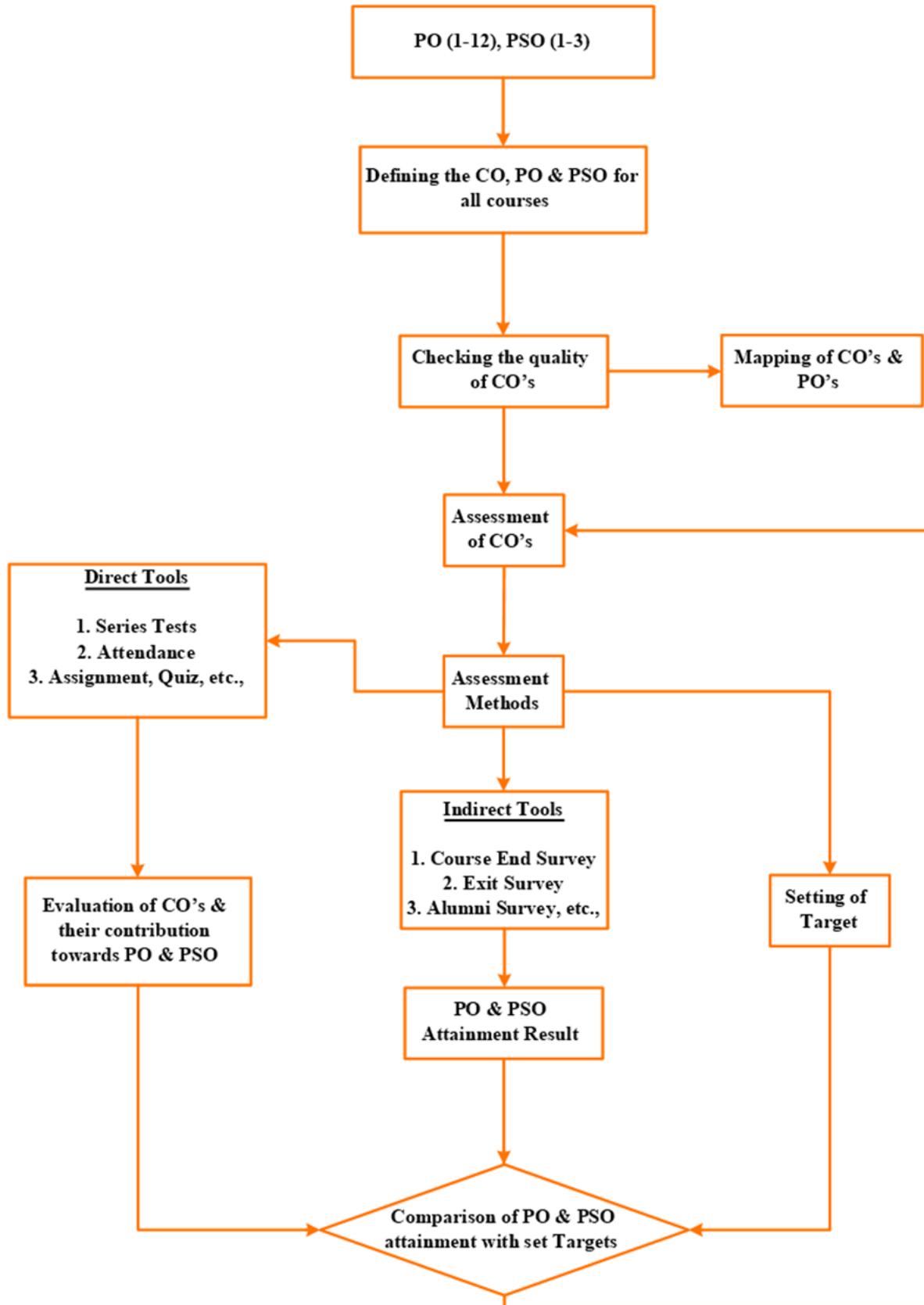
Institute Marks : 40.00

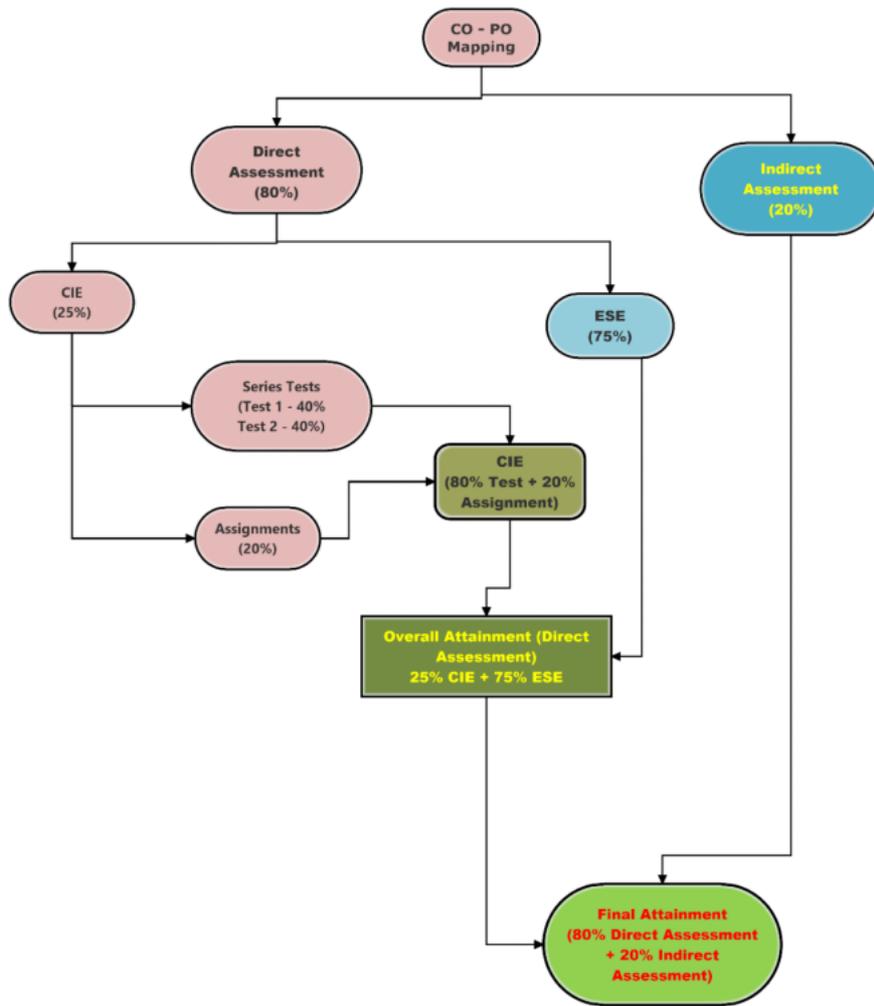**Fig.3.2.2.a. Details of PO & PSO attainment with set target**

Fig. 3.2.2.b CO PO Attainment Calculation

Table 3.2.2.a CO Attainment CAYm3

Subject Code	Subject	CO1	CO2	CO3	CO4	CO5	CO6
MA101	CALCULUS	1.88	1.88	2.19	1.88	1.88	2.63
PH100	ENGINEERING PHYSICS	1.61	2.36	2.36	2.36	2.36	2.36
BE100	ENGINEERING MECHANICS	3.00	3.00	2.88	3.00	2.88	3.00
BE103	INTRODUCTION TO SUSTAINABLE ENGINEERING	2.50	2.50	3.00	2.25	2.25	3.00
EC100	BASICS OF ELECTRONICS ENGINEERING	2.61	3.00	2.96	2.96	3.00	3.00
BE10105	INTRODUCTION TO COMPUTING AND PROBLEM SOLVING	3.00	3.00	3.00	3.00	3.00	3.00
CS110	BASIC ENGINEERING WORKSHOPS COMPUTER	3.00	3.00	3.00	3.00	3.00	3.00
PH110	ENGINEERING PHYSICS LAB	3.00	3.00	3.00	3.00	3.00	3.00
EC110	BASIC ENGINEERING WORKSHOPS ELECTRONICS	3.00	3.00	3.00	3.00	3.00	3.00
CY100	ENGINEERING CHEMISTRY	3.00	2.96	2.25	2.25	2.25	3.00
MA102	DIFFERENTIAL EQUATIONS	2.57	2.57	2.57	2.57	2.57	2.57
BE110	ENGINEERING GRAPHICS	2.48	2.48	2.48	2.48	2.39	2.39
BE102	DESIGN AND ENGINEERING	2.61	3.00	2.96	2.96	3.00	3.00
CE 100	BASICS OF CIVIL ENGINEERING	3.00	2.96	3.00	3.00	3.00	2.25
CE110	BASIC ENGINEERING WORKSHOPS CIVIL	3.00	3.00	3.00	3.00	3.00	3.00
CS100	BASICS OF COMPUTER PROGRAMMING	3.00	2.79	2.25	3.00	3.00	3.00
CS120	COMPUTER PROGRAMMING LAB	3.00	3.00	3.00	3.00	3.00	3.00

CY110	ENGINEERING CHEMISTRY LAB	3.00	3.00	3.00	3.00	3.00	3.00
MA201	LINEAR ALGEBRA AND COMPLEX ANALYSIS	3.00	3.00	3.00	3.00	3.00	3.00
CS201	DISCRET COMPUTATIONAL STRUCTURES	3.00	2.94	3.00	3.00	2.94	2.94
CS203	SWITCHING THEORY AND LOGIC DESIGN	3.00	3.00	3.00	3.00	3.00	3.00
CS205	DATASTRUCTURES	3.00	2.25	2.94	2.25	2.25	2.67
CS207	ELECTRONICS DEVICES AND CIRCUITS	3.00	3.00	3.00	3.00	3.00	3.00
CS231	DATASTRUCTURES LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS233	ELECTRONIC CIRCUITS LAB	3.00	3.00	3.00	3.00	3.00	3.00
HS200	BUSINESS ECONOMICS	2.25	2.25	3.00	2.25	2.67	3.00
MA202	PROBABILITY DISTRIBUTION TRANSFORMS AND NUMERICAL METHODS	3.00	2.88	2.25	2.25	2.88	3.00
CS202	COMPUTER ORGANISATION AND ARCHITECTURE	2.25	2.25	2.67	2.67	3.00	3.00
CS204	OPERATING SYSTEMS	2.56	3.00	2.67	2.88	3.00	2.56
CS206	OBJECT ORIENTED DESIGN AND PROGRAMMING	3.00	3.00	2.67	3.00	3.00	2.56
CS208	PRINCIPLE OF DATABASE DESIGN	2.25	2.25	3.00	3.00	3.00	3.00
CS232	FREE AND OPEN-SOURCE SOFTWARE LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS234	DIGITAL SYSTEMS LAB	3.00	3.00	3.00	3.00	3.00	3.00
HS210	LIFESKILLS	2.25	2.25	2.25	3.00	2.67	2.25
CS301	THEORY OF COMPUTATION	3.00	2.25	3.00	3.00	2.25	3.00
CS303	SYSTEM SOFTWARE	3.00	2.67	2.94	3.00	3.00	2.25
CS305	MICROPROCESSORS AND MICROCONTROLLERS	3.00	2.67	2.94	3.00	3.00	2.25
CS307	DATA COMMUNICATIONS	3.00	2.52	3.00	3.00	2.85	2.69
CS309	GRAPH THEORY AND COMBINATORICS	3.00	3.00	2.98	3.00	3.00	3.00
CS361	SOFT COMPUTING	3.00	2.67	3.00	3.00	2.74	2.25
CS341	DESIGN PROJECT	3.00	3.00	3.00	3.00	3.00	3.00
CS331	SYSTEM SOFTWARE LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS333	APPLICATION SOFTWARE LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS302	DESIGN AND ANALYSIS OF ALGORITHM	3.00	2.52	3.00	3.00	2.85	2.69
CS304	COMPILER DESIGN	2.25	2.25	2.92	2.70	2.25	2.25
CS306	COMPUTER NETWORKS	2.25	2.25	3.00	3.00	3.00	3.00
CS308	SOFTWARE ENGINEERING AND PROJECT MANAGEMENT	2.25	2.25	3.00	3.00	3.00	3.00
HS300	PRINCIPLES OF MANAGEMENT	3.00	3.00	3.00	3.00	3.00	3.00
CS368	WEB TECHNOLOGIES	2.25	2.25	3.00	3.00	3.00	3.00
CS332	MICROPROCESSOR LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS334	NETWORK PROGRAMMING LAB	3.00	3.00	3.00	3.00	3.00	3.00
CS352	COMPREHENSIVE EXAM	3.00	3.00	3.00	3.00	3.00	3.00
CS401	COMPUTER GRAPHICS	2.25	2.25	2.25	3.00	3.00	3.00
CS403	PROGRAMMING PARADIGMS	3.00	3.00	3.00	3.00	3.00	3.00
CS405	COMPUTER SYSTEM ARCHITECTURE	3.00	2.67	2.81	3.00	3.00	3.00
CS407	DISTRIBUTED COMPUTING	2.67	2.67	2.25	3.00	3.00	3.00
CS409	CRYPTOGRAPHY AND NETWORK SECURITY	2.67	2.25	2.25	3.00	3.00	3.00
CS467	MACHINE LEARNING	2.25	2.25	2.25	3.00	3.00	3.00
CS 451	SEMINAR AND PROJECT PRELIMINARY	3.00	3.00	3.00	3.00	3.00	3.00
CS 431	COMPILER DESIGN LAB	3.00	3.00	3.00	3.00	3.00	3.00

CS402	DATMINING AND WAREHOUSING	3.00	3.00	3.00	3.00	3.00	3.00
CS404	EMBEDDED SYSTEMS	3.00	3.00	3.00	3.00	3.00	3.00
CS492	PROJECT	3.00	3.00	3.00	3.00	3.00	3.00
IT482	INFORMATION STORAGE MANAGEMENT	2.94	2.53	2.81	3.00	2.53	3.00
CS472	PRINCIPLES OF INFORMATION SECURITY	3.00	3.00	3.00	3.00	3.00	3.00

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

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)   Institute Marks : 10.00

The list of assessment tools for both direct and indirect methods is given below.

Table 3.3.1.a Assessment tools used for calculation of PO attainment

Assessment Tool Type	Assessment Tool Title	Tool Description
Direct Attainment Tools	Internal Assessments, Assignments, Quizzes, Self-Study / Co-Curricular Activities	Internal Assessment, assignments, quizzes, self-study/co-curricular activities are conducted during every semester to award final CIE marks. These tests and assignments will prepare the students for the Semester End Examination.
	Internal Laboratory Test	During the semester, two laboratory test conduction and evaluation is done. These tests will enhance the confidence of students to face SEE practical examination.
	Project Preliminary, Internship, Projects	Evaluation is done in phases by a committee (HOD, two senior faculties inclusive of the project guide).
	Semester End Examination	Both theory and practical/project examination are conducted as per the guidelines provided by the KTU.
Indirect Attainment Tools	Graduate Survey	Feedback for the betterment of the department.
	Alumni Survey	Feedback for the improvement of infrastructure, library, placement activities, industry-academic interaction.
	Employer Survey	Expectations and the requirements to bridge the industry-academia gap.

Process of PO & PSO Attainment

Course outcomes are assessed through Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). The analysis is done to find the level of attainments of each course COs. The attainment of POs and PSOs are being calculated based on the COs attainment. For indirect assessments, survey questionnaire is circulated to students, alumni and employer. The surveys are assessed and evaluated to determine the strength of attainment level of POs/PSOs. Survey results from graduates, alumni, and employer are consolidated and the final PO values are calculated through 3-point scale (Excellent, Very Good, Satisfactory). Overall attainments of POs are calculated by taking 80% of direct attainment and 20% of indirect attainment. If the POs and PSOs attainment value is below the target, an essential remedial action has been taken.

Table 3.3.1.b Calculation of PO attainment

PO Attainment	**Direct Assessment**	Internal Tests, Assignments, Quizzes, Lab Internal Tests, Self-Study, Co-Curricular Activities, Semester End Examination	80%
	Indirect Assessment	Graduate Survey, Alumni Survey, Employer Survey	20%

Survey Forms - Questionnaires

Sl. No	Program Outcomes(POs)	Excellent (3)	Very Good (2)	Satisfactory (1)
1	**Engineering Knowledge** I have gained an in-depth knowledge of mathematics, computer science and engineering as it applies to computer hardware and software.			
2	**Problem analysis** I have an ability to identify, formulate, and solve hardware and software computing problems, accounting for the interaction between hardware and software.			
3	**Design / Development of Solutions** I am able to apply my engineering knowledge to design hardware and software systems, components, or processes to meet desired needs within realistic constraints.			
4	**Conduct investigations of complex problems** I am able to design and conduct experiments, as well as to organize, analyze and interpret data.			
5	**Modern tool usage** I have had the opportunity to use the techniques, skills, and modern engineering tools necessary for computer engineering practice.			

6	The engineer and society Able to show the understanding of impact of engineering solutions in a global on the society, economic, environmental.			
7	Environment and sustainability I am able to understand the impact of the computer based solutions in societal and environmental context.			
8	Ethics I have had the opportunity to learn professional, legal, and ethical issues and responsibilities.			
9	Individual and team work I have the training necessary to work individually or as a member with responsibility to function on multi-disciplinary teams.			
10	Communication I am able to communicate effectively in speech and in writing, including documentation of hardware and software systems.			
11	Project management and finance I have had the opportunity to learn and apply engineering and management knowledge and techniques to estimate time and resources needed to complete a computer engineering project.			
12	Life - long learning I have an ability to acquire new knowledge in the computing discipline and to engage in life- long learning.			

Fig. 3.3.1.a. Graduate Survey– Questionnaires

Sl. No.	Questions	POs	Excellent (3)	Very Good (2)	Satisfactory (1)
1	How do you rate the engineering knowledge obtained during course period?	PO1			
2	How do you find the programme related to problem analysis?	PO2			
3	Were able to design solutions for complex engineering problems?	PO3			
4	Did you use research based knowledge for interpreting your data during project work?	PO4			
5	How this programme helped in applying modern tool usage for your problems?	PO5			
6	How do you rate your understanding of impact of engineering solutions in a global on the society, economic, environmental aspects?	PO6			
7	Did you understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	PO7			
8	Were you able to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice?	PO8			
9	Did you have opportunity to function as an individual or in a team?	PO9			
10	How do you rate your skill of communicating effectively in speech and in writing, including documentation of hardware and software systems?	PO10			
11	Were you able to manage project and finance aspects effectively in your work environment?	PO11			
12	How far this programme helped you to acquire new knowledge in	PO12			

Your suggestions
1. Relevance of curriculum in your present job.

_____

_____

2. Need any change in curriculum and syllabi.

_____

_____

3. Need improvement in Teaching Learning Process.

_____

_____

4. Any other Suggestions / Comments.

_____

_____

Fig. 3.3.1.b Alumni Feedback Survey– Questionnaires

Sl. No	Questions	POs/ PSOs	Excellent (3)	Very Good (2)	Satisfactory (1)
1	How satisfied were you with the information provided by the department about the skills and knowledge of the student for campus recruitment?	PO1			
2	How do you rate our students' ability to identify, formulate, and solve hardware and software computing problems?	PO2			
3	How did u find our student, with respect to design and development of new products or solutions?	PO3			
4	Your view on our students, regarding investigating new problems in the industry and interpretation of data.	PO4			
5	How fit is our graduate in applying modern tools for solving problems?	PO5			
6	How responsible are our graduates in contextual knowledge to assess societal, health, safety, legal and cultural issues?	PO6			
7	You're rating on our student in handling environmental contexts?	PO7			
8	Your opinion about our graduates with respect to their ethical and moral values?	PO8			
9	How do our students present themselves individually and in team work?	PO9			
10	Our student's skill in communicating effectively in speech and in writing, including documentation of software systems.	PO10			
11	How do you find our students performance in understanding project management and financial principles of the company?	PO11			
12	Rating of our students with respect to attitude and willingness for lifelong learning?	PO12			

Your detailed comments on our graduate employees: (Optional)

_____

_____

_____

Fig. 3.3.1.c. Employer Survey– Questionnaires'

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

Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
BE100	2.83	2.83	0	0	0	0	0	0	0	0	0	0
BE10105	3	3	1.50	2.67	2.00	0	0	0	2.50	2.00	3.00	2.67
BE102	2.50	1	2	3	3	0	0	0	0	2	0	2
BE103	0.83	1	1.94	0	0	1.67	1.67	0.83	0.83	0.83	0.83	0.83
BE110	2.34	0.83	0	0	2.48	0	0	0	0	1.65	0	1.65
CE100	3	2	0	1	3	2	2	2	2	0	0	0
CE110	1	0	0	0	1	1	0	2	2	2	1	1
CS100	2.83	2.83	1.75	1.83	1	1	0	0	0	0	0	2.17
CS110	2.83	2.83	1.50	2.83	1.5	0	0	0	2.83	1.50	3	3
CS120	3	3	3	1	1	2	0	0	0	0	0	2
CS201	3	2.33	2.50	2	0	2	0	0	0	0	0	2.50
CS202	2.13	1	1	1.65	0	0	0	0	0	0	0	1.75
CS203	0.75	0.50	0.50	0.25	0	0.25	0	0	0	0	0	0.50
CS204	2.56	1.71	1.57	1.03	0	0	0	0	0	0.85	0	1.71
CS205	0.83	1.11	1.11	0.83	0	1.83	0	0	0	0	0	2
CS206	2.67	2.00	2.00	2	0	0	0	0	0	0	0	2
CS207	2.13	1.75	1.50	1.50	1.50	1.50	0	0	0	0	0	1.75
CS208	2.13	1.50	1.50	0.75	0.75	0	0	0	0	1.50	0	1.50
CS231	2.33	2.17	2	2	0	2	0	2	0	2	0	2
CS232	3	2	2.20	2.33	3	0	0	1.67	2	2.60	0	2
CS233	3	2	1	0	0	0	0	0	0	0	0	2
CS234	2.33	2.17	2.20	2	0	0	0	2	1.60	2	0	2
CS301	2	1	2	1.8	0	0	0	0	0	0	0	1
CS302	3	2	2	2	0	0	0	0	0	0	0	2
CS303	3	2.83	3	3	2	0	0	0	0	0	0	2
CS304	1.50	1.50	1.50	2.25	1.50	0	0	0	0	0	0	1.50
CS305	3	3	3	2	0	0	0	0	0	0	0	2
CS306	2.25	2.13	1.50	1.50	0	1.50	0	0	0	0	0	1.50
CS307	3	2.67	3	3	0	0	0	0	0	1	0	2.67
CS308	1.50	2.25	1.50	1.50	0	2.25	0	1.69	1.50	2.06	1.50	1.75
CS309	3	2.83	2.67	3	3	0	0	0	0	0	0	2.83
CS331	2.67	3	2	2	3	0	0	3	0	3	0	2
CS332	3	3	3	2	2	0	0	0	1	2	0	0
CS333	2.67	3	2	2	3	3	0	3	3	3	3	2.67
CS334	2	2	2.20	2.33	1	0	0	2	2	2	0	2
CS341	3	3	3	3	0	2	3	0	3	3	3	3
CS352	3	2	2	0	0	2	0	0	2	0	3	2
CS361	2.83	3	1.67	3	0	0	0	0	2	2	0	3

Course												
CS368	2.25	2.25	1.63	0	1.50	0	0	1.50	2.25	1.50	1.50	2
CS401	2.83	2	3	2	0	2	0	0	0	0	0	2.83
CS402	2.83	1.83	2	2	2	2	1.75	0	0	0	0	3
CS403	2	2	0	1	0	0	0	0	0	0	0	2
CS404	2.67	2.67	2.50	2	0	0	0	0	0	0	0	3
CS405	3	3	2	3	0	0	0	0	0	0	0	2.80
CS407	2.52	1.78	1.78	2.67	0	0	0	0	0	0	0	2.67
CS409	2.52	1.78	2.52	1.78	0	0	0	2.52	0	0	0	2.52
CS431	3	3	3	3	0	0	0	0	2.67	3	0	3
CS451	3	3	3	3	3	3	3	2	3	3	3	2
CS467	2.13	2.25	1.35	1.50	0	0	0	0	0	0	0	2.13
CS472	2.94	2.94	2.94	1.72	0	1.96	0	2.94	0	0	0	2.94
CS492	3	3	3	2	3	3	1	3	3	3	3	3
CY100	1	1.17	1	1	2	0	3	0	0	0	0	0
CY110	3	0	0	0	2	0	0	0	0	0	0	3
EC100	2.26	0.87	0	0	0	0	0	0	0	0	0	1.74
EC110	1.50	0	0	0	1	1	0	2	2	2.25	1	1
HS200	0	1.50	1.50	1.50	0	1.25	0	1.50	1.50	1.50	1.75	1.50
HS210	0	2.25	1.50	0.75	0	0.75	0	0.75	1.50	2.25	0.75	1.50
HS300	2	0	0	3	3	0	1	0	2.50	2.50	2.50	2.50
IT482	2.17	2.50	0	2	0	0	0	0	0	0	0	2
MA101	1.88	1.77	1.88	1.67	1.15	0.63	0	0	0.63	1.25	0	1.25
MA102	2.57	2.57	2.57	2.57	1.43	0.86	0	0	0.86	1.29	0	1.37
MA201	3	3	3	3	2	1	0	0	1	2	0	2
MA202	1.69	1.13	1.13	0	0	0	0	0	0.56	1.13	0	1.13
PH100	1.61	0.89	0	0	0	0	0	0.71	1.07	0	0	0.54
PH110	3	0	0	0	2.40	0	0	1	2	0	0	1

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.48	2.17	2.08	2.03	2.02	1.70	2.00	1.94	1.93	2.03	2.12	2.06
Direct Attainment	2.43	2.13	2.04	2.00	2.01	1.67	2.05	1.91	1.89	1.99	2.12	2.02
InDirect Attainment	2.7	2.34	2.26	2.15	2.07	1.81	1.8	2.05	2.1	2.19	2.13	2.22

PSO Attainment

Course	PSO1	PSO2	PSO3
BE100	1	0	0
BE10105	2	1	1
BE102	1	0	0
BE103	0.83	0	0
BE110	0.83	0	0
CE100	1	0	0
CE110	1	0	0
CS100	3	1.75	1
CS110	1.74	1	0
CS120	3	2	1
CS201	2.25	0	0
CS202	1.25	1.13	0
CS203	0.75	0	0
CS204	2.35	1.71	0

CS205	1.46	0	0
CS206	2	2	0
CS207	1.50	2.25	0
CS208	2.25	1.50	0
CS231	3	2	0
CS232	3	2	3
CS233	2	0	0
CS234	2.33	1.33	0
CS301	1	0	0
CS302	3	2	0
CS303	1	1.67	0
CS304	2.25	1.25	0
CS305	2	0	0
CS306	2.25	0.75	0
CS307	1.75	1	0
CS308	1.50	1.50	0
CS309	1	0	0
CS331	3	2.67	2
CS332	0	2	0
CS333	3	2.67	2.67
CS334	3	1	1.67
CS341	3	2	0
CS352	2	0	0
CS361	2	1.80	0
CS368	2.06	1.50	0.75
CS401	2	1	0
CS402	3	2	0
CS403	2	0	0
CS404	2.33	0	0
CS405	2	0	0
CS407	2.67	0	0
CS409	1.78	1.78	0
CS431	2	1	1
CS451	3	3	3
CS467	1.50	1.50	0
CS472	1.96	0	0
CS492	3	3	2
CY100	1	0	0
CY110	1	0	0
EC100	0.87	0	0
EC110	1	0	0
HS200	0.80	0	0
HS210	0.75	0	0
HS300	1	0	0
IT482	2	0	0
MA101	0.63	0	0
MA102	0.86	0	0
MA201	1	0	0
MA202	1.69	0	0
PH100	0.50	0	0

| PH110 | 1 | 0 | 0 |

PSO Attainment Level

Course	PSO1	PSO2	PSO3
CO Attainment	1.84	1.73	1.78
Direct Attainment	1.79	1.71	1.74
InDirect Attainment	2.06	1.83	1.92

4 STUDENTS' PERFORMANCE (150)   Total Marks 115.53

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2021-22 (CAY)	2020-21 (CAYm1)	2019-20(CAYm2)	2018-19(CAYm3)	2017-18(CAYm4)	2016-17 (CAYm5)	2015-16 (CAYm6)
Sanctioned intake of the program(N)	30	30	30	30	60	60	60
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	30	29	14	14	8	22	18
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	0	1	0	0	3	0
Separate division students, If applicable (N3)	0	0	0	1	1	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	30	29	15	15	9	25	18

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2021-22 (CAY)	30	0	0	0	0
2020-21 (CAYm1)	29	5	0	0	0
2019-20 (CAYm2)	15	4	4	0	0
2018-19 (CAYm3)	15	5	4	3	0
2017-18 (LYG)	9	5	4	4	4
2016-17 (LYGm1)	25	19	16	14	13
2015-16 (LYGm2)	18	13	12	11	11

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2021-22 (CAY)	30	0	0	0	0
2020-21 (CAYm1)	29	4	0	0	0
2019-20 (CAYm2)	15	5	4	0	0
2018-19 (CAYm3)	15	5	5	2	0
2017-18 (LYG)	9	9	7	7	5
2016-17 (LYGm1)	25	22	19	19	17
2015-16 (LYGm2)	18	15	15	15	15

4.1 Enrolment Ratio (20)   Total Marks 18.00

Institute Marks : 18.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2021-22 (CAY)	30	30	100.00
2020-21 (CAYm1)	30	29	96.67
2019-20 (CAYm2)	30	14	46.67

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

Assessment : 18.00

4.2 Success Rate in the stipulated period of the program (40)   Total Marks 23.35

4.2.1 Success rate without backlogs in any semester / year of study (25)   Institute Marks : 13.00

Item	Latest Year of Graduation, LYG (2017-18)	Latest Year of Graduation minus 1, LYGm1 (2016-17)	Latest Year of Graduation minus 2 LYGm2 (2015-16)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	9.00	25.00	18.00
Y Number of students who have graduated without backlogs in the stipulated period	4.00	13.00	11.00
Success Index [SI = Y / X]	0.44	0.52	0.61

Average SI [(SI1 + SI2 + SI3) / 3] : 0.52

Assessment [25 * Average SI] : 13.00

4.2.2 Sucess rate in stipulated period (15)   Institute Marks : 10.35

Item	Latest Year of Graduation, LYG (2017-18)	Latest Year of Graduation minus 1, LYGm1 (2016-17)	Latest Year of Graduation minus 2 LYGm2 (2015-16)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	9.00	25.00	18.00
Y Number of students who have graduated in the stipulated period	5.00	17.00	15.00
Success Index [SI = Y / X]	0.56	0.68	0.83

Average SI[(SI1 + SI2 + SI3) / 3]: 0.69

Assessment [15 * Average SI] : 10.35

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

4.3 Academic Performance in Third Year (15)   Total Marks 8.44

Institute Marks : 8.44

Academic Performance	CAYm3 (2018-19)	LYG (2017-18)	LYGm1 (2016-17)
Mean of CGPA or mean percentage of all successful students(X)	6.52	6.87	7.40
Total number of successful students(Y)	2.00	7.00	19.00
Totalnumber of students appeared in the examination(Z)	5.00	7.00	19.00
API [X*(Y/Z)]:	2.61	6.87	7.40

Average API [(AP1 + AP2 + AP3)/3] : 5.63

Assessment [1.5 * AverageAPI] : 8.44

4.4 Academic Performance in Second Year (15)   Total Marks 7.61

Institute Marks : 7.61

Academic Performance	CAYm2 (2019-20)	CAYm3 (2018-19)	LYG (2017-18)
Mean of CGPA or mean percentage of all successful students(X)	6.97	6.50	7.36
Total number of successful students (Y)	4.00	5.00	7.00
Total number of students appeared in the examination (Z)	6.00	6.00	10.00
API [X * (Y/Z)]	4.65	5.42	5.15

Average API [(AP1 + AP2 + AP3)/3] : 5.07

Assessment [1.5 * AverageAPI] : 7.61

4.5 Placement, Higher Studies and Entrepreneurship (40)

Total Marks 38.13

Institute Marks : 38.13

Item	LYG (2017-18)	LYGm1 (2016-17)	LYGm2 (2015-16)
Total No of Final Year Students(N)	7.00	19.00	15.00
No of students placed in the companies or government sector(X)	6.00	14.00	9.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	0.00	4.00	4.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	1.00	2.00
x + y + z =	6.00	19.00	15.00
Placement Index [(X+Y+Z)/N] :	0.86	1.00	1.00

Average Placement [(P1 + P2 + P3)/3] :   0.95

Assessment [40 * Average Placement] : 38.13

Program Name : Computer Science & Engg.
Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aswani Raj C k	VVT17CS003	IBS software	IBS/00551234
2	Hridhin Pt	VVT17CS005	Simelabs	SIME/34567

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Dhanyesh	VVT16CS014	cybaze	CYB/88990
2	Aiswarya K	VVT16CS005	SVM	svm/334467
3	Amrutha pm	VVT16CS008	Nidhi mutual private limited	NMPL/1567
4	Akshaya P	VVT16CS007	Brands n Codes Media Technology	BCMT-67543
5	Theja krishna	VVT16CS028	Techversant infotech private limited	TIPL/5678
6	Shebin KP	VVT16CS023	Aufait Technologies Private Limited	ATPL/4567

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Ajilal M	VVT15CS006	Software Associates	SA/HR/12/19
2	Sabari Nath P	VVT15CS023	Mindtree Ltd	MIND/543267
3	ARSHAG RABEE TK	VVT15CS011	FOUR LINKS BUILDING CONTRACTING LLC	FLBC/67543
4	Mredula P k	VVIT15CS020	Actionfi Technologies	AT/48965
5	Princiya Jas	VVT15CS021	GreenHopper Farm Living LLP	GHFL/47563
6	Anju k	VVT15CS010	Techoriz Digital Solution	TDS/9897
7	Athul Krishna	VVT15CS012	Crypto Trading	CT/6453
8	Harice MH	VIAOECS017	RCG Global Technologies	gf/rcg-in/201482/056/21

4.6 Professional Activities (20)

Total Marks 20.00

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

Institute Marks : 5.00

Professional Societies

Professional bodies have built essential networks where experience and information, including research, is exchanged. They provide conduits for gathering and disseminating information. Their authority and credibility ensures important information is taken seriously.Some of the professional bodies associated with our college is CSI, ACM ,CySi etc.

1.ACM Student Chapter

ACM, the Association for Computing Machinery is the world's largest educational and scientific society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking. ACM Student chapter was active in CSE Department VVIT , since 2021.

Benefits of ACM Membership

- ACM provides the tools and resources to help get you there, by advancing your career.
- Enriching knowledge with life-long learning resources.

2.CSI Student Chapter

Formed in 1965, the CSI has been instrumental in guiding the Indian IT industry down the right path since its formative years. Today, the CSI has 72 chapters all over India, 511 student branches, and more than 100000 members including Indias most famous IT industry leaders, brilliant scientists and dedicated academicians.

CSI Student chapter was active in CSE Department VVIT , since 2013. There are several activities conducted, coordinated by the Student Branch Coordinator, students and other faculty under CSI for past 6 years. The programs are benefited by Faculty and students on the same extent.

Benefits of CSI Membership

- Invitation for all Registered/State/National student conventions/conferences and competitions.
- Opportunities for students to interact with industry professionals and chalk out a career path.
- Eligibilty to be nominated for the best student paper in CSI communications.
- Eligibity for CSI funded minor projects(for college students).

3.CySI Student Chapter

The Cyber Society of India (CySI),is to contribute to the building of peaceful , ethical and prosperous Cyber netizen Society.

Benefits of CySI Membership

- CySI to provide a forum for debate, training, place of assistance and research, which actively promote good Cyber netizen Society and advise the concerned bodies on related matter.

  The events organized by various professional societies are listed in the following table.

Table 4.6.1.a Details of Events Conducted based on Proffessional Societies during CAY 2020-2021

NAME OF CHAPTER	DATE	DETAILS OF EVENT	NAME OF CHIEF GUEST
CSI	20/7/2021	"INDUSTRIAL REQUIREMENTS IN IT FIELD"-WEBINAR	SOBIR.N
	22/5/2021	AFTER BTECH?	ASWIN P CHANDRAN
	3/9/2021	" RECENT TRENDS IN SOCIALLY RELEVANT TECHNICAL EDUCATION-CHALLENGES AND IMPACTS"	DR. KRIPA SHANKER GUPTA , MR. VYSHAKH
	8/7/2020	ONLINE PRESENTING METHODOLOGIES FOR TEACHING COMMUNITY - WEBINAR	DR S KAVITHA MURUGESAN, MR.SHEBIN K P
	1/2/2020	PROGRAM ON "ART OF TEACHING".	DR.KUMARAVEL(PROFESSOR,EEE,NIT;CALICUT)
	3/9/2020	WEBINAR ON MINORS IN B. TECH	DR. JAGET BABU
	4/9/2021	3 DAYS FDP ON " RECENT TRENDS IN SOCIALLY RELEVANT TECHNICAL EDUCATION- CHALLENGES AND IMPACTS"	DR. ANOOP MATHEW, DR. SELVAKUMAR GURUSWAMY, S.M RAMANUNI
	24/8/2021	A TALK ON *YOUTH ENTREPRENEURSHIP –PATH OF A SUCCESSFUL ENTREPRENEUR*	ER.RAJASEKHARAN J
	13/1/2021	" ACCOUNTABILITY OF ONLINE EXAMS"	DR ANOOP MATHEW
	3/7/2021	INAUGURATION OF PROFESSIONAL BODY	(DR) ELIZABETH SHERLY
	9/3/2020	WORKSHOP ON ARTIFICIAL INTELLIGENCE	JAIDEN JOHN BOSE

	3/9/2020	W\WEBINAR ON MINORS IN B. TECH	DR. JAGET BABU
	14/7/2020	WEBINAR ON " EXPLORING BLOCK CHAIN APPLICATIONS FOR EDUCATION	MS. CINTHIA JOY
	17/10/2020	WEBINAR ON MACHINE LEARNING	MS.JESNA JOSEPH
	25/6/2020	WEBINAR "4IR AND DATA ANALYTICS IN INDUSTRY 4.0"	PROF.DR. JAGET BABU
	21/5/2020	WEBINAR ON EMAIL MARKETING	DR.KAVITHA S
	17/6/2020	WEBINAR ON TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	PROF. DR ANOOP MATHEW
	13/3/2021	ONLINE WORKSHOP ON "RESEARCH ARTICLE PREPARATION USING LATEX"	DR.MANIKANDAN VM
	3/7/2021	INAUGURATION OF CSI CHAPTER	DR ELIZABETH SHERLEY
	14/5/2021	PHOTOSHOP CLASS	THYCHA DIGITAL SOLUTIONS
	2/6/2020	" NATIONAL WORKSHOP ON LEARNING	DR. KAVITHA S
	29/5/2020	WEBINAR ON BIG DATA & CLOUD COMPUTING AND CURRENT TRENDS CHYALLENGES	DR.G.GOKULKUMARI
	16/11/2020 to 21/11/20 7/12/2020 to 14/12/20	AN INDUCTION PROGRAM FOR YOUNG TEACHERS	DR.S.KAVITHA MURUGESAN
	27/5/2020	WEBINAR ON PERSONAL TO PROFESSIONAL EXCELLANCE IN GLOBAL ITINDUSTRY	ER. MUJEEBUR RAHIMAN M
	11/1/2021	WEBINAR ON THE TITLE "MY STORY MOTIVATIONAL SESSION"	MR.AKSHAY PK
	29/12/2020	ONLINE MODE QUALITY IMPROVEMENT PROGRAM ON THE TITLE " HOW TO USE JAMBOARD FOR INTERACTIVE CLASSES "	MS.ANJANA TK
	12/6/2021	LIVE WEBINAR ON "INTERNET OF THINGS APPLICATIONS AND CHALLENGES"	DR.S.KAVITHA MURUGESAN
ACM	14/8/2021	INAUGURAL CEREMONY ACM CHAPTER	VINEETH PALERI
CYSI	19/7/2021	INAUGURATION OF " CYBER SOCIETY OF INDIA"	MR. PREMANAND

Screenshots of Events
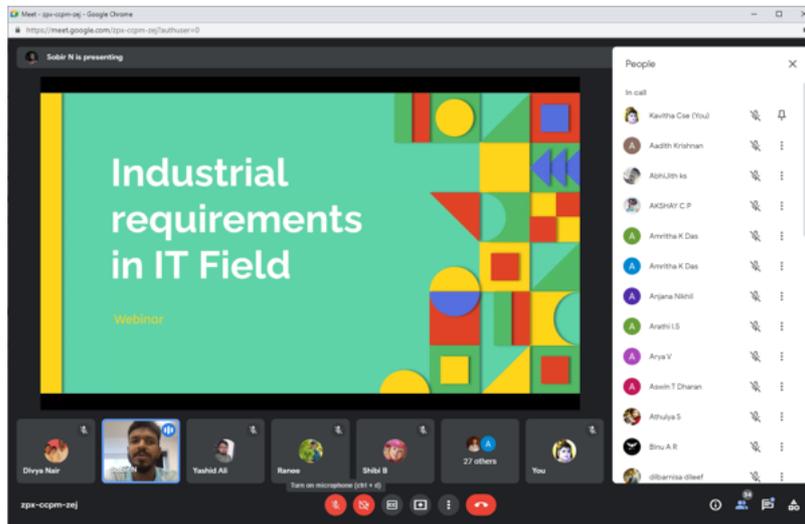
Fig 4.6.3.a Webinar on Industrial Requirements in IT Field

Fig 4.6.3.b Seminar on "Careers after BTech"
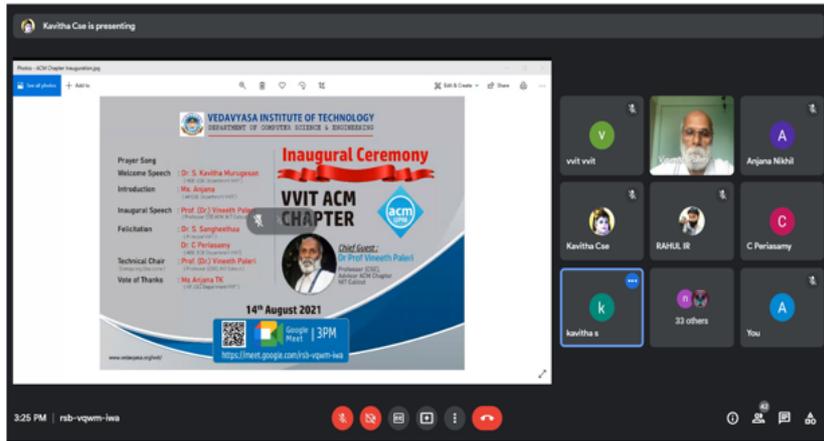
Fig 4.6.3.c Inauguration of ACM Chapter

Fig 4.6.3.d Two days' workshop on "Artificial Intelligence"

4.6.2 Publication of technical magazines, newsletters, etc. (5)   Institute Marks : 5.00

College magazines give the young and talented writers an opportunity to feel intently, observe keenly, think deeply and thereby express themselves in a distinct way. The college magazine plays a very important role in an educational institution as it channelizes the budding talented writers and helps in encouraging their writing skills by appraisal which inspires and motivates them to read and write much more.

Newsletter is published annually and circulated among faculty and students. It is also posted on the college website.

The Editorial Board includes:

1. Chief Editors:Dr.Kavitha S Murugesh,HoD/CSE
2. Editors: Ms.Shibi B,AP / CSE

Table 4.6.2.a Newsletter Publication Details

Sl. No.	Name of Newsletter	Volume	Issue	Year
1		1	1	2018-19
2		2	2	2018-19
3	QWERTY	1	1	2019-20
4		2	2	2019-20
5		1	1	2020-21
6		2	2	2020-21

4.6.3 Participationininter-institute events by students of the program of study (10)   Institute Marks : 10.00

Participating in inter-institute events outside the college provides them with an opportunity to build networks and new friendships. Overall benefits of intercollegiate participation and organization are many. Extracurricular activities provide a place for students to come together, discuss pertinent ideas and issues, and accomplish common goals.

Table 4.6.3.a Co-curricular activities and Extra-curricular activities CAYm2(2018-2019)

Sl no.	Student Name	Reg no.	Date	Event Title	Event Place	Prize / Participation
1	Fathima Husna P C	VVT16CS016	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
2	Sujin M	VVT15CS025	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
3	Vishnu C V	LVVT16CS035	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
4	Shebin K P	VVT16CS23	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			14/11/18	Blood Donation Camp	Vedavyasa institute of technology	Participation
			15/10/2018	Workshop-web designing,INIZIO	Vedavyasa institute of technology	Participation
			14/10/2018	Workshop-Coding,INIZIO	Vedavyasa institute of technology	Participation
5	Siva Subramanian .A	VVT16CS025	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			15/08/2018	Flood Relief Activities	Calicut	Participation
6	Anagha Chandran	VVT15CS008	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
7	Abdul Vashid K	VVT16CS001	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
8	Sreerag NM	VVT16CS027	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
9	Arya Mohandas	VVT16CS010	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	Participation
10	Athira Suresh	VVT16CS012	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	Participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	Participation
11	Aiswarya A K	VVT16CS005	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	Participation
12	Athira P	LVVT16CS034	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	Participation
13	Ranjusha P	VVT16CS022	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
14	Dhanyesh Chandran O	VVT16CS014	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
15	Dilbarnisa	VVT16CS015	19/11/2018	Internship - web designing and development	Primal codes and technologies, Calicut	participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
16	Muhsina Sherin K	VVT16CS021	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
17	Adila P	VVT16CS004	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
18	Vaisakh Vinod K	VVT16CS030	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
19	`Anaswara V	LVVT16CS033	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
20	Anjali K	VVT16CS009	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation

			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
21	Maya Muraleedharan	VVT16CS018	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
22	Theja Krishna	VVT16CS028	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
23	Athulya P D	VVT16CS013	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
24	Amritha P M	VVT16CS008	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation
25	Abina Krishna K	VVT!6CS002	22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
26	Akhaya P	VVT16CS007	28/07/2018	Internship - Sysol system solutions	Kinfra Techno Industrial park	participation
			22/02/2018	Workshop - AI, VoipWIFI Technology	Vedavyasa institute of technology	participation
			28/08/18	Flood Relief Activities	Vedavyasa institute of technology	participation

Table 4.6.3.b Co-curricular activities and Extra-curricular activities CAYm1(2019-2020)

SI no.	Student Name	Reg no.	Date	Event Title	Event Place	Prize / Participation
1	Fathima Husna P C	VVT16CS016	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
2	Sujin M	VVT15CS025	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
4	Shebin K P	VVT16CS23	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
5	Siva Subramanian .A	VVT16CS025	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
6	Anagha Chandran	VVT15CS008	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
7	Abdul Vashid K	VVT16CS001	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
8	Sreerag NM	VVT16CS027	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
9	Arya Mohandas	VVT16CS010	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
10	Athira Suresh	VVT16CS012	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
11	Aiswarya A K	VVT16CS005	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
			05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
12	Athira P	LVVT16CS034	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
13	Ranjusha P	VVT16CS022	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
			05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
14	Dhanyesh Chandran O	VVT16CS014	03/02/2019	Workshop- Web Development	Cochin University	participation
			05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
15	Dilbarnisa	VVT16CS015	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
16	Muhsina Sherin K	VVT16CS021	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
17	Adila P	VVT16CS004	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
18	Vaisakh Vinod K	VVT16CS030	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
19	`Anaswara V	LVVT16CS033	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
20	Anjali K	VVT16CS009	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
21	Maya Muraleedharan	VVT16CS018	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
22	Theja Krishna	VVT16CS028	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
23	Athulya P D	VVT16CS013	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation

24	Amritha P M	VVT16CS008	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
25	Abina Krishna K	VVT!6CS002	28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation
26	Akhaya P	VVT16CS007	05/09/2019	Workshop - Robotics	Vedavyasa institute of technology	participation
			28/03/2019	Workshop-WEKA,IOT	Vedavyasa institute of technology	participation

Table 4.6.3.c Co-curricular activities and Extra-curricular activities CAYm(2020-2021)

Sl No	Student Name	Register Number	Date	Event Title	Event Place	Price/Participation
1	Akash K	VVT18CS001	5/27/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/29/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			6/17/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/18/2020	Cloud Computing with AWS	Online	Participation
			7/14/2020	Exploring BlockChain Application for Education	Online	Participation
			11/12/2020	Recession proof careers after Btech	VVIT	Participation
2	Akshay C P	VVT18CS002	5/27/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/29/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			6/17/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/18/2020	Cloud Computing with AWS	Online	Participation
			7/14/2020	Exploring BlockChain Application for Education	Online	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
3	Arjun Mohanesh	VVT18CS003	5/27/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/29/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			6/17/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/18/2020	Cloud Computing with AWS	Online	Participation
			7/14/2020	Exploring BlockChain Application for Education	Online	Participation
4	Athulya S	VVT18CS004	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation

			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation- Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
5	Binu A R	VVT18CS005	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation- Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
6	Karthik R	VVT18CS006	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation- Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
7	Mohammed Faris	VVT18CS007	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation

|			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
8	Mohammed Lisan	VVT18CS008	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring Block Chain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
9	Piyush Raja	VVT18CS009	2/7/2020	Marketing Intern at ADVITIYA20	Online	Participation
			2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring Block Chain Application for Education	VVIT	Participation
			6/22/2020	Innovation And Entrepreneurship in Post-covid world	Online	Participation
			7/14/2020	Recession proof careers after Btech	Online	Participation
			7/22/2020	NPTEL workshop	Online	Participation
			7/25/2020	Online Quiz by PANORAMA OF PHYSICS	Online	Participation
			8/22/2020	Internship-Mobile app development GRIP at the sparks foundation through internshala	Online	Participation
			9/5/2020	The Fundamental of Digital Marketing	Online	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			10/7/2020	C++ Mini project from Basic To Advance	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
			12/20/2020	Quick and easy guide to microsoft word	Online	Participation
			17.08.2020	Application of machine learning in the advancements of computer science	VVIT	Participation
10	Rahul C K	VVT18CS010	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation

			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
11	Raneesha M K	VVT18CS011	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
12	Sanandan S	VVT18CS013	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
13	Swathi P	VVT18CS014	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation

			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation
14	Vishnu Priya V	VVT18CS016	2/25/2020	WEBINAR-PERSONAL TO PROFESSIONAL EXCELLENCE IN THE GLOBAL IT INDUSTRY	Online	Participation
			5/27/2020	BIG DATA & CLOUD COMPUTING: CURRENT TRENDS & CHALLENGES	Online	Participation
			5/29/2020	TECHNO-ECONOMIC ASPECTS OF GREEN ENERGY	Online	Participation
			6/17/2020	Cloud Computing with AWS	Online	Participation
			6/18/2020	Exploring BlockChain Application for Education	Online	Participation
			7/14/2020	Recession proof careers after Btech	VVIT	Participation
			10/5/2020	How to plan for Start-up and Legal & Ethical Steps	Online	Participation
			11/12/2020	Prototype/Accelerators/Incubation-Opportunities for Students and Faculty – Early Stage Entrepreneurs	Online	Participation

Screenshots of Events
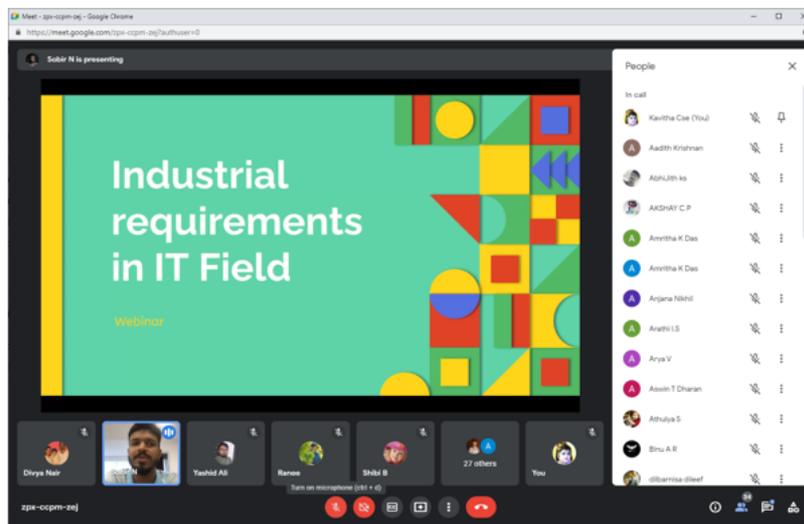
Fig 4.6.3.a Webinar on Industrial Requirements in IT Field

Fig 4.6.3.b Seminar on "Careers after BTech"
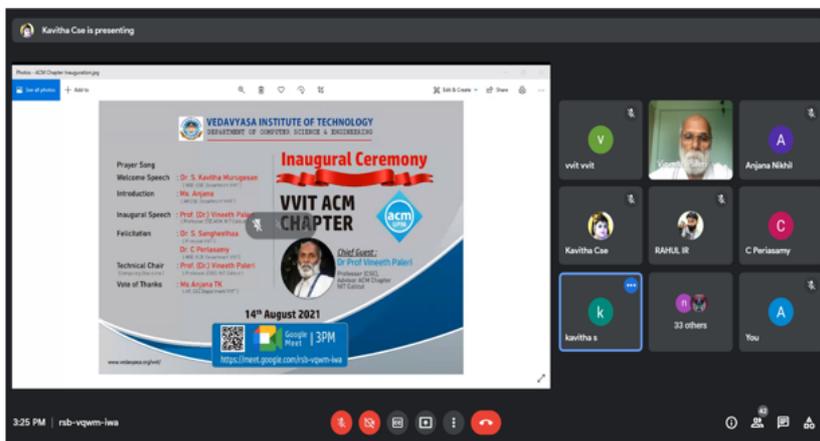
Fig 4.6.3.c Inauguration of ACM Chapter

Fig 4.6.3.d Two days' workshop on "Artificial Intelligence"

5 FACULTY INFORMATION AND CONTRIBUTIONS (200)   Total Marks 180.19

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type
Dr. Sangheethaa S	BLEPS2018G	ME/M. Tech and PhD	17/08/2012	Computer Science and Engineering	30	0	0	Professor		03/10/2008	Regular
Dr Kavitha S	BZWPK7189D	ME/M. Tech and PhD	21/08/2015	Computer Science and Engineering	25	0	0	Professor	03/08/2015	06/06/2005	Regular
Sabitha KP	EBPPP1712J	M.E/M.Tech	15/12/2014	Computer Science and Engineering	1	0	0	Assistant Professor		31/10/2011	Regular
Ginnu George	BEMPG1364Q	M.E/M.Tech	12/06/2013	Computer Science and Engineering	10	0	0	Assistant Professor		12/06/2013	Regular
SHIBI B	IFOPS3890M	M.E/M.Tech	10/07/2014	Computer Science and Engineering	8	0	0	Assistant Professor		01/09/2014	Regular
Anjana P	CHEPP9492A	M.E/M.Tech	28/11/2011	Computer Science and Engineering	2	0	0	Assistant Professor		08/05/2018	Regular
Mrs Ameefa PK	AWXPA8008M	M.E/M.Tech	19/08/2013	Computer Science and Engineering	7	0	0	Assistant Professor		02/08/2021	Regular
Silpa AK	CRUPA6638R	M.E/M.Tech	17/08/2019	Computer Science and Engineering	5	0	0	Assistant Professor		02/08/2021	Regular
Sruthi PK	BIYPC5382C	M.E/M.Tech	21/08/2015	Computer Science and Engineering	4	0	0	Assistant Professor		02/08/2021	Regular
Ranjana C	BCGPR1860L	M.E/M.Tech	01/01/2016	Computer Science and Engineering	5	0	0	Assistant Professor		02/08/2021	Regular
Sruthi MP	FBZPS5506E	M.E/M.Tech	08/05/2017	Computer Science and Engineering	1	0	0	Assistant Professor		01/08/2017	Regular
Jancy Manoharan	BLIPJ5461L	M.E/M.Tech	08/05/2017	Computer Science and Engineering	1	0	0	Assistant Professor		10/08/2018	Regular
Vidya M	CNVPM3548K	M.E/M.Tech	24/07/2017	Computer Science and Engineering	1	0	0	Assistant Professor		13/01/2020	Regular
Amrutha Das K	GSHPD1568K	M.E/M.Tech	13/12/2017	Computer Science and Engineering	1	0	0	Assistant Professor		03/08/2020	Regular
Anjana TK	AYGPA6940B	M.E/M.Tech	08/07/2013	Computer Science and Engineering	1	0	0	Assistant Professor		13/01/2020	Regular
Divya RK	ASWPD4984A	M.E/M.Tech	29/04/2017	Computer Science and Engineering	1	0	0	Assistant Professor		27/01/2020	Regular
Renya Nath	BDNPN1584K	M.E/M.Tech	02/09/2016	Computer Science and Engineering	1	0	0	Assistant Professor		01/01/2018	Regular
Mohamed Riyas	DEZPR5805E	M.E/M.Tech	31/08/2017	Computer Science and Engineering	3	0	0	Assistant Professor		01/01/2018	Regular
Aparna VK	BTFPA7710Q	M.E/M.Tech	17/08/2018	Computer Science and Engineering	1	0	0	Assistant Professor		06/02/2019	Regular

5.1 Student-Faculty Ratio (20)

Total Marks 20.00

Institute Marks : 20.00

UG

No. of UG Programs in the Department 1

Year of Study	B.Tech Computer Science and Engineering					
	CAY		CAYm1		CAYm2	
	(2021-22)		(2020-21)		(2019-20)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	30	0	30	1	30	0
3rd Year	30	0	30	0	60	0
4th Year	30	0	60	0	60	0
Sub-Total	90	0	120	1	150	0
Total	90		121		150	
Grand Total	90		121		150	

PG

No. of PG Programs in the Department 1

Year of Study	M.Tech Computer Science and Engineering		
	CAY(2021-22)	CAYm1(2020-21)	CAYm2 (2019-20)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	18	18	18
2nd Year	18	18	18
Total	36	36	36
Grand Total	36	36	36

SFR

No. of UG Programs in the Department 1
No. of PG Programs in the Department 1

Description	CAY(2021-22)		CAYm1 (2020-21)		CAYm2 (2019-20)	
Total No. of Students in the Department(S)	126	Sum total of all (UG+PG) students	157	Sum total of all (UG+PG) students	186	Sum total of all (UG+PG) students
No. of Faculty in the Department(F)	12	F1	11	F2	11	F3
Student Faculty Ratio(SFR)	10.50	SFR1=S1/F1	14.27	SFR2=S2/F2	16.91	SFR3=S3/F3
Average SFR	13.89	SFR=(SFR1+SFR2+SFR3)/3				
F=Total Number of Faculty Members in the Department (excluding first year faculty)						

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

2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.

3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

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

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2021-22)	12	0
CAYm1(2020-21)	11	0
CAYm2(2019-20)	11	0

Average SFR for three assessment years :   13.89

Assessment SFR :   20

5.2 Faculty Cadre Proportion (25)   Total Marks 25.00

Institute Marks : 25.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2021-22)	1.00	2.00	1.00	0.00	4.00	10.00
CAYm1(2020-21)	1.00	2.00	1.00	0.00	5.00	9.00
CAYm2(2019-20)	1.00	2.00	2.00	0.00	6.00	9.00
Average Numbers	1.00	2.00	1.33	0.00	5.00	9.33

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

5.3 Faculty Qualification (25)   Total Marks 20.19

Institute Marks : 20.19

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2021-22(CAY)	2	10	6.00	25.00
2020-21(CAYm1)	2	9	7.00	20.00
2019-20(CAYm2)	2	9	9.00	15.56

Average Assessment :   20.19

5.4 Faculty Retention (25)   Total Marks 15.00

Institute Marks : 15.00

Description	2020-21	2021-22
No of Faculty Retained	7	7
Total No of Faculty	11	11
% of Faculty Retained	64	64

Average :   64.00

Assessment Marks :   15.00

5.5 Innovations by the Faculty in Teaching and Learning (20)   Total Marks 20.00

Institute Marks : 20.00

Mode of teaching in this institute is not only limited to traditional chalk and talk methods but also an amalgamation of modern technology.

- All the MOOC open courses, MHRD'S, Swayam, NPTEL, UGC-INFONET Digital Library Consortium and NDL are available under VVIT e-Learning Centre for Student Centric Teaching-Learning Process.
- The process of teaching extended to the social networking sites where teachers and students interact over the instructions taught in the class rooms.
- The students are also exposed to online EDUSAT courses by the subject experts.
- The course materials are distributed among the students by the subject faculty well in advance of the commencement of class.
- Faculties share the study materials among students via email, websites etc.

S. No	Methods and Techniques	Goal Achievement Steps
1	Visualization Enhancement	In order to achieve goal 1, ICT enabled classes are provided in which faculty use LCD projectors in the classroom for visualizing and demonstrating various concepts, theories and procedures in addition to the lecture using the blackboard. Different materials used by the faculty for this purpose include Microsoft PowerPoint presentations, Google Slides, PDF and word documents (prepared by faculty), video lectures available from NPTEL and other reliable sources. These materials are made available to the students for improving their learning process. Faculty also handles classes for students in a smart classroom.
2	Software Mechanisms	The Virtual Learning Environment (VLE) of the Computer Science and Engineering Department for facilitating online teaching and learning provides practical assignments, code reviews, quizzes and more opportunities to evaluate the practical evaluation for students. Faculty can set assignments or quizzes via online console, which must be completed by students before the deadline. Faculty can monitor the activities online and assign internals accordingly. Provides online data storage and facilitation of Academic data. This helps students to access their internals on time, online, using their credentials. This reduces paperwork during the learning process.The software also provides options to create quizzes, upload notes etc. such that students can access them online via their login, and use them for study references.
3	Role-Playing based Learning	The Goal is achieved by dividing students into different groups to perform certain roles in a topic. They then mock out the working of various topologies or blocks or algorithms to improve the way of learning.
4	Flipped Classroom-based Learning	Flipped Classroom reverses the traditional way of learning and teaching. It brings the homework into the classroom, ie, students will be asked to learn about a topic prior to its introduction by faculty using online contents and materials. This helps to provide a platform for students to (a)discuss the subject topics with other students in classrooms and thereby enabling them to learn in a more comfortable way (b) have effective participation in group discussion (c) active involvement in teamwork (d) develop good and healthy communication skills.
5	Practical Implementation of Concepts	The faculty provides a demonstration of modern computational and analytical software tools to students during regular class time in order to make the learning process more effective.At the same time TechTalk activity is also provided by each faculty through online.
6	Technical Advancement	Achievement of goal 5 is facilitated by organizing workshops and technical talks on technological advancements in the field of Computer Science and Engineering for undergraduate students.
7	Faculty Improvement in Latest Technologies	Achievement of goal 6 is facilitated by organizing workshops and technical talks on recent advancements in the trends of Computer Science and Engineering, and on academic research promotion for the faculty.
8	Faculty Research Sharing	In order to achieve the goal, the academic research work details and the publication details of the faculty are made available.This not only motivates students to guide themselves to specialize in the field of research but also to get exposure to technological advancements.
9	Methods involved in Contribution to Public	The conducted programs are made available on websites and facebook for the public,so that students as well as the parents get knowledge about the recent trends.

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

Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2020-21 (CAYm1)	2019-20 (CAYm2)	2018-19 (CAYm3)
Dr Sangheethaa S	5.00	5.00	5.00
Dr Kavitha Murugeshan	5.00	5.00	5.00
Ms.Shibi.B	5.00	5.00	5.00
Ms.Sruthi M P	5.00	5.00	5.00
Ms Lubna V	0.00	5.00	5.00
Mrs Renya Nath N	0.00	5.00	5.00
Sabitha KP	5.00	5.00	5.00
Ginnu George	0.00	5.00	5.00
Manju Joseph	0.00	5.00	5.00
Mr Mohammed Riyas K.V	0.00	5.00	5.00
Ms Jancy Manoharan C	5.00	5.00	5.00
Shija V	0.00	5.00	5.00
Ms Anjima Ajith	0.00	5.00	5.00
Anjana P	0.00	5.00	5.00
Sherine Subha	0.00	5.00	5.00
Ms Saikrishna N	5.00	5.00	5.00
Ms Chinchu M.S	5.00	5.00	5.00
Ms Dhrisya k	5.00	5.00	5.00
Ms Neethu Mathew	5.00	5.00	5.00
Sum	50.00	95.00	95.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	6.30	7.85	9.30
Assessment [3*(Sum / 0.5RF)]	47.62	72.61	61.29

Average assessment over 3 years: 60.51

5.7 Research and Development (30)

5.7.1 Academic Research (10)

Total Marks 25.00

Institute Marks : 10.00

Faculty Research Publications

Year	No of publications in journals /conferences
CAY 2020-21	12
CAYm1	12
CAYm2	12
Total	48

List of Faculty Publications (Computer Science and Engineering Department)

SL No	Name of faculty member	Title of paper Include DOI, if available	Conference/Journal	Year
1	Dr.S.Kavitha	Journal Of Adv Research In Dynamical Amp Control Systems	Journal Of Adv Research In Dynamical Amp Control Systems	2018
2	Mr. Mohamed Riyas KV	A Survey On Relation Of Big Data Over Cloud Computing	National Conference On Computation Intelligence And Data Analytics.	2018
3	Mr. Mohamed Riyas KV	Analysis Of Various Encryption Algorithms In Cloud Computing	International Journal Of Computer Science And Mobile Computing	2020
4	Dr.S.Kavitha	Enhanced Student Performance Analysis In Graduation Using K Mean Cluster	Paripex - Indian Journal Of Research	2020
5	Mr. Mohamed Riyas KV	Optimization Of Outrigger And Belt Truss System In Vertically Irregular Structure	Paripex - Indian Journal Of Research	2020
6	Dr.S.Kavitha	An Improved Cardiac Risk Prediction System Using Data Mining Techniques	Paripex - Indian Journal Of Research	2020
7	Anjana. P	An Improved Cardiac Risk Prediction System Using Data Mining Techniques	Paripex - Indian Journal Of Research	2020
8	Dr.S.Kavitha	Enhanced Student Performance Analysis In Graduation Using K Mean Cluster	Icrrcea	2020
9	Mr. Mohamed Riyas KV	Optimization Of Outrigger And Belt Truss System In Vertically Irregular Structure	Icrrcea	2020
10	Dr.S.Kavitha	An Improved Cardiac Risk Prediction System Using Data Mining Techniques	Icrrcea	2020
11	Anjana. P	An Improved Cardiac Risk Prediction System Using Data Mining Techniques	Icrrcea	2020

5.7.2 Sponsored Research (5)   Institute Marks : 5.00

2020-21 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Mapathon	6 Months	Kerala State IT mission	45000.00
Research Trends In Socially Relavent Technical Education	1 week	APJ KTU	139000.00
i-TBI VVIT	3 years	Innovation And Enterprenurship Division iTBI	50000000.00
			Total Amount(X): 50184000.00

2019-20 (CAYm2)

Project Title	Duration	Funding Agency	Amount
STTP-AICTE Induction Progr	2 weeks	AICTE	268333.00
			Total Amount(Y): 268333.00

2018-19 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Leaf Dissifier	6 months	Kerala Start up Mission	50000.00
			Total Amount(Z): 50000.00

Cumulative Amount(X + Y + Z) =   50502333.00

5.7.3 Development Activities (10)   Institute Marks : 10.00

A developmental activity or assignment provides faculties with an alternative work experience that allows for ongoing experiential learning. This experience enhances a faculties knowledge and skills and can range from on-the-job training to details or rotations outside an organization. Growth and development are key motivators for faculties.Education is a never-ending process. It doesn't stop after earning a degree and starting a career. Through continuing education, career-minded individuals can constantly improve their skills and become more proficient at their jobs.

Table 5.7.3.a List of Development Activities

Faculty involved in Developmental Activities	
Developmental Activities	**Faculty/Resource person Involved**
VVIT Website Hosting and Management	Dr.Sangeethaa S and Dr.Kavitha.M
IC Departmental Website Hosting and Management	Dr.Sangeethaa S and Dr.Kavitha.M
SWAYAM and SWAYAM Prabha Coordinator	Ms Shibi B
IC Career Development Cell	Ms Anjana P
Dean Research and Development	Dr.Kavitha.M and Ms Ginnu George
Convener of Photography and Fine Art club	Ms Sruthi CK and Ms Ranjana C
Convener of Cultural Council	Ms Ameefa PK
Convener of Sports Council	Ms Silpa AK
IQAC convener	Dr.Kavitha.M

Product Development

Computer science includes programming, design, analysis, and theory. Computer science projects involve designing and development of various application-based software. Computer science project topics can be implemented by a number of tools such as Java, .NET, Oracle, etc.At VVIT we specialize in the application of emerging technologies across diverse levels. With each individual student we specifically tailor our product development solutions to fit their needs and help inspire innovation. Through a perfect blend of technical expertise and awareness our faculty team can help students to develop leading-edge products that build market presence.

Fig 5.7.3.a Enhanced Firm Protection from Fire hazards using IOT.

1. Analysis on Credit Card Fraud Identification using ML

2.An Enhanced Heart Disease Prediction Technique Using Hybrid Machine Learning Method

3.Early Detection and Categorization of Diabetic Retinopathy using Deep Convolutional Neural Network.

4.Award Badging System using Block chain technology

5.Enhanced Firm Protection from Fire hazards using IOT.

These are some of the projects done.

Research Labratories

Table 5.7.3.b Research Laboratories

SI No	Laboratory Name	No of Computers	Configurations	Softwares/Hardwares Available
1	R & D Lab	10	Computer System with Intel Core i5,RAM 8GB,64 bit OS,HDD 500GB,DELL Monitor	MATLAB CDAC IOT KITS
2	Project Lab	40	Computer System with Intel Core i5,RAM 8GB,64 bit OS,HDD 500GB,DELL Monitor	MATLAB

Instructional Materials

The department maintains the following instructional materials that helps in teaching learning process

▪ Printed Lab manuals for each lab.

 ▪ Tutorial sheets

▪ Contents beyond the syllabus

▪ Handwritten /printed lecture notes

▪ E-notes

Table 5.7.3.c List of Lab Manuals

Instruction Materials (Lab Manuals)
o Electronic Circuits and Logic Design o Data Structures with C/C++ o Design and Analysis of Algorithms o Microprocessor o Microcontrollers and Embedded systems o Computer Network o Database Applications o System Software and Operating System o Unix System Programming and Compiler Design o Artificial Intelligence and Machine Learning o Web Technology o Computer Network o Web Programming

Table 5.7.3.d Skill Development Activities for Faculty CAYm (2020-21)

Name Of Expert	Industry /Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Anjana T K	Institute	Cyber Security	17/7/2021	S	210
Ms.Kavitha	Institute	IOT Applications and Challenges	12/06/2021	S	130
Ms.Vidya M	Institute	Information Extraction Webinar	29/05/20221	S	70
		Workshop on Artificial Intelligence	10/02/2020	S	120
IIC , CSI	CSI VVIT	Webinar on "SMART INSTITUTIONS"	22nd April 2021	S	90

Mr.Naseef Abdul Nizar Ahammed and Mr.Najim Paleri.	CSI Chapter VVIT	Online workshop" "ADOBE PHOTOSHOP"“"	14th May 2021	S	85
Shri.ManishShukla ADG(Technology), DoT Kerala LSA and Shri.Simon Samuel ADET(Security), DoT Kerala LSA	ECE, III cell & CSI -VVIT	Emerging Trends in Mobile communication and Electromagnetic radiation from towers"	21.05.2021	S	70
Mrs.Vidyas M, Assistant Professor, Dept. of CSE	CSI Chapter	WebinarSeries-Spread the Knowledge	29th May 2021	S	50
Dr.S.Kavitha Murugesan,HOD CSE and Ms.Shibi B Asst Prof CSE Dept VVIT	CSI Chapter	Webinar Internet of Things (IoT)	12thJune 2021	S	70
Ms Saritha Riju CEO, SEAOUX Imports & Exports (P) Ltd,Calicut	IIC & CSI Chapter VVIT	Webinar on "Accelerators/Incubation-Opportunities for Students & Faculty Early-Stage Entrepreneurs"	18th June 2021	S	100
Dr.C.Periasamy President IIC,Dr.S.Kavitha Murugesan IIC Event Convenor CSE Dept	IIC CSI Chapter VVIT	"Intellectual Property Rights and IP management for Startup".	30thJune 2021	S	70
Mrs. Anjana T K	CSI Chapter VVIT	Webinar "Cyber Security "	17.7.2021	S	80
Dr.Kavitha Murugesan Professor Department of CSE	IIC and CSE Dept	Webinar on " Design Validation trough various model design validation (e.g Double Diamond Approach).Double Diamond structure	18.08.2021	S	85

Table 5.7.3.e Development Activities for Faculty Sponsered by VVIT CAYm1(2019-20)

Name of program	Name of Sponsor	Period	No.of Internal Participants	No.of External Participants
Art of Teaching	Management	June	20	30
Techtalk series	Management	every wednesday	50	0

Table 5.7.3.f Skill Development Activities for Faculty CAYm1 (2019-20)

Name Of Expert	Industry/ Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Ingenius power control systems	1	Hands on Training in PLC	13/02/2020	S	25
CADD Center	1	Electrical Technology	24/02/2020	S	25
Wattle Corp Cyber Security Labs- Sri.Karthik Kalathil	1	Cyber Security Ethical Hacking-Offensive Attack	25/10/2019	S	50

Pycon,India Mr.Noufal Ibrahim	1	Learn to code:Break into Elite Software jobs	06/11/2019	S	70
Github Developer- Shebin KP	2	GITHUB	13/02/2020	S	75
Saudi Electronic University, Kingdom of Saudi Arabia.- Dr Gokulkumari	2	Big data Cloud Computing :Current Trends and Challenges	29/05/2020	F	100
Coda Global- Akshay AK	1	Cloud Computing with AWS	18/06/2020	S	110
Federation University Australia, Ballarat- Ms. Cinthia Joy Godly	2	Exploring BlockChain Applications for Education	14/07/2020	S	100
MMTC-CSR- Dr Anoop Mathew	1	Techno-Economic Aspects of Green Technology	17/06/2020	S	100
CADD Center- Er. Zacaria	2	Green vehicle technology	05/06/2020	S	100

Table 5.7.3.g Skill Development Activities for Faculty CAYm2(2018-19)

Name of program	Name of Sponsor	Period	No.of Internal Participants	No.of External Participants
The Future of Big Data analytics using Machine Learning Applications	APJKTU	27th -29th June 2019	30	15

Table 5.3.h MOU Details

Name of program	Period	Number of Days	No.of Participants
MOU Signed Between Vedavyasa Institute Of Technology And Tech Axis Academy For Training and Placement Activities during October 2018	12 months	30	35
MOU Signed Between Vedavyasa Institute Of Technology and CADD centre For Training and Placement Activities during October 2018	10 months	30	63

Table 5.7.3.i List of Expert Talk for Faculty CAYm2(2018-19)

Name Of Expert	Industry/ Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Ansar	1	Role of ICT and Digitalization in Engineering Applications	20/10/2018	S	30
Shine	1	CADD Practice	20/10/2018	S	63

Working Models

Models are useful tools in learning science which can be used to improve explanations, generate discussion, make predictions, provide visual representations of abstract concepts and generate mental models.Computer science includes programming, design, analysis, and theory. computer science Projects involve designing and development of various application-based software. Computer science project topics can be implemented by a number of tools such as Java, .NET, Oracle, etc.

- Robotic Automation:- A workshop on Robotics and automation was conducted by IIM Delhi in 2018.

Fig 5.7.3.b workshop on Robotics

- OSI Model (Chart)
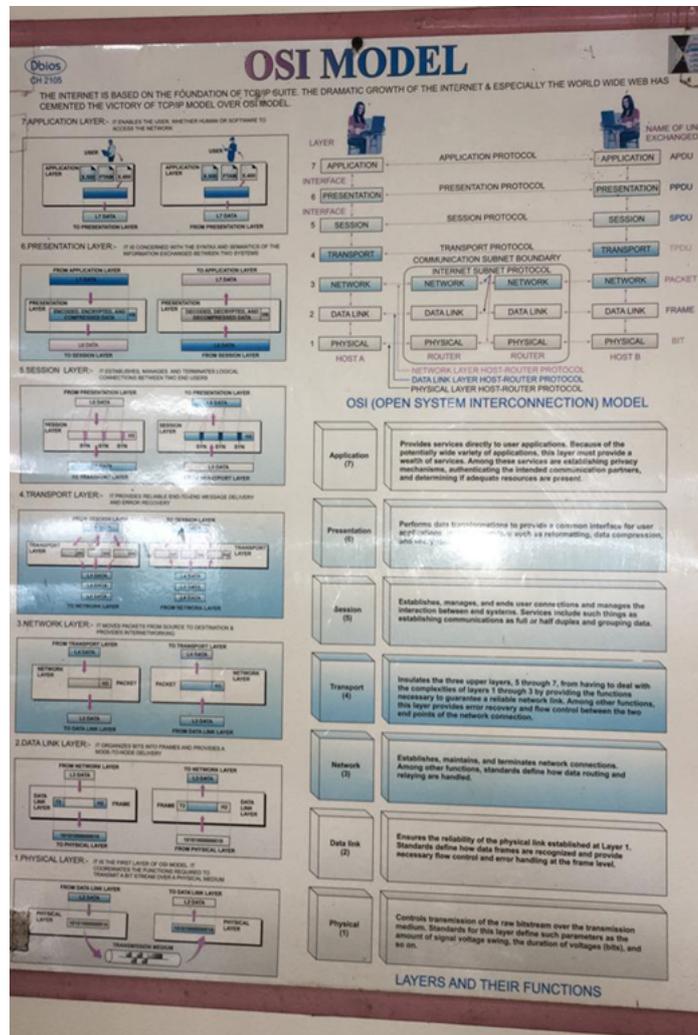
Fig 5.7.3.c OSI model Chart

OSI stands for Open Systems Interconnection. It has been developed by ISO – 'International Organization for Standardization', in the year 1984. It is a 7 layer architecture with each layer having specific functionality to perform. All these 7 layers work collaboratively to transmit the data from one person to another across the globe. It is a conceptual framework used to describe the functions of a networking system. The OSI model characterizes computing functions into a universal set of rules and requirements in order to support interoperability between different products and software.

- Network Topology (Model)
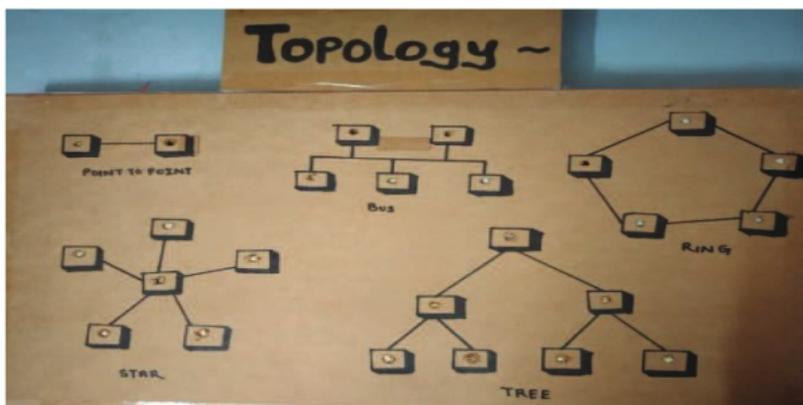
Topology defines the structure of the network of how all the components are interconnected to each other. There are two types of topology: physical and logical topology.

5.7.4 Consultancy(from Industry) (5) Institute Marks : 0.00

2020-21 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Mapathon	6 MONTHS	Kerala State IT mission	45000.00
			Total Amount(X): 45000.00

2019-20 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Academic Website	6 months	SVR Computers	100000.00
			Total Amount(Y): 100000.00

2018-19 (CAYm3)

Project Title	Duration	Funding Agency	Amount
LEAF DISEIFFER	6 months	Kerala Startup Mission	50000.00
			Total Amount(Z): 50000.00

Cumulative Amount(X + Y + Z) = 195000.00

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

Institute Marks : 30.00

VVIT conducts annual performance appraisals of all members of the faculty. A well-defined appraisal system runs in VVIT that offers both the higher authorities and employees valuable opportunities to focus on work activities, set goals for future efforts, identify existing problems and strategies for resolutions, and encourage positive future performance; thereby enhancing performance of the entire organization. The appraisal system primarily aims at the below-mentioned criteria:

Identification of difficult areas in the performance of individual faculty member

 • Promote the interaction of faculty with higher authorities so as to discuss their weaknesses and strengths in order to use their potential in a proper manner and improve their performance.

• Motivating the faculty members with good performance by providing increments and/or promotions.

• Reorientation of the faculty members who experience difficulties in achieving academic standards and expectations by means of constructive discussions and interactive sessions.

Enhancement of current performance or correcting deficiencies in areas which faculty or administration consider relevant and important

Appraisal Process: Implementation and effectiveness

The internal assessment is performed on an annual basis. The appraisal system especially becomes important during

 a) evaluation of faculty performance at the end of probation and/or contractual period for confirmation, and,

b) assessment of faculty performance on consideration of their applications for promotion The appraisal forms are filled by every faculty member and submitted to their respective HODs. HODs check all the entries and include their own comment and recommendations on the form. Subsequently the appraisal form is then countersigned by the Dean, Academics and Director who also put their recommendations on the form.

The following factors may be considered for the final recommendation:

• Faculty members attainment of previously set objectives and goals.

• Contributions made at department & institute level

- Fulfillment of Instructions at Department & college level

- New additions at department & institute level

- Self-development through Skill additions & research orientations

- Publication of quality research work

Supervision of quality projects

- Quality of classroom teaching

- Promptness in completing assignments

- Interaction with industry & industry training

SELF APPRAISAL FOR ACADEMIC PERFORMANCE INDEX (API)

Objectives: 1) To be aware of Self Appraisal
2) To learn filling up Self-Appraisal forms
3) To evaluate and document one's own performance
4) To facilitate Career advancement of teachers

Concept:

Teachers are well familiar with assessment and evaluation of students. Self appraisal helps to figure out what teacher's strengths and weaknesses are. It allows one to take at anhonest look at oneself. It is a process of self evaluation to determine the level of self- efficiency .It is a part of continuing professional development or career advancement. It has been suggested as an indicator of CAS. As per NBA it is mandatory for all colleges to prepare Performance Based Appraisal in the prescribed format for applying to any teaching post or career advancement.

The individual Performance Based Appraisal System (PABS)

PART A: - General Information & Academic background

1. Name(in block letters) :-_____
2. Father's/Mother's Name:- _____
3. Department:- _____
4. Name of the College:- _____
5. Current Designation:- _____
6. Current Pay :- _____
7. Date of last promotion:- _____
8. Position to which to be promoted:- _____
9. Pay band expected & Grade pay:- _____
10. Date of eligibility for promotion:- _____
11. Date & place of birth:- _____
12. Sex:- _____
13. Marital Status:- _____
14. Nationality:- _____
15. Category to which belongs:- Open/SC/ST/OBC/Physically challenged
16. Address for the correspondence:- _____
_____
17. Permanent Address:- _____
_____
18. Contact Numbers:- (O)_____(R)_____
(M)_____
19. E mail id:- _____

Fig. 5.8.a. Sample Self Appraisal Form for Academic Performance Index (API)

The above defined factors have quantitative evaluations. The form is finally evaluated and it is assured that the evaluation function has been properly completed in a fair and objective manner. These evaluations serve a significant role in assessing faculty performance.

<u>**Criteria for promotions & increments**</u>

Quantitative analysis based on the above defined factors is the basis for promotions & increments. Quantitative evaluation is done on a scale of 100 points. The quantitative requirements are defined accordingly for Professors, Associate Professors & Assistant Professors. A minimum score of 30% is necessary for consideration.

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)   Total Marks 10.00

Institute Marks : 10.00

Table 5.9.a List of Visiting Faculty CAYm1 (2018-2019)

Name Of Expert	Industry/ Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Ansar	1	Role of ICT and Digitalization in Engineering Applications	20/10/2018	S	30

Table 5.9.b List of Visiting Faculty CAYm2 (2019-2020)

Name Of Expert	Industry/ Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Calicut university-Dr. Yahya Ismail	2	Outcome based education	19/08/2019	F	22
Wattle Corp Cyber Security Labs- Sri.Karthik Kalathil	1	Cyber Security Ethical Hacking -Offensive Attack	25/10/2019	S	50
Pycon,India Mr.Noufal Ibrahim	1	Learn to code:Break into Elite Software jobs	06/11/2019	S	70
Github Developer- Shebin KP	2	GITHUB	13/02/2020	S	75
Saudi Electronic University, Kingdom of Saudi Arabia.- Dr Gokulkumari	2	Big data Cloud Computing :Current Trends and Challenges	29/05/2020	F	100
Coda Global- Akshay AK	1	Cloud Computing with AWS	18/06/2020	S	110
Federation University Australia, Ballarat- Ms. Cinthia Joy Godly	2	Exploring BlockChain Applications for Education	14/07/2020	S	100
MMTC-CSR- Dr Anoop Mathew	1	Techno- Economic Aspects of Green Technology	17/06/2020	S	100
CADD Center- Er. Zacaria	2	Green vehicle technology	05/06/2020	S	100

Table 5.9.c List Of Visiting Faculty CAYm (2020-2021)

Name Of Expert	Industry/ Institute	Topic	Date	Beneficiaries	Number of Beneficiaries
Er.Sugumaran	1	Impact of ICT in Telecommunications	11/10/2017	S	210
Er.Vimal	1	Recent Network Security and Admin Trends	19/02/2018	S	130

6 FACILITIES AND TECHNICAL SUPPORT (80)   Total Marks 80.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)   Total Marks 30.00

Institute Marks : 30.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	System Software lab	37	Core i3/4GB/1TB/17"TFT Desktops, Dot-matrix Printer	Ansys, Inventor professional 2020, Maya2019, Revit2020, Python 3.7	Sahad	Lab Admin	B.E
2	Programming Lab	70	Dual Core/1GB or 2GB /160GB or 500GB/15"TFT Desktops, Dot-matrix Printer	Office365 plus for student, Turbo C++, JAVA, MySQL, Flex, Bison(yacc), MATLAB and Similink Student Suite,Simscape Electrical	Sahad	Lab Admin	B.E
3	PG Lab	10	Dual Core/4GB/160GB or 500GB/15"TFT Desktops, Dot-matrix Printer	AutoCad2014,Bison(yacc), Simscape Electrical	Sahad	Lab Admin	B.E
4	Hardware Lab	30	8086 Microprocessor Kit, Stepper Motor , 8251& 8253 Interface Board	Microprocessor, Microcontrollers	Sahad	Lab Admin	B.E
5	Object Oriented Programming Lab	20	Dual Core/4GB/160GB or 500GB/15"TFT Desktops, Dot-matrix Printer	Office365 plus for student, Turbo C++, JAVA, MySQL, Flex, Bison(yacc), MATLAB and Similink Student Suite,Simscape Electrical	Sahad	Lab Admin	BE
6	Research Lab	10	Dual Core/4GB/160GB or 500GB/15"TFT Desktops, Dot-matrix Printer	Office365 plus for student, Turbo C++, JAVA, MySQL, Flex, Bison(yacc), MATLAB and Similink Student Suite,Simscape Electrical	Sahad	Lab Admin	BE

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

Institute Marks : 25.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	LMS- Using Moodle	Moodle 3.1.2 (latest Version as on September 2016)	Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalized learning environments	B.Tech with 8 Courses M.Tech with 2 Courses Quizzes Online assignment Forums Project Scheduling	Compiler Design Design and analysis of algorithms Internet and Web Programming Data Structure and Algorithms Switching Theory and Logic Design Computer Programming Mini and Main Projects	PO3,PO5, PO12,PSO1, PSO2
2	Mooshak	Mooshak 1.6.2 (Latest Version as on July 2015	Mooshak is a system for managing programming contests on the Web. It helps the us to automatically judge the programming experiments	Utilized in the laboratory for judging the experiments in various subjects like Computer Programming, Data Structure and Algorithms Compiler Design and Operating System etc	Computer Programming Data Structures and Algorithms Compiler Design Operating System Programming Paradigm	PO3, PO5
3	ZYBRO	Zybro Digital Language Lab	Students imbibe listening skills attending different tasks assigned by the instructor. Learner can listen to the best samples of spoken language to acquire sensibility for sounds and rhythm of language.	B.Tech Courses M.Tech Courses IMPROVING ENGLISH	Internet and Web Programming	PO12
4	Value added Courses	NPTEL Courses, Online Tutorials,Webinars etc	Facility to staff and students for enhancing Teaching Learning , Android App Development, Latex and Typesetting	Complete semester is opened to utilize	To gain the value added knowledge	All POs and COs
5	Smart lab facility	Lab with LCD projector,whiteboards and softwares as supporting teaching aids	To enhance Teaching Learning process	During the semester	Better Understanding	All POs and COs

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

Institute Marks : 10.00

To maintain the laboratories a departmental committee is constituted headed by the Head of the department. There is a Faculty in charge, Technical Staff in charge for each lab. The scope of work of this committee includes installation, demonstration, purchase, maintenance and trouble-shooting of equipment and facilities. The

Technical Staff sets up the lab in preparation for experiments , maintain supplies and documentations. The Technical Staff also maintains materials store and ensures adequate inventory levels for supplies. He/She also observes and reinforces safety and housekeeping procedures and protocol within the laboratory. Lab manuals are available in all labs. The Department is equipped with sophisticated laboratories and state of art electronic equipment to satisfy the curriculum. Salient features regarding maintenance and ambience of laboratory facilities are as follows,

Laboratory Maintenance:

1. Informative notice board containing safety, Do's & Don'ts is properly maintained.
2. Well trained technical staffs are available for maintenance of computer and software.
3. Maintenance and Servicing of each lab is done every month and a servicing register is maintained.
4. Department is having internet speed of 200 Mbps and Wi –Fi speed of 100Mbps for students and Faculty usage.
5. Department is having three 30 KVA UPS, 240 VDC along with batteries are used as backup to support power failures
6. Breakdown register is maintained for all the labs.
7. As per the requirements minor repairs are carried out by the lab instructors and Faculty members.
8. Chart assisted learning to demonstrate the process is available
9. Major repairs are outsourced as per the institutional policy.
10. Student's login / logout register is maintained in all laboratories.
11. Each laboratory maintains a stock register detailing the equipment history within it.
12. Two teaching faculty and a Lab instructor are in-charge of the overall functioning / maintaining of all labs.
13. All the computers are protected with licensed anti-virus software.
14. First aid kit is available in all laboratories.
15. Fire extinguishers are available in all floors.

Overall Ambience

1. Department has full-fledged State of Art laboratories to cater to all UG and PG courses as per curriculum requirements.
2. For every lab sufficient number of windows is available for ventilation and natural light.
3. Lighting system is very effective, along with the natural light in every corner of the rooms.
4. Cup-boards are available in each lab for students to place their belongings
5. Each Lab is equipped with white/black board, computer, Internet, and such other amenities.
6. Each lab is equipped with Projectors to aid the teaching process.
7. Laboratory manuals are prepared and are available in soft and hardcopy.
8. Laboratories are kept open beyond office hours as per the need.
9. Research laboratory is available 24X7 for all faculties and students to carry out research work and projects.
10. Exclusively, a project lab has been provided for the students to carry out their mini and major project work. This will promote innovation and creativity in students
11. All laboratories are well furnished.
12. Lab assessments are done as per the lab rubrics.
13. All windows in the Labs are covered by curtains.
14. All the doors are sufficiently wide and available in adequate numbers, to evacuate people outside in case of emergency.
15. The buildings are designed by professional architects, who give utmost care in providing academic ambience in all labs.
16. Every lab is assigned with a main faculty and a co faculty for effective functioning of labs.
17. All the labs are conducted as per the specified Timetable.

Photos of the Labs

6.4 Project laboratories (5)

The bridge between the theoretical aspects and real world is project based learning. However, in engineering curriculum, projects are for the final year students. And knowledge in the real world throughout the course of study is what hinders us from truly appreciating the things that we study.This is where hobby projects or doing a sm subjects that have to be studied in a particular semester comes into the picture. Projects help us in understanding the subject better which in turn leads to remembering longer duration of time.

Table 6.4 Tools used in Project Laboratories

Sl No	Name of the Software/ Equipment	Specification	Utilization	Remarks
1	Microsoft Visual Studio 2013	32/64 bit application software	Programming	Used for Project and Research works
2	Microsoft SQL Server 2013	32/64 bit application software	Database operation	Used for Project and Research works
3	Android Studio	32/64 bit application software	Android application Development	Used for Project works
4	LAMP(software bundle)	Ubuntu 14.04,Apache,MySql,PHP	Web Development	Used for Project and Research works
5	Python Programming	32/64 bit application software	Programming	Used for Project and Research works

Project Lab Utilization:

1.The project lab is utilized for 8-12 Hrs a week to Create Projects (both software and hardware).

2.The development of mini projects and curriculum projects are carried out in project lab. Sufficient infrastructure is provided in the laboratories of the department to meet the

Table 6.4.b Project Lab Details

PROJECT LAB	
System Configuration	Processor: i5 RAM: 8GB Hard disk Capacity:1TB
Software Tools	Visual Studio , Python ,Java, GCC , Android Studio , Mat Lab , Ns2 , Ns3 , XAMPP , WAMP ,CISCO Packet Tracer
Cloud Computing Facility	Open Stack , AWS, Google Cloud
Servers	IIS , Apache Tomcat
Database	Mysql ,Mongo Db, Oracle ,Hadoop

Editors	Notepad++ , VS Code , Brackets ,Code Blocks , Anaconda, Tex maker ,Sublime
Operating System	Windows & Linux
Documentation Tools	Latex , Microsoft Office ,Open office ,Dia
Internet Facility	Wired and Wireless
IOT FACILITIES	
Development Boards	Raspberry pi 3 – 3 Nos , Raspberry Pi2- 4 Nos , Intel Galileo -7 , Arduino – Nos
Sensor Modules	Accelerometer (GY-521) ,PIR sensor(V), Moisture Sensor(HL-01 , HL-69) Temperature Sensor(DHT -11)
Components	A/D converter ,D/A converter ,Micro Switches , Buzzer ,Switching Transistors(NPN & PNP),Breadboards ,LCD , Keyboard Interface ,Display Interfaces ,Resistors ,Bread Boards,Led Bulbs, Jumper Wires , Potentiometer
E-Yantra LAB FACILITIES	
Programming Languages	Embedded C, Python , Lua
Software Tools	V-Rep (Virtual robotics experimentation platform) ,Visual Studio ,Atmel Studio

Research Lab

Students study the design, development, and analysis of software and hardware used to solve problems in a variety of business, scientific, and social contexts in computer heart of everything we do in modern society: everything we use, including computers, is based on research. In fact, it is true not only for the introduction of a new t improvement and refinement over time.No matter how much research is conducted, all institutions can benefit from research-computing resources. In order to enable data provide specialized staff and infrastructure that facilitate collaboration, efficiency, and data storage.In VVIT we have Research lab for both UG & PG students.
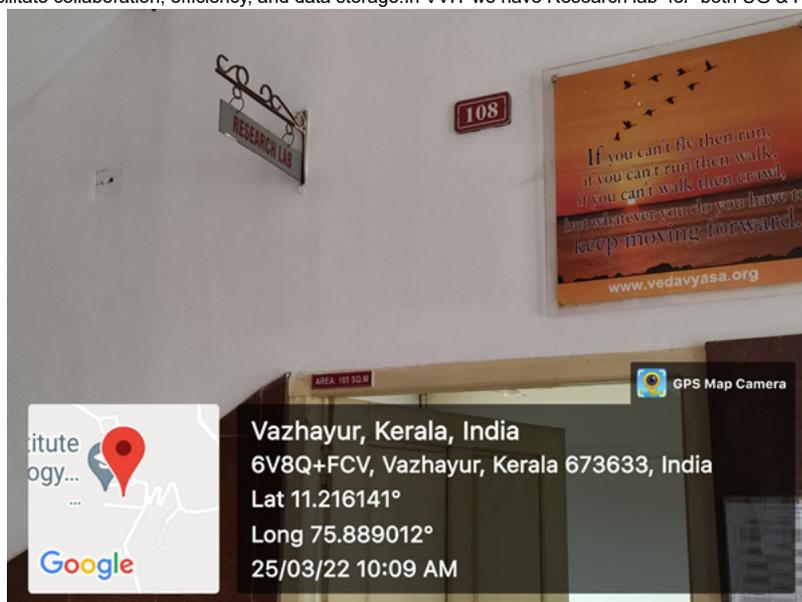
Research Lab

6.5 Safety measures in laboratories (10)　　　　　　　　　　　　　　　　Total Marks 10.00

Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	SOFTWARE LAB	First Aid Box Fire Extinguisher Safety measures are displayed in the lab. MCBs withcircuit breaker provided. Switches are safely mounted in a rack. Reliable grounding is provided. Ensured the use of approved electrical equipment. Well Trained Technical Support Staff. Proper Data backup facility. Firewalls and Antivirus softwares installed for system security. Damaged Systems and parts are identified and serviced regularly. Specific Rules of conduct inside the lab like Dos and Don'ts are displayed and instructed to all students. Maintaining a Students log register for each lab. Emergency contact numbers are displayed. Clean and hygienic laboratory ensured.
2	PG LAB	First Aid Box Fire Extinguisher Safety measures are displayed in the lab. MCBs withcircuit breaker provided. Switches are safely mounted in a rack. Reliable grounding is provided. Ensured the use of approved electrical equipment. Well Trained Technical Support Staff. Proper Data backup facility. Firewalls and Antivirus softwares installed for system security. Damaged Systems and parts are identified and serviced regularly. Specific Rules of conduct inside the lab like Dos and Don'ts are displayed and instructed to all students. Maintaining a Students log register for each lab. Emergency contact numbers are displayed. Clean and hygienic laboratory ensured.
3	HARDWARE LAB	First Aid Box Fire Extinguisher Safety measures are displayed in the lab. MCBs withcircuit breaker provided. Switches are safely mounted in a rack. Reliable grounding is provided. Ensured the use of approved electrical equipment. Well Trained Technical Support Staff. Proper Data backup facility. Firewalls and Antivirus softwares installed for system security. Damaged Systems and parts are identified and serviced regularly. Specific Rules of conduct inside the lab like Dos and Don'ts are displayed and instructed to all students. Maintaining a Students log register for each lab. Emergency contact numbers are displayed. Clean and hygienic laboratory ensured.
4	COMPUTER CENTER	First Aid Box Fire Extinguisher Safety measures are displayed in the lab. MCBs withcircuit breaker provided. Switches are safely mounted in a rack. Reliable grounding is provided. Ensured the use of approved electrical equipment. Well Trained Technical Support Staff. Proper Data backup facility. Firewalls and Antivirus softwares installed for system security. Damaged Systems and parts are identified and serviced regularly. Specific Rules of conduct inside the lab like Dos and Don'ts are displayed and instructed to all students. Maintaining a Students log register for each lab. Emergency contact numbers are displayed. Clean and hygienic laboratory ensured.
5	Research Lab	First Aid Box Fire Extinguisher Safety measures are displayed in the lab.MCBs withcircuit breaker provided. Switches are safely mounted in a rack. Reliable grounding is provided. Ensured the use of approved electrical equipment. Well Trained Technical Support Staff. Proper Data backup facility. Firewalls and Antivirus softwares installed for system security. Damaged Systems and parts are identified and serviced regularly. Specific Rules of conduct inside the lab like Dos and Don'ts are displayed and instructed to all students. Maintaining a Students log register for each lab. Emergency contact numbers are displayed. Clean and hygienic laboratory ensured.

7 CONTINUOUS IMPROVEMENT (50)　　　　　　　　　Total Marks 50.00

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

Total Marks 20.00

Institute Marks : 20.00

POs Attainment Levels and Actions for Improvement- (2020-21)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	2.88	2.50	Target attained
Action 1:Trained to gain knowledge in Engineering fundamentals by conducting Bridge course			
PO 2 : Problem Analysis			
PO 2	2.53	2.19	Difficult to analyze complex Engineering
Action 1: Encouraged to develop their attitude in problem solving ability through tutorial classes Action 2: Advised to practice more number of complex problems by home assignments			
PO 3 : Design/development of Solutions			
PO 3	2.47	2.08	Difficulty in solving Engineering problems
Action : Encouraged to attend In-plant training in various electrical design companies in order to reach higher attainment level			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	2.20	1.95	Lack of knowledge in methodical investigation
Action : The attainment level can be increased by motivating the students to attend seminars, workshop, symposium, conferences and to do projects in latest research areas			
PO 5 : Modern Tool Usage			
PO 5	2.20	2.02	Inadequate knowledge in modern engineering technology
Action: The higher attainment level can be achieved by conducting various training programs.			
PO 6 : The Engineer and Society			
PO 6	2.40	1.71	Need improvement in application of Engineering practice technique
Action 1: Conducted orientation program to create awareness about electrical safety for the student Action 2: Conducted extensional activities for the society			
PO 7 : Environment and Sustainability			
PO 7	1.67	2.07	Require improvement in understanding impact of professional Engineering solutions
Action : Conducted awareness program related to environment and sustainability			
PO 8 : Ethics			
PO 8	2.57	1.93	Create responsibilities on engineering ethics to engineers
Action 1: Students were trained in ethical principles & responsibilities in order to attain higher level Action 2: More examples on the subject to be practiced by students in extra classes.			
PO 9 : Individual and Team Work			
PO 9	2.67	1.92	Small drop in individual and team work
Action : Students were trained to do individual and team work effectively			
PO 10 : Communication			
PO 10	2.67	2.00	Create knowledge in management aspects for multidisciplinary Environments
Action : Even though the target was attained still students were motivated to perform many activities like innovative seminar, group discussion, technical quiz, personality development program and to write technical articles in order to reach higher attainment level			
PO 11 : Project Management and Finance			
PO 11	2.75	2.21	Create knowledge in management aspects for multidisciplinary environments
Action : Motivated to work as a team in multidisciplinary environment to reach high attainment level			
PO 12 : Life-long Learning			
PO 12	2.65	2.02	Need to enrich their life-long learning skill
Action : Students are motivated to enrich the knowledge with recent trends and to participate in national and global level students competition			

PSOs Attainment Levels and Actions for Improvement- (2020-21)

PSOs	Target Level	Attainment Level	Observations

PSO 1 : Basic knowledge of computer applications to model computational problems by applying mathematical concepts and design solutions using suitable data structures and algorithmic techniques.

PSO 1	2.47	1.91	Difficult to attain

Train the students to do more computational problems using suitable techniques.

PSO 2 : Design computer-based systems of varying complexity and develop software solutions by following standard software engineering principles by using suitable programming languages and platforms.

PSO 2	1.89	1.77	Target attained

Train to gain programming knowledge .

PSO 3 : Develop system solutions involving both hardware and software modules.

PSO 3	1.80	1.66	Target attained

Practice more on hardware and software modules.

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

Total Marks 10.00

Institute Marks : 10.00

The Department IQAC and Auditor assigned by University/Institution(Covid 19) performs first level of audit during the starting of every semester and verifies the contents of the course file, lesson plan, assignments, extra material lecture notes, etc. The comments of the committee are given as feedback to the faculty member to include the recommended material. The second level of auditing is performed during the end of every semester by the Department IQAC and Auditor of the respective department; ensure the adherence of instructions given by the audit committee through a check list.

Feedback is communicated to the faculty member for all levels of audit and action taken on non-conformity is ensured by the audit team and reviewed by the Head of the institution. This audit ensures the quality deliverables to the students. Similarly, examination process is also audited once in a semester by the senior faculty members from the leading institutions. This audit ensures the quality deliverables to the students.

Table 7.2.a. Academic audit Programme checklist

Sl. No.	Parameters	Sub Section
1	**Scheme & Syllabus**	1. All the semesters since inception – HARD COPY Frequency of its revision (R2015 Scheme and R2019 Scheme by APJKTU)
2	**Teaching Learning & Evaluation**	1. Vision & Mission 2. PEOs & PSOs 3. Rules & Regulations copy 4. Calendar of events 5. Students list 6. Registration of the course – including re-registration 7. On Roll Students list 8. Students withdraw from the course 9. Attainment of COs & POs 10. Strategies used for Effective teaching-learning 11. Result Analysis 12. Time Table & Workload 13. CIA details (Series Test time table, QP and etc.,) 14. Project details (if any) Process schedule Guide allotment Topics Assessment Pattern (Rubrics) Final Marks with break up 15. Lab Manuals 16. Profession body/ Club activities

		Students Mentoring Process
3	**Student Centric**	Mechanism of students' feedback
		Feedback on courses
		Healthy practices for ensuring students' discipline
		Assigning of students to faculties
		Mentoring record books/ Reports
		Class wise PTA Meeting
4	**Academic files**	1. College Vision & Mission 2. Department vision & mission 3. Program outcomes 4. Department PEO & PSO 5. Course diary - KTU,VVIT Calendar, Semester plan - Class Schedule - Syllabus (Includes Textbook, References and Evaluation details) - Subject CO – PO Mapping - Course delivery plan/execution details - Assessment details - Given study material details - List of NPTEL Course materials - Students Name List and Attendance sheet - Internal Marks (Series, Assignment and final internal) 6. Series Examination Question Papers with Answer key and Valuation Scheme 7. Assignment Question Papers with Valuation Scheme 8. Remedial/booster class details 9. Tutorial class details 10. Content beyond syllabus(as per format) 11. Report by faculty(as per format) 12. CO – PO Attainment Sheet 13. Industrial relevance of the course (if any) 14. Annexure I : Sample Series exam answer books (top, middle, bottom from each series) 15. Annexure II : Sample Assignments (top, middle, bottom from each assignment) 16. Annexure III : Previous university exam question papers 17. Annexure IV : Notes/Hard copy of ppts
5	**Coaching Class**	1. Identifications of the subjects 2. List of students 3. Time Table 4. Details of classes conducted and attendance 5. Test / Assignment / Quiz (conducted if any)
6	**R&D Activities**	1. Details about publications / grants / patents 2. Students publication details 3. Conferences / Symposium / Seminars / FDPs attended by the faculty. 4. Conferences / Symposium / Seminars / FDPs conducted. 5. Chapters & Books published by the faculty. 6. MOUs executed
7	**Result Analysis**	1. Comparison and Action taken
8	**Placement Activities**	- Number of students placed in different companies. - Different types of Technical training given to students
9	**Guest Lectures / Expert talks**	Conducted in the department

10	Industrial visit & Interaction	Any educational visit carried out
11	Administration	1. Teaching Staff list 2. Non-Teaching Staff list 3. Minutes of the department/Class/Course meeting 4. Faculty performance

Table 7.2.b Auditors for three academic years

Sl. No.	Name of the Internal Auditor(s)	Designation – Department	Role
	CAY (2021-22)		
1	Dr S. Sangheethaa	Principal	Chair Person
2	Dr. Kavitha S Murugesan	Vice Principal, HoD – CSE	Director - IQAC
3	Dr. C. Periasamy	HoD – ECE	Member
4	Dr. A. Haseena	Associate Prof. – EEE	Member
5	Ms. Divya	HoD – Civil	Member
6	Ms. Sabitha Rani	HoD – Mech	Member
7	Mr. I. Vinoth kanna	Associate Professor – Mech	Member
8	Mr. Binoy P	Associate Professor – Mech	Member
9	Mr. Daniel	Assistant Professor – Civil	Member
	CAY m1 (2020-2021)		
1	Dr S. Sangheethaa	Principal	Chair Person
2	Dr. Kavitha S Murugesan	Vice Principal, HoD – CSE	Director - IQAC
3	Dr. C. Periasamy	HoD – ECE	Member
4	Ms. Divya	HoD – Civil	Member
5	Ms. Sabitha Rani	HoD – Mech	Member
6	Mr. I. Vinoth kanna	Associate Professor – Mech	Member
7	Mr. Binoy P	Associate Professor – Mech	Member
8	Mr. Daniel	Assistant Professor – Civil	Member
	CAY m2 (2019-2020)		
1	Dr S. Sangheethaa	Principal	Chair Person
2	Dr. Kavitha S Murugesan	Vice Principal, HoD – CSE	Director - IQAC
3	Dr. C. Periasamy	HoD – ECE	Member
4	Ms. Sabitha Rani	HoD – Mech	Member
5	Ms. Krishna Priya V	Asst. Prof. – ECE	Member
6	Mr. Kiran Murali	Asst. Prof. – ME	Member
7	Ms. Shibi B	Asst. Prof. – CSE	Member
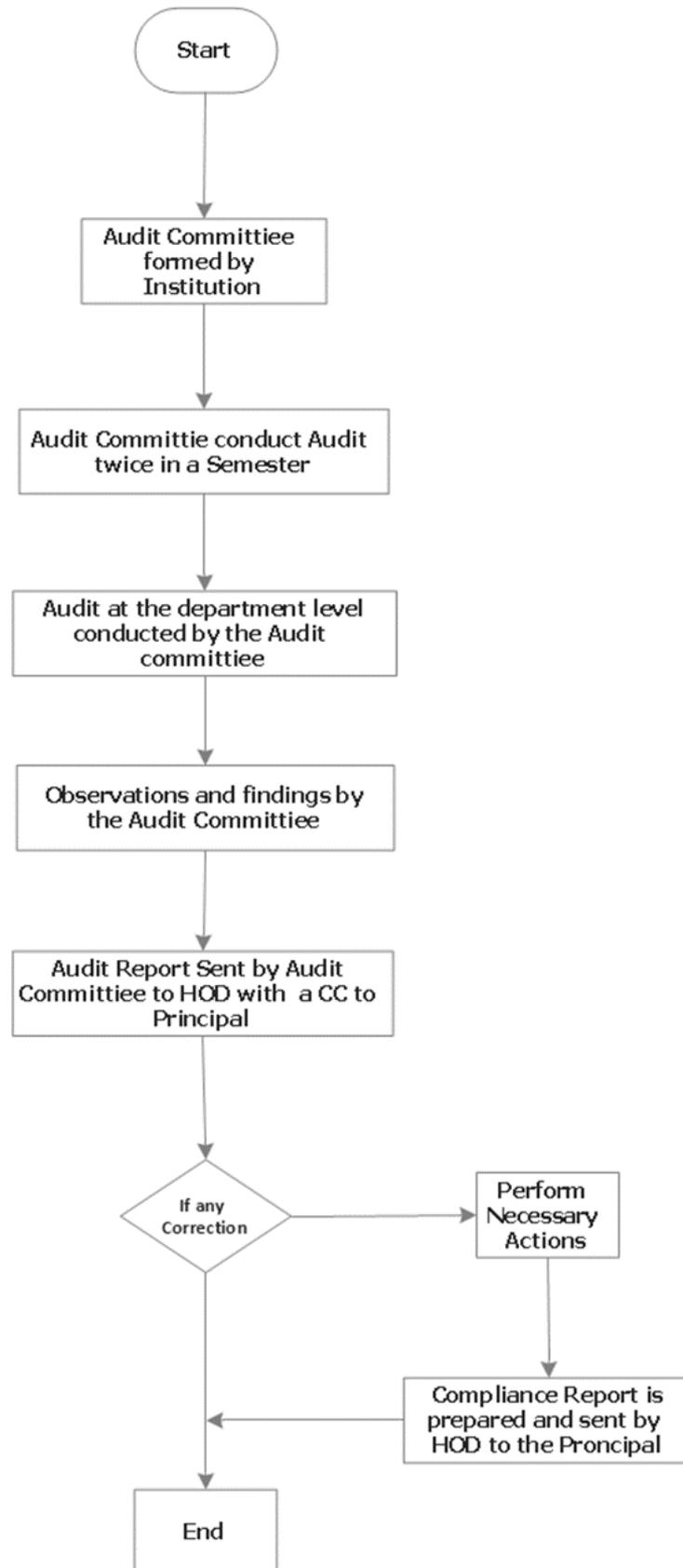
Fig. 7.2.a Internal Audit Process
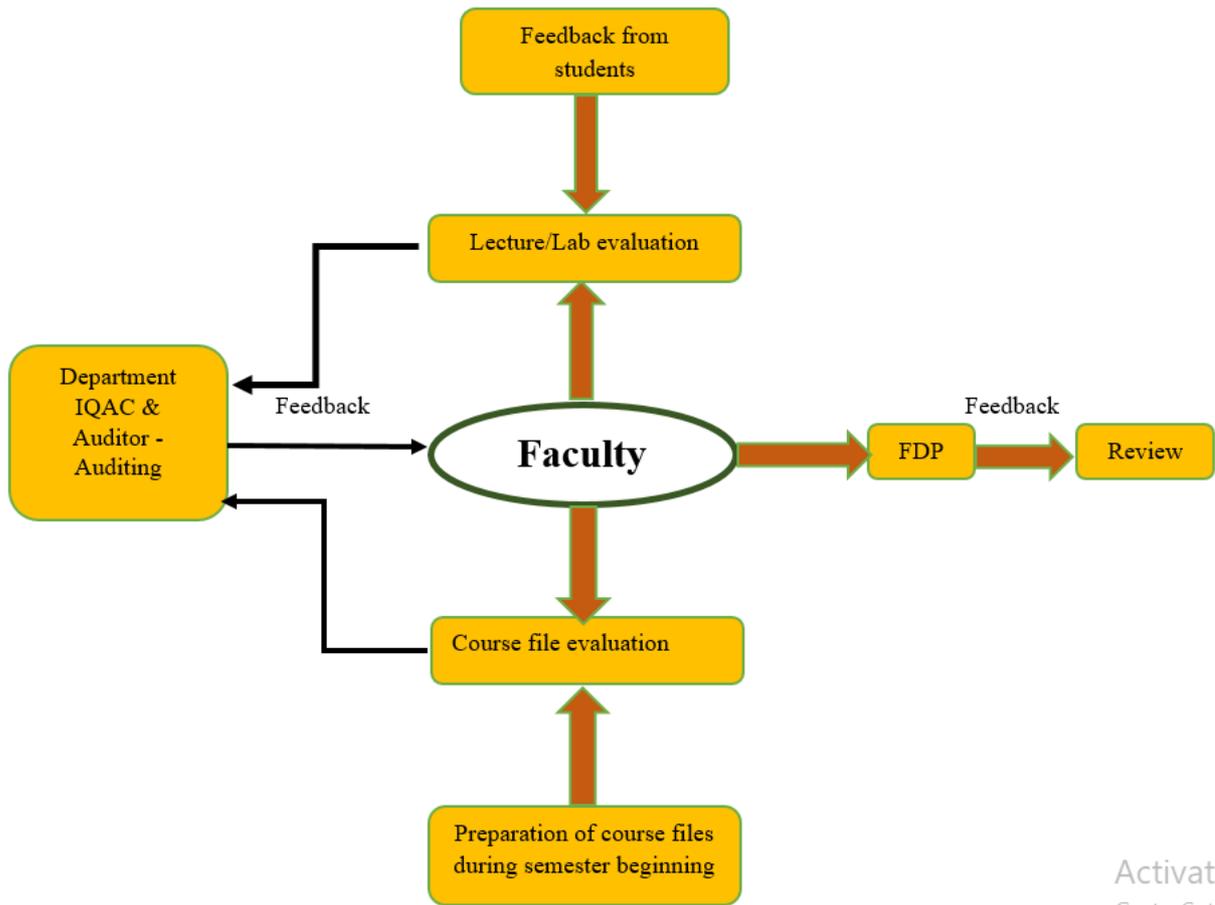
Fig. 7.2.b Faculty Improvement process after IQAC Auditing
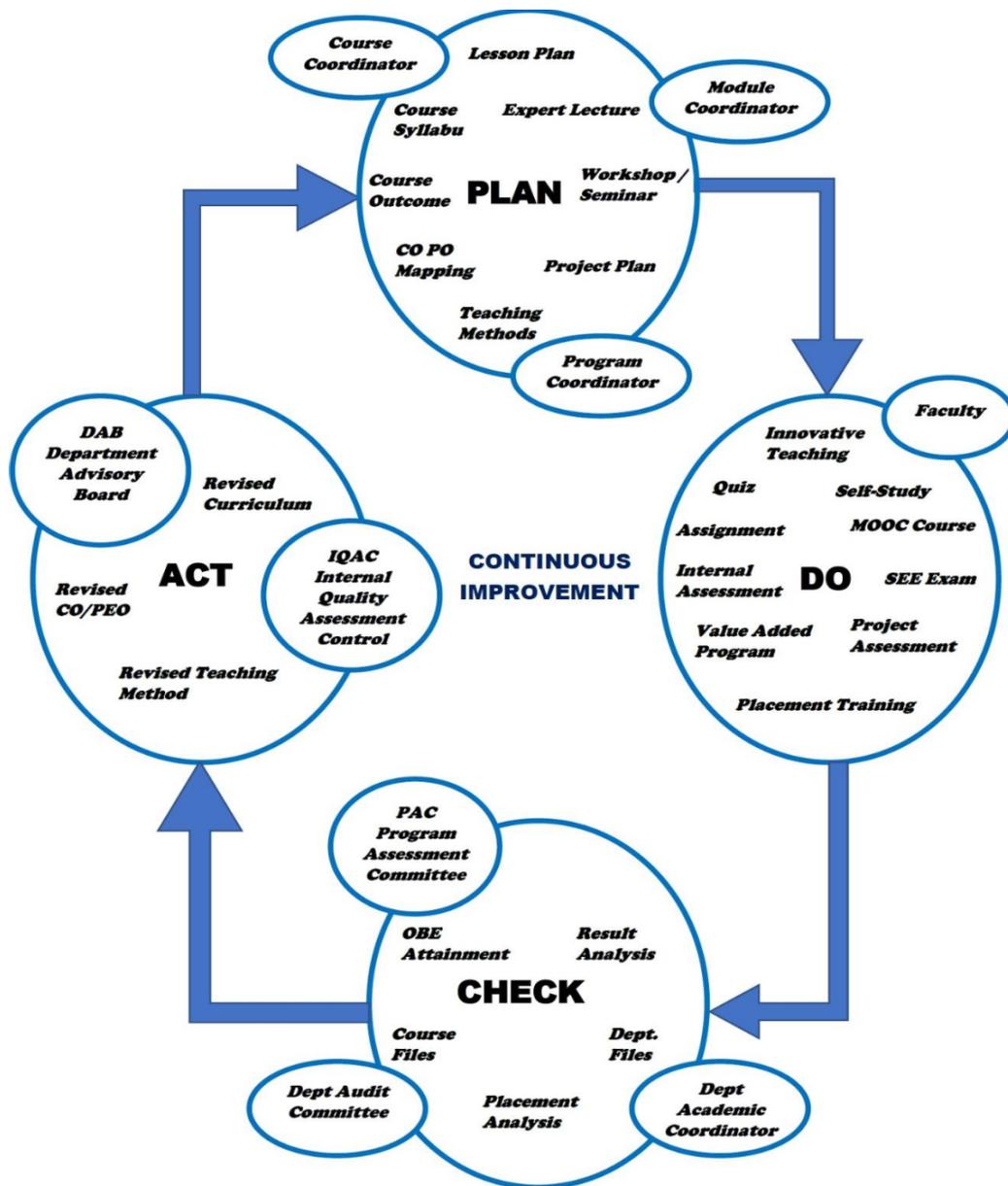
Fig. 7.2.c Plan-Do-Check-Act Cycle

Readiness reports:

1.

   Department level audit by heads

2.

   Done before commencement of each semester

3.

   Lesson plan, Lecturer Notes, application PPT, Question bank, Lab Manual

4.

   Class room and laboratory environments are met our requirements.

Audit report gives the overall view about the Academic related information and activities which were carried out during the academic year.

Phase –I Audit

Phase –I Audit is conducted at the mid of every semester. A team of internal auditors will do the audit. They will report the discrepancies and suggestions. The Action Taken Report (ATR) will be collected from the respective auditors. It is proposed to conduct Phase-I Audit for every academic year (Odd Semester) as per the flexible time of auditors and subject handling faculty members. Hence, the auditors are requested to visit the departments assigned as given Table 7.2.b and submit a report.

APJ Abdul Kalam Technological University
CET Campus, Thiruvananthapuram
Kerala -695016
India

Academic Audit Report
2020 - 2021

Basic Details

Institution	**VEDAVYASA INSTITUTE OF TECHNOLOGY**
First Auditor Name	**Kavitha S**
Second Auditor Name	
Visit	**First**
Semester Type	**Even**

College Specific Assessments

Key Aspects	Rating	Auditor Remarks	Principal's Response
Compliance to the Academic Calendar of KTU (B)	Excellent(5)	Commencement of Classes, Internal Exams, dates of publishing of internal marks and are done as per KTU Calendar.	Ok
Functioning of students grievances and appeal committee (B)	Excellent(5)	The committee have been formed and all Grievances from the students are dealt with promptly and in a satisfactory manner	Ok
Average student to faculty ratio (A)	Good(4)	50 regular faculty members are available.	Ok
Faculty Qualification Index (A)	Excellent(5)	All the Department consists of Professor, Associate Professors and Assistant professor as per norms.	Ok
Number of qualified technical staff (A)	Excellent(5)	10 - Lab instructors are available for all labs.	Ok

Key Aspects	Rating	Auditor Remarks	Principal's Response
Syllabus coverage (B)	Excellent(5)	Coverage of syllabus in all	Ok

Syllabus coverage (B)	Excellent(5)	Coverage of syllabus in all the discipline are satisfactory. Syllabus covered by using Online, conduct and remedial classes as per KTU instruction.	Ok
Effectiveness of teaching/learning process	Good(4)	Though 90% of classes is conducted over online mode, Submission of materials to the students are satisfactory as per feedback collected from the students.	Ok
Conduct of Labs (B)	Good(4)	Online facilities with Apps and Vlabs have been started as per Availability and lab work is under progress	Lab will be conducted in offline mode once KTU instructs to start offline classes
Continuous assessment (B)	Excellent(5)	Assignments, Seminars, Quiz are given in the regular intervals.	ok
Interaction/discussion/doubt clearing etc (A)	Excellent(5)	Faculty act as a mentors and guide the students throughout their classes.	ok
Net connectivity issue	Good(4)	Minor issues were reported but it is very occasional.	Vidoe classes are posted to go about the portions.
Extra fees/fine imposed on students (B)	Not Relevant	Nil	Students are actually allowed to pay the tution fee also in installments, due to corona crisis.
Approach of the management/institution in addressing student grievances (B)	Excellent(5)	Supportive	Ok
Availability of Faculty for all subjects (A)	Excellent(5)	No issues	Ok
Any other remarks (C)	Not Relevant	Nil	Ok

COMPUTER SCIENCE & ENGINEERING-(Full Time)

Key Aspects	Rating	Auditor Remarks	Principal's Response
Class/course committee meetings and action taken report (B)	Excellent(5)	Meetings were held. Presentation of minutes is done.	Ok
Advisory meetings and action taken report (B)	Excellent(5)	Meeting was conducted. Meeting with parents was held.	Ok
Result analysis of previous odd semester (A)	Good(4)	Previous semester results not yet published. 2019 Admitted	Steps Taken to improve

		S1 - 28% (VERY POOR) S2 - 50% (FAIR) S3 - 7% (VERY POOR) S4 - 35% (POOR) 2017 Admitted S1 - 88% (EXCELLENT) S2 - 75% (EXCELLENT) S3 - 38% (POOR) S4 - 38% (POOR) S6 - 50% (FAIR) S6 - 88% (EXCELLENT)	

Syllabus coverage as per course plan (A)	Excellent(5)	Complied as per plan	Ok
Platform used for LMS/Course materials and lectures uploaded (A)	Excellent(5)	LMS: Vedavyasa app is in use.Teachers notes/material were uploaded in Google Classroom.	Ok
Conduct of minor/honours classes (A)	Not Relevant	Not Applicable	Ok
NPTEL/SWAYAM course materials recommended for reading (B)	Excellent(5)	Each faculties suggest the students to refer online course materials and link shared in their respective students and its recorded in the course diaries.	Ok
Conduct of Internal assessments for theory and lab classes (A)	Excellent(5)	Periodic assesment of each courses have verified. All the faculties recorded their assesment details along with proof in their course diaries.	Ok
The mechanisms for taking feedback as to whether the online classes are effective (B)	Excellent(5)	Feedback have collected from the students and remarks resolution and action taken have recorded in the file	Ok
Conduct of series tests (A)	Excellent(5)	As per KTU Instruction Test have been conducted. series test 1 and 2 question papers along with scheme of evaluation,	Ok

Figure 7.2. e Observations by Internal Academic Auditor

APJ Abdul Kalam Technological University
CET Campus, Thiruvananthapuram
Kerala -695016
India

Academic Audit Report
2018 - 2019

Basic Details

Institution	VEDAVYASA INSTITUTE OF TECHNOLOGY
First Auditor Name	Sajith P P
Second Auditor Name	
Visit	First
Semester Type	Odd

General Assessment

Auditor's Comment	Principal's Response

College Specific Assessments

Key Aspects	Rating	Auditor Remarks	Principal's Response
Compliance to the Academic Calendar of KTU	Good(4)		
Functioning of students grievances and appeal committee	Good(4)		
Functioning of Academic Discipline & Welfare committee	Good(4)		
Student feedback on co-curricular and extracurricular activities	Good(4)		
Average student to faculty ratio index	Fair(3)		
Progress of Monthly report uploading	Good(4)		

COMPUTER SCIENCE & ENGINEERING-(Full Time)

Key Aspects	Rating	Auditor Remarks	Principal's Response
Functioning of class/course committees	Good(4)		
Schedule of Time Table	Good(4)		
Attendance of students	Good(4)		
Quantity & Quality of Assignments/Mini Projects	Fair(3)		
Conduct of Tutorial Classes	Fair(3)		
Syllabus coverage as per course plan	Good(4)		
Use of ICT enabled teaching & Digital courses	Fair(3)		
Conduct of Practical classes	Fair(3)		
Syllabus coverage of practical courses	Good(4)		
Evaluation of students performance in practical	Fair(3)		

Figure 7.2. f. Observations by External Academic Auditor

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

Institute Marks : 10.00

Item	2020-2021CAYm1	19-20CAYm1	18-19CAYm1
Total No. of Final Year Students (N)	8	25	18
No. of students placed in companies or Government Sector (x)	5	12	8
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	0	4	4
No. of students turned entrepreneur in engineering/technology (z)	0	1	2

Table 7.3.a. Assesment Details of Placements, Higher Studies

Sl. No.	Name of the Company	No. of Students Placed	Salary per annum per student
1	UST	1	3,50,000
2	IBS Software Pvt Ltd.	1	2,01,600
3	CGI	1	2,00,000
4	RCG Global Services	1	3,60,000
5	Invigo Software Pvt Ltd.	1	2,50,000

Table 7.3.b. Placement Details 2020-2021

Sl. No.	Name of the Company	No. of Students Placed	Salary per annum per student
1	UST	1	3,50,000
2	IBS Software Pvt Ltd.	1	2,01,600
3	CGI	1	2,00,000
4	RCG Global Services	1	3,60,000
5	Invigo Software Pvt Ltd.	1	2,50,000
6	Tally Solutions	1	3,00,000
7	Extrieve Technologies Pvt Ltd	1	2,82,000
8	SimeLabs	1	3,50,004
9	Mindtree Ltd	1	3,20,000
10	Tomercon Developers	1	3,00,000
11	Pinnet Infotech	1	396875

Table 7.3.c. Placement Details 2019-2020

SL. No.	Name of the Company	No. of Students Placed	Salary per annum per student
1	UST	1	3,50,000
2	IBS Software Pvt Ltd.	1	2,01,600
3	CGI	1	2,00,000
4	RCG Global Services	1	3,60,000

5	Invigo Software Pvt Ltd.	1	2,50,000
6	Tally Solutions	1	3,00,000
7	Extrieve Technologies Pvt Ltd	1	2,70,000
8	SimeLabs	1	3,50,004
9	Nidhi mutual private limited	1	2,00,000
10	GreenHopper Farm Living LLP	1	2,18,000
11	Techoriz Digital Solution	1	3,00,000
12	Crypto Trading	1	2,15,000
13	cybaze	1	1,80,000
14	SVM	1	2,20,000
15	Brands n Codes Media Technology	1	2,00,000
17	Four Links Building Contracting Llc	1	2,73,000
18	Actionfi Technologies	1	2,30,000
19	Brands n Codes Media Technology	1	1,90,000

Table 7.3.d. Placement Details 2018-2019

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

Total Marks 10.00

Institute Marks : 10.00

Item		2021-22	2020-21	2019-20
National Level Entrance Examination NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others KEAM	No of students admitted	4	1	6
	Opening Score/Rank	25419	25000	16237
	Closing Score/Rank	44448	50657	40352
Name of the Entrance Examination for Lateral Entry or lateral entry details LET	No of students admitted	8	11	1
	Opening Score/Rank	1690	441	1861
	Closing Score/Rank	3638	3788	1861
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)				

8 FIRST YEAR ACADEMICS (50)

Total Marks 41.92

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

Total M

Institute Ma

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

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Dat leav cas Cur Ass is 'N
							CAY	CAYm1	CAYm2			
Mr SujiKumar	CSEPD0874M	M.Phil	29/04/2011	Mathematics	Associate Professor	25/07/2019	50	50	50	Yes	Regular	
Dr Nimmy Joh	APMPV9829B	M.Sc. and PhD	28/09/2018	Nanotechnology	Associate Professor	12/07/2019	50	50	50	Yes	Regular	
Ms MANEESH	BRNPP6326H	M.Sc	31/03/2017	Physics	Assistant Professor	01/04/2019	50	50	50	Yes	Regular	
Ms MEGHA P	EDHPP7229E	MBA	27/09/2019	HR AND FINANCE	Assistant Professor	29/01/2020	50	50	50	Yes	Regular	
Ms Aswani Pa	GASPP6567D	M.Sc	28/06/2019	Statistics	Assistant Professor	25/11/2019	50	50	50	Yes	Regular	
Ms Divya P	GLSPP0316M	M.Sc	30/04/2020	Statistics	Assistant Professor	09/07/2021	50	0	0	Yes	Regular	
Mr MUHAMME	CYDPA9435N	M.Sc	30/08/2019	Physics	Assistant Professor	06/12/2021	50	0	0	Yes	Regular	
Mrs SARANYA	FXTPS1894D	M.Phil	31/12/2015	Mathematics	Assistant Professor	29/11/2021	50	0	0	Yes	Regular	
Ms RESHMA	VFGTR4568H	MA	30/06/2017	English	Assistant Professor	10/06/2017	50	50	50	Yes	Regular	
Mr Vishnu	BKMPV7402E	MBA	30/06/2017	HR Management	Assistant Professor	10/01/2019	50	50	50	Yes	Regular	
Neethu M P	CPTPN7639Q	M.Sc	29/09/2017	Chemistry	Assistant Professor	12/11/2021	50	0	0	Yes	Regular	
Dr Julin Josep	BPRPJ4442A	M.Sc. and PhD	30/04/2018	Physics	Associate Professor	17/07/2019	0	50	50	No	Regular	15/1
Ms SUMISHA	PRAIS1234I	M.Phil	30/04/2012	Mathematics	Assistant Professor	01/08/2016	0	50	50	No	Regular	31/1
Mr SAI K BHA	EUNPP7356J	M.Sc	28/04/2017	Physics	Assistant Professor	03/03/2018	0	50	50	No	Regular	30/0
Ms CHINCHU	POHJG5678E	MBA	31/12/2013	HRM and FINANCE	Assistant Professor	13/08/2018	0	50	50	No	Regular	05/1
Ms Babitha P	BCYPB2722F	MBA	30/12/2011	Finance and Marketing	Assistant Professor	01/11/2019	50	50	50	Yes	Regular	

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment= (5*20)/FYSFR(Limited to Max.5)
2019-20(CAYm2)	30	6	5	5.00
2020-21(CAYm1)	30	6	5	5.00
2021-22(CAY)	30	6	5	5.00
Average	0	0	0	0

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

Total Marks 5.00

Institute Marks : 5.00

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2019-20	1	2	1	11.00
2020-21	1	2	1	11.00
2021-22	1	2	1	11.00

Average Assessment: 11.00

8.3 First Year Academic Performance (10)   Total Marks 1.92

Institute Marks : 1.92

Academic Performance	2021-22	2020-21	2019-20
Mean of CGPA or mean percentage of all successful students(X)	6.73	6.97	6.52
Total Number of successful students(Y)	4.00	5.00	5.00
Total Number of students appeared in the examination(Z)	29.00	14.00	14.00
API [X*(Y/Z)]	0.93	2.49	2.33

Average API[(AP1+AP2+AP3)/3] : 1.92

Assessment [1.5 * Average API] : 1.92

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

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

Table 8.4.1.a Tools used in measuring CO

Assessment Tool Type	Assessment Tool Title	Tool Description
Direct Assessment	Continuous Internal Evaluation (CIE)	This is used as an assessment tool to evaluate the attainment of course outcomes, through Assignments, Quizzes, Internal assessments (Average of 2 Exams) which are conducted throughout the semester and designed in such a way that the evaluation of the complete syllabus is covered. This is done for all courses of the semester.
	Laboratory Examinations	The performance in the laboratory is evaluated through appropriate rubrics. The students are tested for their confidence in terms of the design of a system and experimentation. The ability of the students to analyze and interpret the results of experiments is continuously evaluated by the faculty during laboratory classes. The strength of the students in using their skills and tools in the laboratory is also evaluated in external laboratory examinations.
	Semester End Examinations (SEE)	This tool examines at all cognitive levels the ability and understanding of the students with respect to the concepts taught and their applicability in solving complex engineering problems. The ability of the students to understand and apply knowledge of mathematics, science, and engineering concepts in solving engineering problems is keenly evaluated.

Table 8.4.1.b Calculation of CO attainment

CO Attainment (Direct Method)	Weightage	Assessment Tools
	80%	Continuous Internal Evaluation CIE (20%)
		Semester End Examinations (SEE) (80%)
CO Attainment (In-Direct Method)	20%	Course End Survey, Alumni Survey, Employer Survey, etc.,

The individual COs of the courses is mapped with Correlation level and are being evaluated by prescribed assessment tools. The attainment of individual CO is calculated by assigning separate weightage to the continuous Internal Evaluation, Semester End examination, assignments, and quizzes. The attainment of COs is compared with the target level. The CO is said to be attained if its attainment value is greater than or equal to the target attainment level.

8.4.1.1. Theory Course Evaluation

Assignments, Quizzes, Internal assessment tests, semester-end examinations are conducted and evaluated for (both theory and lab) integrated courses. The distribution of marks for theory courses (Sample) is as given in the table below.

Table 8.4.1.1. Distribution of marks for theory & Lab courses evaluation

Assessment Tool	Max Marks	Marks scaled to	Weightage
Theory			
Assignments, Quiz, Survey, etc.,	30+	15	20%
Internal Assessment Exam (Avg. of 2 Exams)	50 each	25	

Attendance - Theory	100	10	
Semester End Examination – Theory	100	100	80%
Laboratory			
Everyday Lab session (Each Expt. 60 marks)	60	30	
Lab Internal Exam/ Viva	30	30	50%
Attendance - Laboratory	100	15	
Semester End Examiniation – Laboratory	75	75	50%

The Process for Assessment and Attainment of COs is described in the flowchart as shown in Flow Chart
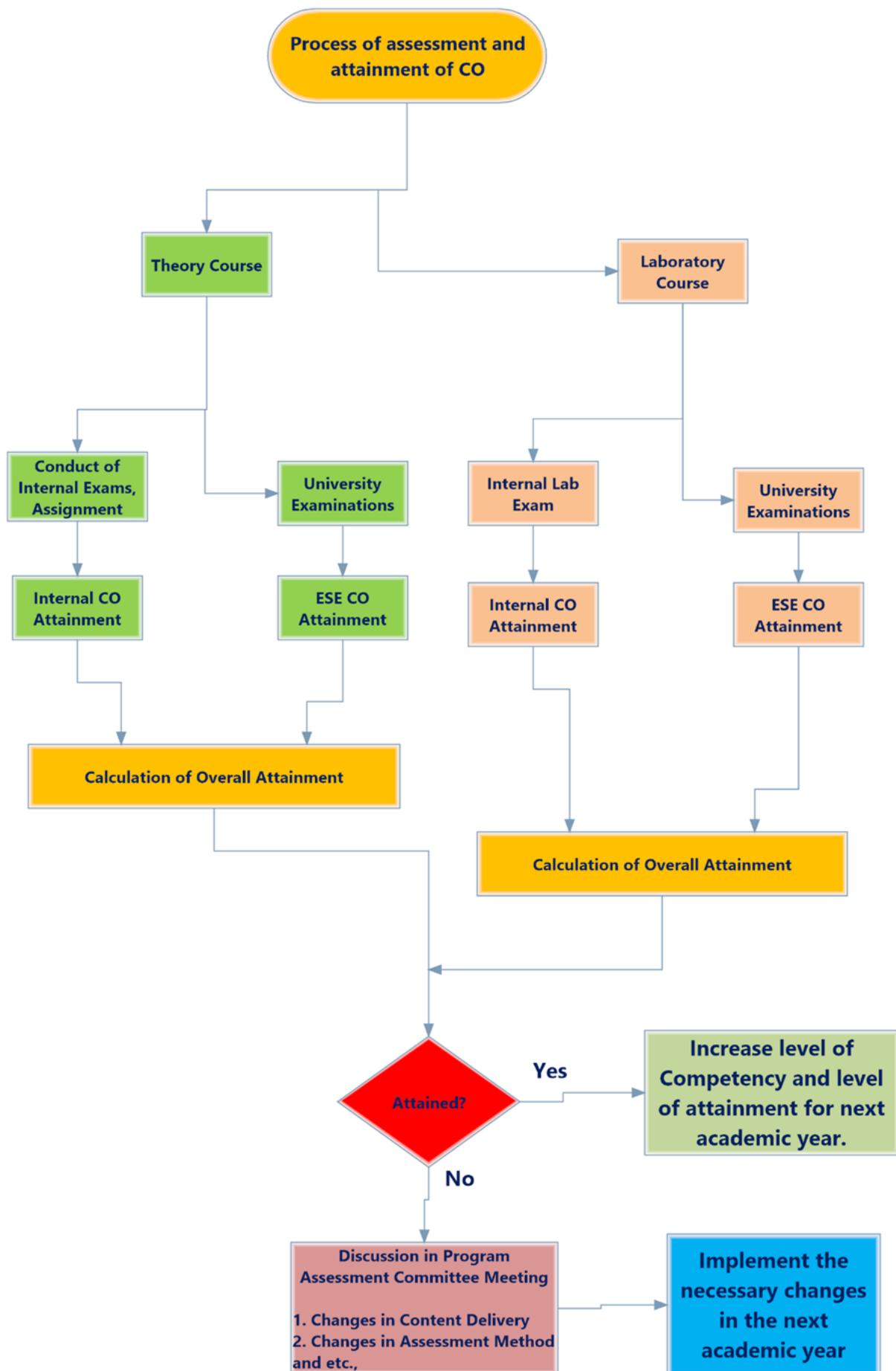
Fig 8.4.1. Process of assessment and attainment of CO

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)

Institute Marks : 5.00

The set attainment value is fixed based on the performance of students in the university examination of previous years. Once the set attainment level is reached, the set attainment value is increased for the successive academic years.

· **Attainment Level 1 (slight)**: 60% of students scoring more than set attainment level in the final examination.

· **Attainment Level 2 (moderate)**: 70% of students scoring more than set attainment level in the final examination.

· **Attainment Level 3 (substantial)**: 80% of students scoring more than set attainment level in the final examination.

Academic Year (2018-2019)

Subject Code	Subject	CO1	CO2	CO3	CO4	CO5	CO6
MA101	CALCULUS	1.88	1.88	2.19	1.88	1.88	2.63
PH100	ENGINEERING PHYSICS	1.61	2.36	2.36	2.36	2.36	2.36
BE100	ENGINEERING MECHANICS	3.00	3.00	2.88	3.00	2.88	3.00
BE103	INTRODUCTION TO SUSTAINABLE ENGINEERING	2.25	2.25	3.00	2.25	2.25	3.00
EC100	BASICS OF ELECTRONICS ENGINEERING	2.61	3.00	2.96	2.96	3.00	3.00
BE10105	INTRODUCTION TO COMPUTING AND PROBLEM SOLVING	3.00	3.00	3.00	3.00	3.00	3.00
CS110	BASIC ENGINEERING WORKSHOPS COMPUTER	3.00	3.00	3.00	3.00	3.00	3.00
PH110	ENGINEERING PHYSICS LAB	3.00	3.00	3.00	3.00	3.00	3.00
EC110	BASIC ENGINEERING WORKSHOPS ELECTRONICS	3.00	3.00	3.00	3.00	3.00	3.00
CY100	ENGINEERING CHEMISTRY	3.00	2.96	2.25	2.25	2.25	3.00
MA102	DIFFERENTIAL EQUATIONS	2.57	2.57	2.57	2.57	2.57	2.57
BE110	ENGINEERING GRAPHICS	2.48	2.48	2.48	2.48	2.39	2.39
BE102	DESIGN AND ENGINEERING	2.61	3.00	2.96	2.96	3.00	3.00
CE 100	BASICS OF CIVIL ENGINEERING	3.00	2.96	3.00	3.00	3.00	2.25
CE110	BASIC ENGINEERING WORKSHOPS CIVIL	3.00	3.00	3.00	3.00	3.00	3.00
CS100	BASICS OF COMPUTER PROGRAMMING	3.00	2.79	2.25	3.00	3.00	3.00
CS120	COMPUTER PROGRAMMING LAB	3.00	3.00	3.00	3.00	3.00	3.00
CY110	ENGINEERING CHEMISTRY LAB	3.00	3.00	3.00	3.00	3.00	3.00

Academic Year (2019-2020)

Subject Code	Subject	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9	CO10	CO11
MAT101	LINEAR ALGEBRA AND CALCULUS	1.88	0.00	3.00	3.00	3.00						
PHT100	ENGINEERING PHYSICS A	1.69	1.69	1.69	1.69	1.69						
EST100	ENGINEERING MECHANICS A	0.63	0.31	0.00	0.75	0.63						
EST 130	BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING	2.63	2.63	2.63	2.34	2.63	2.63					
HUN101	LIFE SKILLS	3.00	2.88	2.88	2.88	3.00	3.00					
PHL120	ENGINEERING PHYSICS LAB	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**						
ESL130	ELECTRICAL AND ELECTRICAL WORKSHOP	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**				
MAT102	VECTOR CALCULUS, DIFFERENTIAL EQUATIONS AND TRANSFORMS	3.00	3.00	3.00	3.00	3.00						
CYT 100	ENGINEERING CHEMISTRY	3.00	3.00	3.00	3.00	3.00						
EST110	ENGINEERING GRAPHICS	1.43	2.86	3.00	3.00	3.00						
EST 120	BASICS OF CIVIL & MECHANICAL ENGINEERING	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	3.00	3.00
HUN 102	PROFESSIONAL COMMUNICATION	1.43	2.14	3.00	3.00	3.00	3.00					
CYL 120	ENGINEERING CHEMISTRY LAB	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**						
EST 102	PROGRAMMING IN C	3.00	3.00	3.00	3.00	3.00						
ESL 120	CIVIL AND MECHANICAL WORKSHOP	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**			

Academic Year (2020-2021)

Subject Code	Subject	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9	CO10	CO11
MAT101	LINEAR ALGEBRA AND CALCULUS	0.75	0.75	0.75	0.75	0.75						
PHT100	ENGINEERING PHYSICS A	2.48	2.48	2.48	2.48	2.48						
EST100	ENGINEERING MECHANICS A	0.75	0.75	0.75	0.58	0.42						
EST 130	BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING	1.55	1.55	1.55	1.55	1.55	1.55					
HUN101	LIFE SKILLS	3.00	3.00	2.92	3.00	2.25						
PHL120	ENGINEERING PHYSICS LAB	3.00	3.00	3.00	3.00	3.00						
ESL130	ELECTRICAL AND ELECTRICAL WORKSHOP	3.00	3.00	3.00	3.00	3.00	3.00	3.00				
MAT102	VECTOR CALCULUS, DIFFERENTIAL EQUATIONS AND TRANSFORMS	3.00	3.00	3.00	3.00	3.00						
CYT 100	ENGINEERING CHEMISTRY	3.00	3.00	3.00	3.00	3.00						
EST110	ENGINEERING GRAPHICS	2.93	3.00	0.00	0.00	3.00	3.00					
EST 120	BASICS OF CIVIL & MECHANICAL ENGINEERING	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
HUN 102	PROFESSIONAL COMMUNICATION	3.00	3.00	3.00	3.00	3.00	3.00					
CYL 120	ENGINEERING CHEMISTRY LAB	**3.00**	**3.00**	**3.00**	**3.00**	**3.00**						
EST 102	PROGRAMMING IN C	3.00	3.00	3.00	3.00	3.00						
ESL 120	CIVIL AND MECHANICAL WORKSHOP	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00			

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

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

Total Marks 20.00

Institute Marks : 15.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MAT101	0.75	0.70	0.75	0.70	0.45	0.25	0.00	0.00	0.25	0.50	0.00	0.50
PHT100	1.75	1.60	0	0	0	0	0	0.58	1.17	0	0	0.58
EST100	0.71	0.71	0	0	0	0	0	0	0	0	0	0
HUN101	0	3.00	2.00	1.00	0	1.33	0	1.00	2.25	2.67	1.00	2.00
PHL120	3.00	0	0	0	3.00	0	0	1.00	2.00	0	0	1.00
MAT102	3.00	0	0	0	0	0	0	0	0	0	0	0
CYT100	1.00	1.25	1.00	1.00	2.00	0	3.00	0	0	0	0	0
EST110	2.93	0.98	0	0	2.93	0	0	0	0	1.95	0	0
EST120	3.00	1.70	0	1.00	3.00	2.50	2.50	2.50	2.00	0	0	0
CYL120	3.00	0	0	0	2.00	0	0	0	3.00	2.00	0	1.75
EST130	1.29	0.52	0	0	0	0	0	0	0	0	0	1.04
ESL130	2.60	0	0	1.00	2.00	2.00	0	1.00	2.50	1.67	0.00	1.67
HUN102	1.00	1.00	0	0	0	1.00	0	0	1.33	2.67	0	2.00
EST102	3.00	3.00	2.00	2.00	1.00	1.00	0	0	0	1.00	1.00	2.00
ESL120	1.5	0	0	0	1.00	1.00	0	2.00	2.00	2.00	1.00	1.00

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.04	1.45	1.44	1.12	1.93	1.30	1.83	1.15	1.83	1.81	0.60	1.35
CO Attainment	2.04	1.45	1.44	1.12	1.93	1.30	1.83	1.15	1.83	1.81	0.60	1.35

PSOs Attainment:

Course	PSO1	PSO2	PSO3
MAT101	0.25	0	0
PHT100	0.58	0	0
HUN101	1.00	0	0
PHL120	1.00	0	0
MAT102	1.00	0	0
CYT100	1.00	0	0
EST110	2.93	0	0
EST120	3.00	0	0
CYL120	1.00	0	0
EST100	0.25	0	0
EST130	0.52	0	0
ESL130	1.00	0	0
HUN102	1	0	0
EST102	3.00	2.00	1.00
ESL120	1.00	0	0

PSO Attainment Level

Course	PSO1	PSO2	PSO3
Direct Attainment	1.24	2.00	1.00
CO Attainment	1.24	2.00	1.00

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

POs Attainment Levels and Actions for Improvement- (2020-21)

POs	Target Level	Attainment Level	Observations

PO 1 : Engineering Knowledge

PO 1	2.2	2.42	Target Achieved

Action : 1. Trained to gain knowledge in Engineering fundamentals by conducting Bridge course 2. Emphasized the role of fundamental sciences in Computer science engineering domain by conducting the virtual tours of the Labs related to Computer Science Engineering department and student were briefed about Quantum Computation whose underlying phenomenon is Quantum mechanics.

PO 2 : Problem Analysis

PO 2	2.2	2.22	Target Achieved

Action 1: Encouraged to develop their attitude in problem-solving ability through tutorial classes Action 2: Advised to practice more number of complex problems by home assignments

PO 3 : Design/development of Solutions

PO 3	2.2	2.16	Difficulty in solving Engineering problems

Action: Using the Industry Institute labs, students demonstrated the solution for engineering problems. The students were also assigned the small projects as self-study, and the project exhibition was conducted at the end of the semester.

PO 4 : Conduct Investigations of Complex Problems

PO 4	2.2	2.28	Target Achieved

Action: The significance of the literature survey was outlined to students.

PO 5 : Modern Tool Usage

PO 5	2.2	2.93	Target Achieved

Action: Using SAP lab, IIOT lab, VMware Labs, and HP lab students were demonstrated the capabilities of software solutions

PO 6 : The Engineer and Society

PO 6	2.2	2.77	Target Achieved

Action: Engineers' primary obligation is to protect the safety, health, and welfare of the public. Engineer's decision-making is very important because the ultimate beneficiary is the general public or society at large. This was emphasized through the course Constitution of India and Professional Ethics. Three weeks induction program also outlined the contribution of engineers to the society

PO 7 : Environment and Sustainability

PO 7	2.2	3.00	Target Achieved

Action: The e-waste management and disposal were outlined through videos. The awareness of the role of IT in ecological sustainability was created through eco-club

PO 8 : Ethics

PO 8	2.2	2.85	Target Achieved

Action: Ethics will guide the engineers to mold the personality trait of an individual which will play a key role in instilling discipline and facilitating students to become responsible citizens of the nation. This is also reemphasized through the course Constitution of India and Professional Ethics.

PO 9 : Individual and Team Work

PO 9	2.2	2.74	Target Achieved

Action: As part of the self-study evaluation, students were assigned the small projects in groups; working in the groups enabled them to understand the intricacies of team work and decision-making process

PO 10 : Communication

PO 10	2.2	2.71	Target Achieved

Action: The "Center for Soft Skills and Life-Long Learning" ensures the students are equipped with all possible communication tools

PO 11 : Project Management and Finance

PO 11	2.2	3.00	Target Achieved

Action: Students get hands-on experience in managing small group tasks and associated finances by participating actively in the Curricular, Co-curricular, and Technical clubs. Technically too students were assigned the small projects in groups as part of the self-study evaluation, which teaches the nuances of project management

PO 12 : Life-long Learning

PO 12	2.2	2.30	Target Achieved

Action: The "Center for Soft Skills and Life-Long Learning" conducts various activities

PSOs Attainment Levels and Actions for Improvement- (2020-21)

PSOs	Target Level	Attainment Level	Observations

PSO 1 : Basic knowledge of computer applications to model computational problems by applying mathematical concepts and design solutions using suitable data structures and algorithmic techniques.

PSO 1	2.2	2.81	Target attained.
No action taken.			

PSO 2 : Design computer-based systems of varying complexity and develop software solutions by following standard software engineering principles by using suitable programming languages and platforms.

PSO 2	2.2	3.00	Target attained.
No action taken			

PSO 3 : Develop system solutions involving both hardware and software modules.

PSO 3	2.2	3.00	Target attained.
No action taken			

9 STUDENT SUPPORT SYSTEMS (50)   Total Marks 50.00

9.1 Mentoring system to help at individual level (5)   Total Marks 5.00

Institute Marks : 5.00

An effective Student mentoring system (SMS) has already been implemented in our college. All the students of the college are coming under this system from the date of joining the college.A complete track of the student activities like Academic, Curricular, Co curricular Extra Curricular achievements, Social activities and the details of Parent Meetings are registered in the system.A Mentoring Register has been distributed to all the staffs of the college .Each staff is allocated with 10- 15 students under the mentoring system.Faculties will have a meeting with the students periodically and their Academic progress and all his activities are discussed and noted in the register.Any discrepancies in the student behaviour like Attendance , etc will be questioned and will be counseled with care.Staff will be submitting the register to the high level Mentoring /Counselling committee with members like Head of the institution ,HOD.The committees will scrutinize case by case and suggest corrective measuresIf necessary the committee will have discussions with the Parents and Medical Counselor.

<u>Steps</u>

- An effective mentoring system is followed in our University to create a healthy relationship between faculty members and students.
- A group-advisory system is implemented in the College for the benefit of the students. A staff member will be in charge of a batch of 30 students.
- The mentors will collect all the details during the first counseling. During mentoring, session issues or difficulties experienced by the mentees are recorded and necessary steps are taken to resolve the issues.
- On admission to the College, each student will be assigned to a Group Advisor from the concerned department. The Group Advisor keeps the records of all academic and extracurricular activities of the students under his/her guidance.
- A file containing the photograph, personal and academic details are maintained by the Group Advisor for each student. All applications for leave, scholarships, certificates, etc. are to be forwarded to the Principal through the Group Advisor.

The system is intended to give advice and guidance to the students in all curricular and extra curricular matters. The students can meet the Advisor to discuss their personal and academic problems.

OOUTCOMES

- Mentor takes the responsibility of mentoring the students/mentees.
- They provide counseling and guidance to the students in their academic, career and personal matters. These interactions help the students in solving their personal problems as well as problems related to academics.
- The students feel free to approach their mentors whenever the need arises.

STUDENT WELFARE COMMITTEE

- Dr Nimmi John S&H HOD
- Ms. Jeyanthi AP S&H
- Ms. Megha O AP CE Dept.

Class Committee meeting:

1.1 Every class shall have a class committee consisting of teachers of the class concerned, student representatives and a chairperson who is not teaching the class.

1.2 The chairperson of the class committee invites Faculty advisor(s) and the student representatives to the meeting.

1.3 The Principal may participate in any class committee of the institution.

1.4 The chairperson prepares the minutes of every meeting, submits the same to the Principal within two days of the meeting and arranges to circulate it among the students and teachers concerned. Corrective measures are taken if required.

Role of a Mentor

- Keeps the records of student's profile in the prescribed format
- Maintains the records of absentees, problems/issues
- Explains to students the academic rules and regulation.
- Collects or downloads the attendance of each student for all courses either on monthly basis (if done manually) or fortnightly
- Examines the results of the students and counsel for poor results within a week after the results is published.
- Communicates with parents of students to discuss students' performance, any attendance issues and future plan at least twice in a semester.
- Gives specific guidance to students in selecting elective courses for registration.
- Gives guidance and information to plan for industry internship.

- Ensures to provide study material for advanced courses or advance study
- Gives guidance to students for selecting project topic, project guide, counsel them on back papers and debarred courses.

Fig 9.1.a Mentoring

I. Types of mentoring activities done towards students

Academic Growth

·   First, mentors educate their mentees in a particular course, serving as masters to the developing learners by analyzing their performance in continuous internal evaluation tests (CIE).

·   Based on academic record, students with good performance are encouraged to achieve the next higher level of performance and slow learners are motivated and guided to improve the performance.

·   The mentors counsel the students for their low attendance, low performance in examination (with the emphasis on the reason(s) of low attendance and performance).

·   Information of academic planners, academic schedules, and e-learning resources are shared to enhance their knowledge.

·   Students are given training for taking up competitive exams GATE, IES, UPSC, etc.

·   Faculty members encourage students to do a poster presentation on the project preliminary and PBL based project learning.

Professional Guidance

·   The students are encouraged and guided to register themselves in the professional bodies like IEEE, CSI, and ISTE etc. to create awareness and enhance the knowledge about the various activities including research in their area of specialization.

·   Mentors support their learning and enhance their laboratory and research skills through technical workshops/symposiums.

·   Industry based training is offered to students to improve their chances of employability.

·   Students are encouraged to develop their oral and written communication skills by writing research papers /articles and presenting in national and international conferences.

·   The projects are designed based on real-time scenarios to apprise students about the working culture of industry and industry expectations.

Career Advancement

·   Students are supported to take up online certification courses offered by MOOC/NPTEL/SWAYAM to strengthen the qualification for their academic progression. This also helps them to achieve higher career paths in the applied areas of their specializations.

·   Career guidance and counseling is provided by senior faculty members and placement Co-coordinators

·   Value added training programs are arranged to enhance their placement opportunities as well as to support their research in the industry. Students are also encouraged to take up international professional certification for example in CISCO, Microsoft, Java, etc. This helps the students to improve their profiles for the future.

Laboratory Specific

·   Counsel irregular students to laboratory classes to attend regularly and complete backlog experiments during specified extra hours.

·   Arrange special lab coaching for Students with backlogs in external lab exams.

All-round Development

·   Encourage and support students towards all-around development through participation in literary, cultural, and sports activities which helps to develop leadership qualities, decision-making abilities, team spirit, sociopsychological awareness, and shapes the student into an intellectually integrated person.

Student Personality development

·   Empower and enable inner adjustments by individual students to counter and cope with physical, emotional, mental, social, and environmental challenges through student-counselor interaction/ through meditation workshops/ through other specialized workshops/activities.

·   Use of therapeutic interventions by counselors where necessary; such as Cognitive Behavior Therapy(CBT), Rational Emotive Behavior Therapy (REBT), Desensitization Therapy, Psychodynamic therapy, Group therapy and so on.

·   Engage in family /peer counseling by Counselor/ Mentor /HOD to strengthen student's interpersonal relationships thereby improving their grades.

II. List of Training activities

- Orientation of the students prior to Placement season.
- Aptitude Training.
- Mock online aptitude practice test.
- Technical training through labs.
- Mock online technical practice test.
- One to one career counseling and guidance to all the students.
- Mock Group Discussion practice.
- Personality development activities.
- Life skill trainings.
- Verbal and written communication trainings.
- Company specific trainings.
- Mock face to face interviews.
- Industry visits.
- Internship opportunities.
- Participation in Hackathon and other coding challenge contests.

Fig 9.2.b Mentoring activities
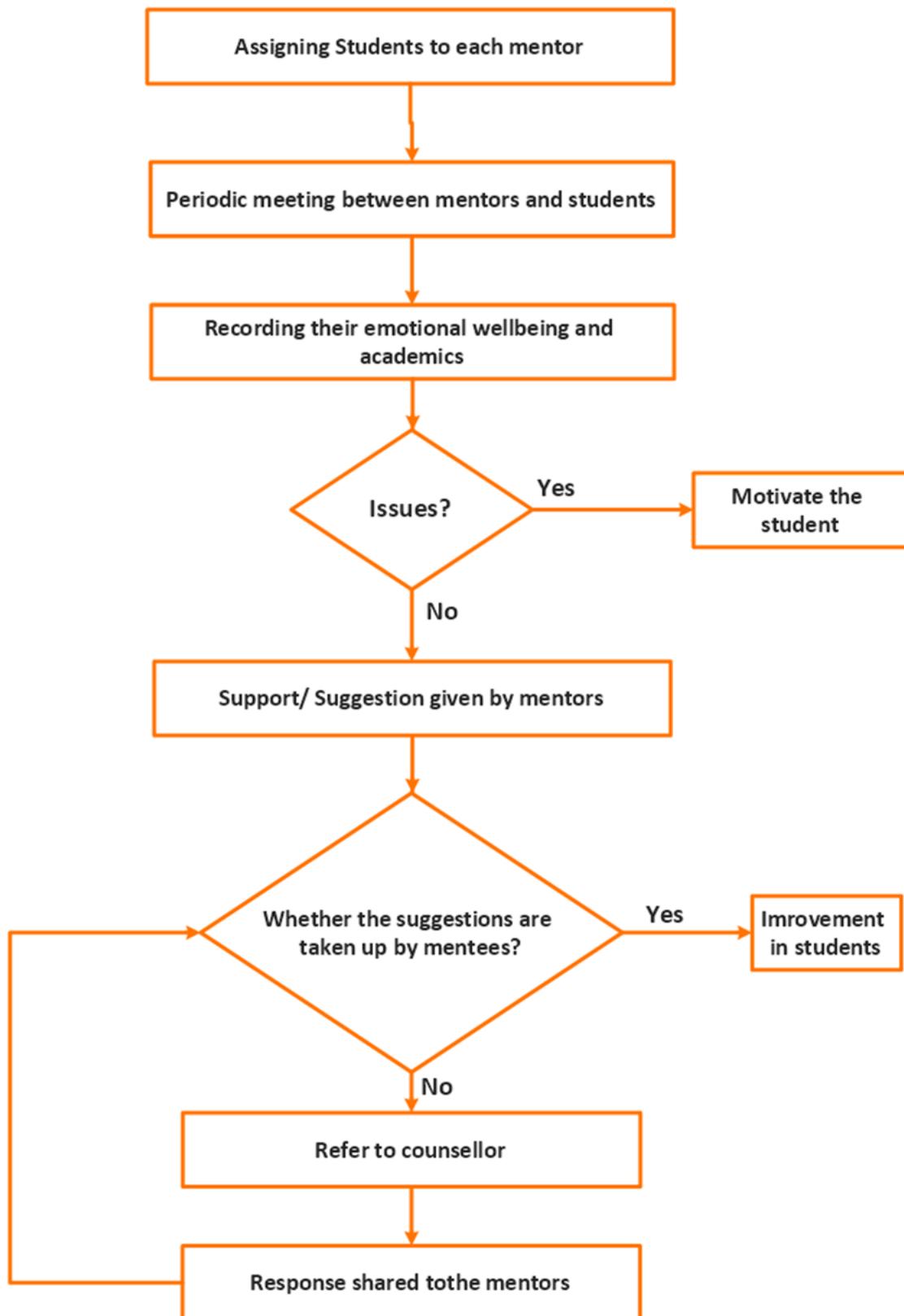
Fig. 9.1.c The structure of mentoring report

III. Career Advancement

- Students are encouraged to take up online certification courses offered by MOOC/NPTEL/SWAYAM to strengthen the qualification for their academic progression. This also helps them to achieve higher career paths in the applied areas of their specializations.
- Career guidance and counseling are provided by senior faculty members and placement co-coordinators.
- Value added training programs are arranged to enhance their placement opportunities as well as to support their research in industry. Students are also
- encouraged to take up international professional certification for example in CISCO, Microsoft, Java, etc. This helps the students to improve their profiles for future.

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

Feedback collected for all courses: YES

Specify the feedback collection process;

The teaching-learning system followed by any educational institution needs continuous refinement. To capacitate this process of continuous refinement, the institution has adopted This eventually helps to fine-tune the teaching-learning process and the curriculum. The institution follows a well-defined and formal feedback system. It has been identified as one from students regarding the quality of teaching is collected during each semester, the students are asked to respond to a feedback questionnaire. The entire process is executed in

- Feedback collection
- Feedback analysis
- Reward / corrective measures

Feedback Collection Process
- Feedback mechanism is well organized system in the college for all courses.
- All the students are allowed to give feedback.
- Computerized feedback is collected from students for all the courses. The feedback collection process is discussed in Table 9.2.a.

Table 9.2.a. Feedback collection process

Title	Description
Feedback collection process	Online feedback from all students on respective courses
Process	Online on Google Form, Vedavyasa App
Frequency of feedback Collection	Twice in a semester
Metrics used for calculation	5-Excellent 4-Very Good 3-Good 2-Satisfactory 1-Below average

Feedback analysis Process:

Summary of the feedback reports pertaining to course, program and teaching- learning is prepared, usually on the scale of 1 to 5. The minimum expected feedback for a facu feedback is shared with heads of the respective departments. Informal feedback is also taken directly by the heads from time to time during the ongoing semester. A special e A broad range of parameters that are used for collecting the feedback data is as given below.

· Particular on timely coverage of syllabus.

· Ability to integrate content with other courses.

· Depth of the course content including project work, if any.

· Learning value (in terms of knowledge, concepts, manual skills, analytical abilities and broadening perspectives)

· Lectures are interesting.

· Logical structuring & sequencing of course content into modules.

· Promptness & adequacy of feedback provided by teacher on academic performance.

· Promptness in Evaluation of Tests, Assignments and Quizzes.

· Punctuality (starting time & ending time for lectures, Lab classes and Tutorials Classes)

· Recap of last lecture, assignments, quizzes, projects, discussion, case studies etc.

· Teacher comes well prepared to teach in the class.

· Teacher encourages students to ask questions and are satisfied with answers.

· Teacher encourages students to think independently.

· Teacher gives real life examples/ uses videos.

· Teacher is approachable to students for Academic/ personal advice.

· Teacher is clear with course concepts.

· Teacher is enthusiastic about teaching the course.

· Teacher provides course and lecture outline at the semester beginning.

· Teacher suggests web-links related to the topics taught.

· Teacher takes extra care to ensure learning.

· Teacher uploads the teaching material well before the class.

· The course materials (e.g. text, case studies, readings etc.) are helpful in learning the course. The evaluation process is well designed during the course.

· There is clarity in presentation, considering language, voice and black board Writing.

Fig. 9.2.b. Format of student feedback on Teaching – Learning

Sample Feedback analysis for CSE

A broad range of parameters that are used for collecting the feedback data is as given below.
- Particular on timely coverage of syllabus
- Ability to integrate content with other courses
- Depth of the course content including project work, if any
- Learning value (in terms of knowledge, concepts, manual skills, analytical abilities and broadening perspectives)
- Lectures are interesting
- Logical structuring & sequencing of course content into modules
- Promptness & adequacy of feedback provided by teacher on academic performance
- Promptness in Evaluation of Tests, Assignments and Quizzes
- Punctuality (starting time & ending time for lectures, Lab classes and Tutorials Classes)
- Recap of last lecture, assignments, quizzes, projects, discussion, case studies etc.
- Teacher comes well prepared to teach in the class
- Teacher encourages students to ask questions and are satisfied with answers
- Teacher encourages students to think independently
- Teacher gives real life examples/ uses videos
- Teacher is approachable to students for Academic/ personal advice
- Teacher is clear with course concepts
- Teacher is enthusiastic about teaching the course
- Teacher provides course and lecture outline at the semester beginning
- Teacher suggests web-links related to the topics taught
- Teacher takes extra care to ensure learning
- Teacher uploads the teaching material well before the class
- The course materials (e.g. text, case studies, readings etc.) are helpful in learning the course
- The evaluation process is well designed during the course
- There is clarity in presentation, considering language, voice and blackboard writing

Basis of reward/corrective measure:
Based on the consolidated feedback reports and faculty self-appraisal reports, the faculty members are apprised about their performance.

1. Faculty members who get average feedback below 3 on 1-5 scale are identified and provided with induction program and faculty development program in specified area.
2. Also the faculty members who get feedback more than 75% are appreciated by management during Annual function

Sample Feedback analysis for CV
The faculty members who follow good and innovative teaching pedagogies are appreciated and awarded along with the monetary benefit of increment, in recognition of their e
- Resourcefulness
- Innovations in bringing about the change
- Dependability in their work
- Expertise used and developed in academics, research and patenting
- Corrective actions are taken for the faculty whose feedback score is less than the institution standard.
- Encouraging faculty to attend more Faculty Development Programs (FDPs). Suggestions are given to enhance their academic skill set with the peer support within a sti
  department regularly.

Fig 9.2.a. Sample Feedback Form

Vedavyasa Institute of Technology- Faculty Feedback Format

Date of Feedback: Course& Branch: BTECH- CSC   Semester:

Remarks as to teaching Evaluation: I-Needs Improvement(1), S-Satisfactory(2), G-Good(3), VG-Very Good(4), E-Excellent(5) (Give Ur

Sl.No.	Description	S.Code MA206 - Sunali Miss	S.Code CS202	S.Code CS204	S.Code CS206	S.Code CS208	S.Code HS200	S.Code CS232
	Subjects handled by the faculty in which feedback is sought------------------------→	Sumisha Miss	Alka Miss	Shibi Miss	Divya Miss	Shruthi Miss	Chinjusha Miss	Shibi/ Vidhya M
01	Knowledge in the Subject	5	5	4	5	5	4	4
02	Communication Skill	5	5	4	5	5	5	4
03	Control over the class and enforcing discipline	5	5	5	5	5	4	5
04	Eye Contact – Facing each student while engaging class	5	5	5	5	5	5	4
05	Body Language	5	5	5	5	5	5	5
06	Sound Audibility	5	5	5	5	5	5	5
07	Explanation and analysis of topics taught	5	5	4	5	5	4	3
08	Clarity in teaching	5	4	4	5	5	4	4
09	Giving Assignments and evaluation of Assignments	5	5	5	5	5	5	5
10	Skill in English Language	5	5	4	5	5	5	4
11	Doubt clearing Ability	5	4	4	5	5	4	3
12	Punctuality	5	5	5	5	5	4	5

Akash K
Name and Signature o

Methodology being followed for corrective measures taken:

Based on the consolidated feedback and faculty self-appraisal reports, the faculty members are appraised about their performance. Some of the faculty members are apprec
of,
- Resourcefulness
- Innovations in bringing about the change
- Dependability in their work
- Expertise used and developed in academics, research and patenting

Necessary corrective actions taken for the faculty members whose feedback score is less than the institution standard, are as given below. Head of the Department chairin
regard to
- Clarity in explanation, effective communication, syllabus coverage
- Participating in Faculty Development Programs (FDPs).
- Enhancing their academic skill set with the peer support within a stipulated time period.

The performance is reviewed regularly.

Rewards/Corrective Measures

Based on the consolidated feedback reports and faculty self-appraisal reports, the faculty members are apprised about their performance. The faculty members who follow g
along with the monetary benefit of increment, in recognition of their exemplary efforts of
- Resourcefulness
- Innovations in bringing about the change
- Dependability in Their Work
- Expertise Used and Developed in Academics, Research and Patenting

Necessary corrective actions are taken for the faculty members who score less than the institution standard, are followed as given below.
- Head of the department advise the faculty about handling and monitoring the class.
- Encouraging faculty to attend more Faculty Development Programs (FDPs).
- Suggestions are given to enhance their academic skill set with the peer support within a stipulated time period. The performance is reviewed by the head of the departn
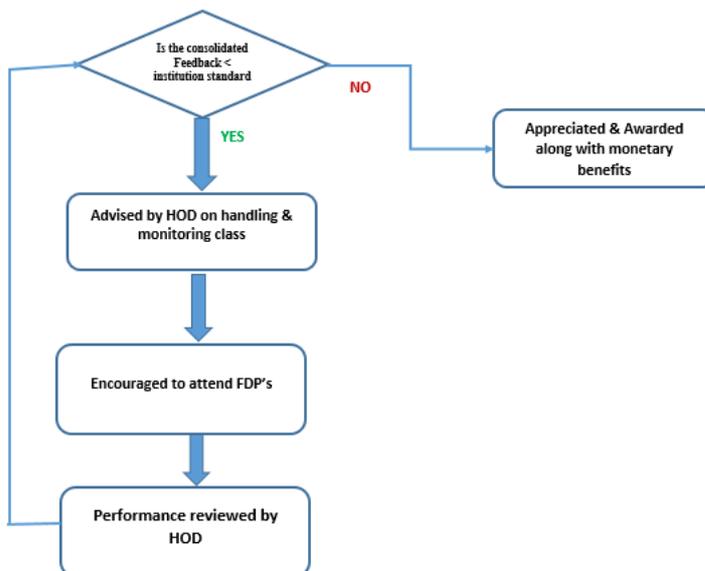
Fig.9.2.c Flowchart of Feedback Analysis and action taken

Number of corrective actions taken:

· Classes to be handled as per the syllabus and Academic Plan of APJAKTU sticking to online Timetable

· Asynchronous methods to be implemented to take classes whenever necessary

· Network issues of a few staffs and students to be positively acknowledged by uploading the teaching materials/notes/videos in relevant Google classrooms and whatsapp grou

· The materials of the topics covered for each subject were posted in the appropriate platform and links provided

· Faculties were informed to complete the modules as per the course plan

· Assignments and class test should be conducted on the completion of each module.

VEDAVYASA INSTITUTE OF TECHNOLOGY, KARADPARAMBA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
Summary of faculty online feedback of CSE Dept. online classes from 16.3.2021 to 18
S8 B.TECH KTU   2017Admn.Total No of students on Roll:10

Name of faculty	Subject Code & Subject Name	Points scored in S8 CSE out of Max (No.of students x 5 x Questions):	No.of Students
(b)	(c)	(d)	(e)
Dr.Kavitha S Murugesan	Data Mining & Warehousing	337	10
Ms.Anjana TK	Principles of Information Security	338	10
Ms.Amritha K Das	Information Storage Management	339	10
Ms. Krishnapriya V	Embedded Systems	311	10
Ms.Anjana TK	Project	341	10
Ms.Divya RK	Project	341	10

Note: Points scored for a batch =(N1 x 5) + (N2 x 4) + (N3 x 3) + (N4 x 2) + (N5 x 1), where N1 = No. of Excellent sc

N2 = No. of V. Good scored, N3 =No. of Good scored, N4 =No. of Satisfactory scored, N5 =No. of Needs Improve

Annexure 1

Action Taken Report on the basis of Summary of faculty online feedback of CSE Dept. online classes fro

Sl.No	Faculty Name	Feed back %	Feedback % informed Status (Yes/No)	Action Recommended/Points discus Detail by HOD and SFA
1	Dr.Kavitha S Murugesan	84.25	Yes	Students were satisfied and further Steps to taken with immediate effect to as per Comr Points were discussed
2	Ms.Anjana TK	84.50	Yes	Students were satisfied and further Steps to taken with immediate effect to as per Comr Points were discussed .
3	Ms.Amritha K Das	84.75	Yes	Students were satisfied and further Steps to taken with immediate effect to as per Comr Points were discussed
4	Ms. Krishnapriya V	77.75	Yes	Students issue in difficulty in material collec continuity was informed to faculty and furth to be taken with immediate effect to as per Common Points were discussed
5	Ms.Anjana TK	85.25	Yes	Students were satisfied and further Steps to taken with immediate effect to as per Comr Points were discussed
6	Ms.Divya RK	85.25	Yes	Students were satisfied and further Steps to taken with immediate effect to as per Comr Points were discussed

Common Points :
- Students were enquired about the difficulties to attend online classes and remedies were done.
- Classes to be handled as per the syllabus and Academic Plan of APJKTU sticking to online Timetable
- Recorded class along with live streaming of classes were given
- Network issues of a few staffs and students to be positively acknowledged by uploading the teaching materials/notes classrooms and whatsapp group so that if the network issues are existing , they can access the same at any time

Fig. 9.2.d. Sample Summary of faculty online feedback form
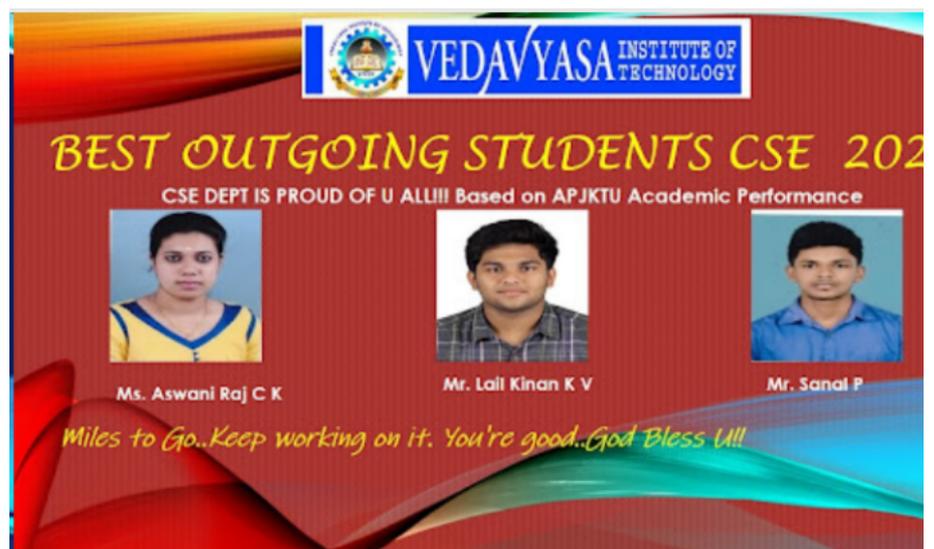
Fig 9.2.e. Best Outgoing Students

9.3 Feedback on facilities (5)   Total Marks 5.00

Institute Marks : 5.00

Assessment is based on student feedback collection, analysis and corrective action taken.

Feedbacks on the following facilities are collected

- Academics
- Library
- Canteen
- Technical - Computer
- Transport
- Cash Counter
- Office
- Reception
- New Requirements
- Mess
- Carpenter and Electrical Works
- Maintenance work
- Plumbing works
- Security
- Hostel

Feedback on Facilities

A standard procedure of feedback on facilities demonstrates a commitment to excellence in the planning and provision of services across different departments of VVIT. The feedback is collected from the students on the facilities available in VVIT such as class room infrastructure, library, laboratories, hostel, playground, Internet facility, Mess etc.

The feedback is analyzed and the necessary corrective measures are implemented after discussions with the management.

The feedback on facilities is taken up in the department as per the following steps:

 1) Feedback collection

2) Feedback analysis

3) Corrective measures

Feedback Collection:

Formal feedback is gathered, at least once during every semester, about the use and satisfaction with a variety of facilities and services which are categorized as

·   General Facilities &Services

·   Technology Services

·   Specialized Services

·   A broad range of parameters that are used for collecting feedback on facilities is given below:

·   Availability of teaching aids such as multimedia projectors, speakers etc. in classrooms/ tutorial rooms

·   Library space and ambience, timings and usage

·   Adequacy of number of titles in library or range of text and reference books covering syllabus relating to different courses

·   Adequacy of Internet facilities in terms availability of terminals & bandwidth

·   Drinking water facilities & their maintenance

·   Canteen facilities

·   Medical & first-aid facilities

·   Housekeeping & maintenance

·   Infrastructure for Co-curricular and extra-curricular activities

·   Mentoring system to help students at individual level

The details of the feedback collection process on facilities are summarized in Table 9.3.a

Table 9.3.a. Details of the feedback collection process

Title	Description
Feedback collected on all facilities provided by the college	YES
Feedback collection process	Online
Feedback receiver	Administrative officer / Admin manager
Frequency of feedback collection	Once in an academic year
Metrics used for calculation	Strongly agree Agree Partially agree Disagree
Purpose of comments	For improving the quality of facilities.

Feedback analysis

A combined report is prepared on the basis of students' feedback under the supervision of committee and corrective action suggested to the appropriate departments/person to resolve these problems and improve the facilities continuously. Sample feedback on facilities is given below.

On college website, a student's portal is made available to post students grievances. When students register their complaint, they are being referred to corresponding department for timely resolution.

The feedback format consists of following questions

Questionnaire

1. How do you rate the Canteen facilities provided by the institution?

2. How do you rate the class room Infrastructure?

3. How do rate the cyber lab facility provided by the institution?

4. Are you satisfied with the extracurricular infrastructure at College?

5. Are you satisfied with the Hostel Facility provided by the institution?

6. How do you rate the Lab facilities at the institution?

7. How do you rate the Library Facilities provided by the institution?

8. Are you satisfied with the placement support provided?

9. How is the responsiveness of Accounts office?

10. How is the responsiveness of College Admin office?

11. How is the responsiveness of Exam office?

12. How do you rate the Sports facilities provided by the Institution?

13. Are you satisfied with the toilet facilities and Maintenance?

14. How do you rate the transport facility provided by the college?

Rating of Scale

5-Excellent

4-Very Good

3-Good

2-Satisfactory

1-Below Average

On the institution website, a student's portal is made available to post students' grievances. When students register their complaints, they are being referred to corresponding department for timely resolution.

Corrective Measures

Some of the corrective actions taken are,

· Recreation center

· Dance room and music room in boys' hostel

· Gymnasium

· Table Tennis room

· Enhancement of food court

Feedback analysis for CSE

A combined report is prepared on the basis of students' feedback under the supervision of committee and corrective action suggested to the appropriate departments/person to resolve these problems and improve the facilities continuously.

9.4 Self-Learning (5)

The college believes that self learning and learning beyond syllabus have great scope in the development of the career of an engineer. Eve The explosion in knowledge related to applied science and engineering during the last century has been so much that four years is too short a time to cover even one bran What an institution should do is to provide adequate facilities for self-learning so that students get motivated to learn more and more and ultimately become life-long learners

A teacher has a great role to play in this. Discussing subject beyond the syllabus, providing exposure to exciting developments in science and technology around the globe, learning. Motivation for self-learning should be provided in classrooms. They should also be motivated to do things themselves so that they gain confidence to try anything w has been providing ample opportunities and facilities for these, as outlined below.

NPTEL Lectures:

· To promote self-learning and share knowledge among students.

· To enhance the quality of engineering education, on tip compatibility and resources for beyond curriculum.

Fig: 9.4.a NPTEL Special Lecture Series

Webinar:

- Web-based seminar is a presentation, lecture, workshop or seminar that is transmitted over the Web using video conferencing software.
- A webinar is a form of one-to-many communication: a presenter can reach a large and specific group of online viewers from a single location. Providing it is used effectively, i
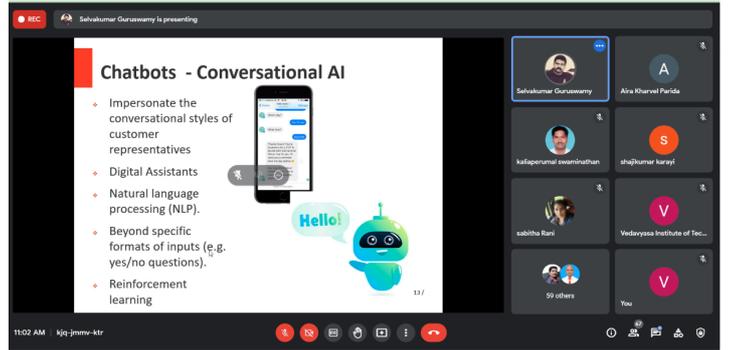
Fig: 9.4.b Webinar on AI
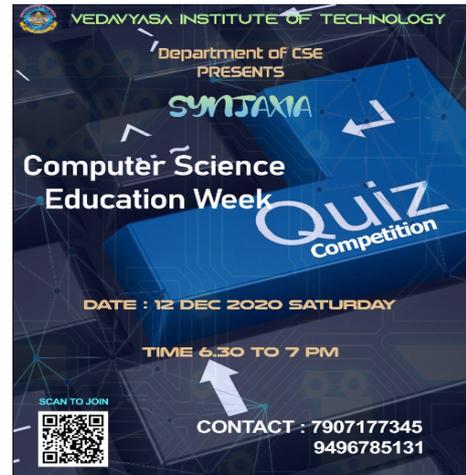
Fig: 9.4.c Quiz Competition

- Opportunity to do mini projects during the course has been encouraged.
- Participation in activities through Professional bodies and R&D cell.

Availability of the centralized computer facility with internet even beyond working hours.

These all facility has enabled the overall development of our students which is seen with respect to improved placements, participation and success in both curricular and cocurricul

Industrial visit

- Industrial visit is a part of college curriculum during which students visit companies and get insight regarding the internal working environment of a company.
- It helps students to gain first-hand information regarding functioning of the industry.
- Provides an opportunity to plan, organize and engage in active learning experiences both inside and outside class room.
- Provides an awareness and importance of industry in the real working world.
- Assist them for future placement.
- Helps to enhance their interpersonal and communication skills,
- it also enriches the knowledge about industrial practices.

Fig 9.4.e. Industrial Visit

Professional bodies/other association activities

- A professional association is one of the most important activities in a student career.
- All career options related to professional association, offers valuable information and resources for their career enhancement.
- College is a registered member of following professional bodies: CSI, ACM & CySI.

Fig. 9.4. f. Cyber Society of India

Fig. 9.4.g. Poster of Inauguration Computer Society of India

Fig. 9.4.h. Workshop conducted under CSI VVIT

Fig. 9.4.i. Poster of Inauguration of ACM Chapter

E-Learning Center

Fig 9.4.g. Poster for E-Learning

VVIT has the E-learning facility that helps teachers to provide opportunities for mutual discussion, access to online resources. This basically enhances the quality of educa_ learning is the innovative mode of learning with the help of communication technologies (ICTs). It comprises of the use of ICT based tools (e.g. Internet, computer, telepho_ support teaching and learning activities.

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

Institute Marks : 10.00

The institution has a structured and organized training and placement cell. Domain specific training and skill-based trainings through outsourced agencies and in-house training is conducted during four years of programme.

VVIT offers career guidance and placement on all aspects of career planning, job searching and post-graduate studies. College provides individual counseling for all the students towards reaching goals.

A. Availability of career guidance facilities:

·   The college has career guidance and placement cell with 9 full time staff members, headed by Executive Director – Placement & Training.

·   The team fine tunes the students by providing insights into the complex dynamics of the corporate world and the current critical industrial & business scenarios.

·   Campus Recruitment Training (CRT) program grooms the students in various areas like Quantitative Ability, Verbal Ability, Reasoning Ability, Group Discussion, Personality Development, Attitude and Behavioral Development and Facing Interview.

·   An online portal is used for training the students. This portal allows students to register for placement, avail training using the numerous videos and take up tests to assess themselves. In addition, the portal also provides company specific question papers which can be used to ensure better performance in the aptitude/technical tests. Certified Trainers are deputed to take sessions on Verbal, Written and listening skills to ensure our students are well trained in Business English Communication

·   Domain and technical training is provided based on the industry requirement.

·   Mock interviews and GDs are conducted on a regular basis to equip final and prefinal students to face the challenges of recruitment scenario.

·   The placement cell organizes on-campus and off-campus recruitments.

·   In addition to the training conducted by the placement division the department organizes training on technical aspects like Data Structures, Java, C, C++ and Python.

The College has created the following infrastructure facilities to conduct training program and campus recruitment.

Table 9.5.a. Facilities for Placement & Training

Facilities	Number
Office	1
Conference Hall	1
Auditorium	1
Seminar hall	4
Rooms for Group Discussion	1
Interview Rooms	5
Computer Centers for Online Test	3

The college also has a placement committee that ensures that the needs of the students belonging to different branches of engineering are addressed and all are given equal opportunities.

B. Pre-Placement Training:

The process involves

·   Identification and grooming of capable students for a particular domain

·   Arranging Training Sessions from industry resources regularly.

·   Counseling the students having less attendance in trainings.

·   Interacting with Life skills trainer regularly for inputs on training.

·   Maintaining the attendance of the students and sharing the same with Centre for

·   Life Skills and Life-Long Learning.

·   Ensuring students learn English essentials/business communication as a subject.

·   Arranging Aptitude Development training sessions for all programmes of Undergraduate (UG).

·   Arranging Technical and domain related sessions and the topics will vary from one programme to another programme. All circuit programmes are taught with basic programming subjects, C, DS etc. Non-circuit programmes students are trained with core subjects and the highlight would be fundamentals of Electrical Engg, Electronics Engg, Mechanical Engg, Civil Engg, Automobile Engg, etc.and some application orientation.

The Roles and Responsibilities of Placement Committee (PC)

·   To conduct research regarding the skills, abilities, and credentials employers seek from graduates and also to find relevant job titles and industries for graduates.

·   To help students create their resumes and cover letters, find internship or externship sites, and apply for jobs in their fields.

·   To arrange for mock interviews to give students practice answering common questions and provide information about companies hiring in the area.

·   To develop strong rapport with employers and develop local partnerships with companies where students can do internships or externships or visit for job shadowing.

·   And also, to recommend students to these employers after they learn necessary skills.

·   To schedule hiring events like job fairs which gives students exposure to potential jobs and helps local companies find suitable candidates.

·   To Ensure students availability for all campus recruitment events.

·   To participate in pre-placement presentations conducted by companies.

·   To participate in exit meetings at the end of each company recruitment events and to implement suggestions regard to grey areas as mentioned in the feedback in the departmental activities.

·   To coordinate with each Department regarding aptitude, soft skills and domain related training activities to students.

·   To Visit companies for presenting Department's quality and talent pool availability

·   To arrange for domain related training and re-training activities based on companies' feedback.

Career counseling for higher studies:

Career guidance and motivational lectures by Alumni, External guests and faculty are organized frequently.

Organizing coaching classes for competitive exams

- · The departments organize coaching classes for GATE and other competitive examinations.
- · The placement cell organizes seminars on higher studies and conduct aptitude training sessions.
- · Foundation course for Civil Services is offered for interested students appearing for Civil Services. Many books and periodicals are available in the library for the students.

Skill development (Spoken English, Computer Literacy, etc.)

Communicative English has been incorporated into the curriculum. The English Language communication lab with a capacity of 60 consoles has been set up with innovation.

Industry – Institute Collaboration Activities:

The purpose of the Industry-Institute Collaboration Cell which shall be referred to as IIC hereon is to ensure a paradigm shift in the thought process of a VVIT student from J2C (Job to Career). This should lead a student towards the identification of a SMART CAREER GOAL. Taking a step further, IIC would endeavor to establish connections between eminent faculty members and the relevant industries to join hands and work towards mutually beneficial causes/projects.

Centre of Excellence

- · Develop the best learning process using a comprehensive understanding of the industry's best practices.
- · Imbibe professionalism, behavioural aspects, and awareness as per the industry expectations.
- · Continuous improvement to achieve success and growth.

Industry Integration

- · Leveraging networking and collaboration with partnership.
- · Promote career counselling by organizing guidance lectures by senior corporate personnel.
- · Regular interaction with the industry through Seminars, Guest Lectures, Conferences, Corporate Meets, etc.

Internship Visits

- · Enable student readiness.
- · Training on employable skills.
- · Talent transformation.

Career Guidance and Placement support FOR CV

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

Students who are looking for a change and want to get a self-direction are counselled so that they can explore and make an incredible career by opting for higher studies like an MBA or M. Tech in their field or related fields. Counselling is also organized related to the techno managerial education and various examinations like GATE/GRE/UPSC/PSC etc. that help students get job opportunities in Public/Private Sector Industries, Government Jobs, Defense sector or obtain higher degrees abroad.

Table 9.5.b Trainning details

Career Guidance, Training and Placement			
Date	Branch/Institution	Company Name	Activity
03/09/2018	ROBOTICS	IIT DELHI	Workshop
04/09/2018	ROBOTICS	IIT DELHI	Workshop
14/09/2018	VVIT	Tech Axis Academy	Training and Placement
13/09/2018	VVIT	CADD centre	Training and Placement
28/01/2019	Digital Marketing	TECH AXIS ACADEMY	Workshop
25/10/2019	Cyber Security Ethical Hacking - Offensive Attack	Wattle Corp Cyber Security Labs Sri.Karthik Kalathil	Lecture
06/11/2019	Learn to code: Break into Elite Software jobs	Pycon,India Mr.Noufal Ibrahim	Lecture
10/02/2020	Artificial Intelligence	CSI VVIT	workshop
20/04/2020	Dharshan 2020	Placement Cell of VVIT	workshop
21/05/2020	Email marketing	CSI VVIT	workshop
27/05/2020	Personal to Professional excellence in IT Industry	CSI VVIT	workshop
29/05/2020	Big data Cloud Computing :Current Trends and Challenge	Saudi Electronic University, Kingdom of Saudi Arabia.- Dr Gokulkumar	Lecture
05/06/2020	Green vehicle technology	CADD CenterEr. Zacaria	Lecture
18/06/2020	Cloud Computing with AWS	Coda GlobalAkshay AK	Lecture

14/07/2020	Exploring BlockChain Applications for Education	Federation University Australia, Ballarat- Ms. Cinthia Joy Godly	Lecture

Fig: 9.5.a Online Placement Drive

Fig: 9.5.b Workshop on AI

Fig: 9.5.c Webinar on Design Thinking for Innovation

Fig 9.5.d Placement Activities

9.6 Entrepreneurship Cell (5)   Total Marks 5.00

Institute Marks : 5.00

In order to nurture the entrepreneur skill among the students, the institution is having a full-fledged Entrepreneurship Development Cell (EDC).

- This cell periodically organizes various events to know the importance of being an entrepreneur and ways to get assistance to become an entrepreneur
- Arranges motivational lectures by young entrepreneurs.
- Encourages the student members to participate in competitions organized by various educational institutions and organizations.

Entrepreneurship Initiatives:

- To create an environment for self-employment, promote innovation, incubation, and entrepreneurship development through formal and non-formal programs
- To introduce the concept of Entrepreneurship in the curriculum at degree levels
- To develop management personnel at appropriate levels for non-corporate and unorganized sectors like education, rural development, small-scale industry, etc
- To utilize the infrastructure facilities and technically trained manpower for the development of non-corporate and unorganized sectors.
- To promote employment opportunities
- Technology Commercialization Assistance and Management Evaluation
- Intellectual Property Rights/Management
- Help with Regulatory Compliance
- Feasibility Study (Technical and Financial)
- Help with Business Basics
- Marketing Assistance/Market Research/Pilot Study/Test Marketing.
- Enhancement of Marketing Skills, Commercialization/Scale up: Access to Bank Loans, Loan Funds and Guarantee Programs and Access to Angel Investors or Venture Capital etc.
- Business Structuring Advisory: Help with Accounting/Financial Management/ Company Formation/Management Team Identification/HR Services.
- Help with Presentation Skills and Business Etiquettes.
- Comprehensive Business Training Programs.

These are the members in Entrepreneurship Cell

1	Dr Periasami Head, ECE
2	Dr Kavitha Head CSE
3	Prof Balakrishnan Head EEE
4	Mr Vinoth Khanna AP ME
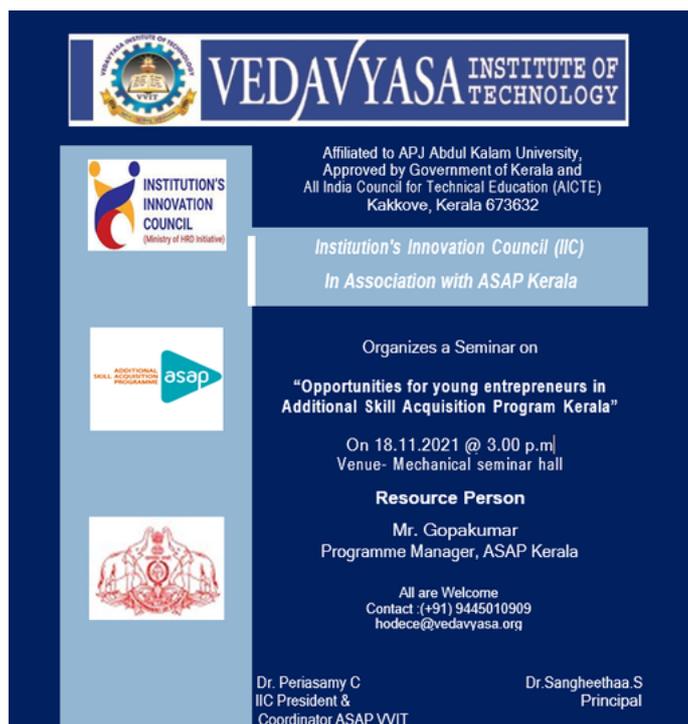
Fig 9.6.a Poster of IIC Seminar

9.7 Co-curricular and Extra-curricular Activities (10)

Total Marks 10.00

Institute Marks : 10.00

Date	2018-2019	Activity	Category
28/09/2018		Surgical strike day	NSS/NCC
05/09/2018		Teachers day celebration	NSS/NCC
07/09/2018		Nss campaign /flood relief	NSS/NCC
07/09/2018		By vvit nss technical cell	NSS

Date	2019-2020	Activity	Category
	27/12/2018	Home for home less	NSS
	14/11/2018	Blood donation	NSS/NCC
	12/03/2019	Stem cell	NSS/NCC
	08/03/2019	Womens day	NSS/NCC
		Nadham 2k19	COLLEGE FEST
Date	**2019-2020**	**Activity**	**Category**
	20/12/2019	Nss camp	NSS
	20/12/2019	Blood donation	NSS
	23/01/2020	Cancer awareness program	RETD. IRRIGATION OFFICER MR. BHAVAN
	24/01/2020	National girl child day	NSS
	28/01/2020	Akshayapathram	NSS
	22/07/2019	Anti-ragging class	MR. ABID SUB INSPECTOR OF POLICE VAZHAKKAD
	24/07/2019	Women empowerment	WEC
	11/08/2019	Flood relief camp	NSS
	20/08/2019	Orientation class	NSS
	05/09/2019	Teachers day	NSS/NCC
	16/09/2019	Rebuild kerala	NSS/NCC
	25/09/2019	Golden jubilee celebrations	NSS
	25/09/2019	Clean campus	NSS
	28/09/2019	Haritha karma sena	NSS
	02/10/2019	Gandhi Jayanthi celebrations	NSS
	16/10/2019	World food day	NSS
	20/10/2019	Mapathon	KERALA STATE IT MISSION AND KTU NSS CELL
	26/09/2019	Turpentine 2k19	ANGANWADI
	28/10/2019	Vigilance week	NSS
	14/11/2019	Children's day	NSS
	15/02/2020	Palliative care training	SRI ASWATHY VOLUNTEER PALLIATIVE CARE
	08/03/2020	Enni njan ozhukatte	NSS

Table 9.7.a. List of Extra-Curricular Activities

NSS

VVIT has NSS unit that helps in personality development of the students through community service. Whereas NCC helps in personality development of students through different physical activities that helps in building stamina of the students.

Different activities that are included in NSS are environment enrichment and conservation, women empowerment programmes, social service programmes, education and recreation, and blood donation.

Fig. 9.7.a. Surgical Strike Day Celebration

Fig 9.7.b. NSS Activity

Sports Facilities:

The Department of Physical Education in vedavyasa institute of technology is promoting Physical Education and sports on par with regular academics. The Institution has well recognized the value of sports and physical activities as a means of developing personality promoting social harmony and discipline. The Department provides ample opportunity to the students to utilize their leisure time with physical activities to reduce their stress and inculcate a lifetime physical activity behavior in their day-to-day education system. Physical fitness is not only the most important key to a healthy body but also the basis of dynamic and creative intellectual abilities. We encourage mass participation towards physical activities, which enhance the overall cognitive abilities of the students. The Department of Physical Education is monitoring the sports activities of students as well as staffs. Our Sports department desires to prepare all the Sports events to enable participation for all Inter Collegiate Tournaments.

Sports Club
1.Gymnasium
2.Football Ground
3.Basket Ball Ground
4.Volleyball Court
Recreation Room
1. Chess
2. Carom

We encourage mass participation towards physical activities, which enhance the overall cognitive abilities of the students. The Department of Physical Education is monitoring the sports activities of students as well as staff. Our Sports department desires to prepare all the Sports events to enable participation for all Inter Collegiate Tournaments.

Fig 9.7.c. Football Match

Fig 9.7.d. Sports Day

Ensav Club

EnSAv (Energy Saving Awareness) Club focuses on bringing about a first-hand realization of the energy crisis and scarcity of natural resources in the country. With the increasing demand for energy, effective management and conservation of the same has become the need of the hour. Recognizing the immense value the Professional Students can bring to the initiative and taking due consideration of this urgent need, VVIT started Energy Saving Awareness Club (EnSAv Club), to propagate efficient usage of energy and to educate the society on climate change issues in the forthcoming years.

As students, parent and teachers are being sensitized towards "energy conservations" issues that confront each one of us , today. Students undertake various activities and present their ideas to conserve energy, as we all know "energy can neither be created, nor be destroyed"

Fig.9.7.e EnSav Club activity

Rejuvenating Club

Engaging in a hobby leads to acquiring substantial skills, knowledge and experience. The objective of the Rejuvenating Clubs is to inspire students to pursue a hobby and explore their potential in areas like music, photography, painting, gardening, star gazing, web designing, trekking etc. The committee shall work towards encouraging student participation in recreational activities, thus providing an opportunity for networking, team-building and personality development.

Fig. 9.7.f. Poster of Rejuvenating Club Activity

Road & Safety Club

Institution has a Road & Safety Club which has the following aims:

- To educate road users about traffic rules, traffic regulations and related matters.
- To develop skills among the students for interacting with various traffic situations.
- To assist in the enforcement of traffic rules
- To work as a volunteer forum for aiding Trauma Care activities.
- To undertake all required activities for ensuring safety of the users on road.

Fig. 9.7.g. Poster of Road & Safety Club
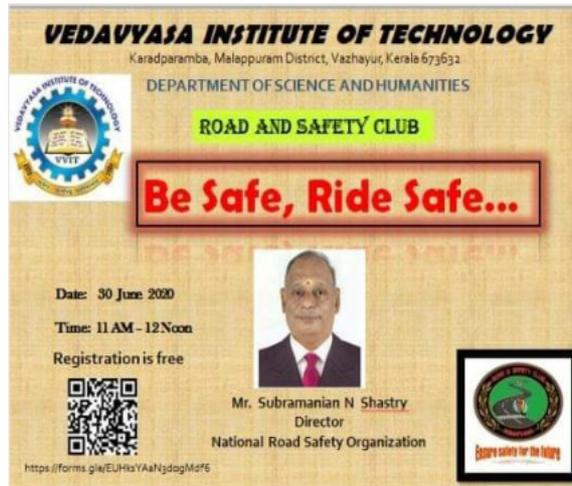
10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 120.00

10.1 Organization, Governance and Transparency (40)

Total Marks 40.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks : 5.00

Vision :
Grooming up Professional Engineers.
Mission :
To launch successfully a high-tech educational package and produce holistically developed technical personalities.

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 10.00

Governing Council of Vedavyasa Institute of Technology		
Name	**Affiliation**	**Position**
Smt.Kala Korath	Vedavyasa Trust,	Chairperson

Dr.Arun Korath	Vedavyasa Trust and Director of VVIT	Secretary
Dr.Arjun Korath	Vedavyasa Trust,	Treasurer
Dr.S.Sangheethaa,	Principal of VVIT	Member Secretary
Dr Revathi G Sekhar	Medical Counselor, VVIT	Member
Mr. Sasidharan S. (nominee of APJKTU)	Technical Section, APJ KTU	Member
Dr. Madhu Thomas	Professor, Addis Ababa Science and Technology University	Member
Dr. Kavitha S.	Professor, GRG Krishnamal College, Coimbatore	Member
Ms. S. Sangeetha	Consultant, Robert Bosch, Coimbatore	Member
Mr. Neeraj K	COO, Yarddiant, KINFRA	Member
Dr. Kavitha S. Murugesan	Professor & Head, Department of Computer Science, Vedavyasa Institute of Technology	Member
Director (nominee of DTE)	Directorate of Technical Education	Member
South West Regional Officer (nominee of AICTE)	AICTE, Trivandrum	Member

Academic Council Members:

Following members are appointed as Academic council members of Vedavyasa Institute of Technology, for the academic year 2020-21 .

Sl. No.	Name	Representation	Department
1	Dr.S.Sangheethaa	Principal, VVIT	Chair Person
2	Dr Kavitha S	Vice Principal, HOD CS, Dept.	Member
3	Dr. Periasami C	HOD, ECE Department	Member
4	Prof. Balakrishnan M. Pilla	HOD EEE Department	Member
5	Mrs. Divya KK	HOD CE Department	Member
6	Dr. Nimmi John	HOD S&H Department	Member
7	Mrs. Sabitha Rani	HOD-in-charge ME Department	Member
8	Ms. Babitha	PRO	Member
9	Ms. Megha P	Placement Officer	Member
10	Mr. Rahul IR	NSS Programme Officer	Member
11	Mr. Narayanan Thannani	AO	Member

Vedavyasa Institute of Technology is managed by Vedavyasa Trust management committee which conducts one meeting every four months to manage the affairs of the Institute It has ten members and three invited members. Day to day functioning & decision making is facilitated through Director. Standard operating procedure (SOP), rules & responsibilities for different cadre is declared by management time to time.

1. To accept donations (movable or immovable) that are legally permissible.

2. The objective of the Trust is to benefit society and to achieve it legally. Governing Council will avail of its financial resources for the various institute run under trust for building infrastructure development.

3. To make decisions for the Institutes under the Trust like purchase, recruitment, and others.

4. To manage, supervise, administer and control all the affairs of the Trust including liaising or dealing with Central or State Governments, its Departments and its officials and for that purpose to employ and retain such staff including experts as may be required for the purpose of the Trust and to pay them such fees / honorarium or remuneration as may be deemed fit.

5. To borrow or raise any money that may be required for the purpose of the Trust upon such terms, interest and security as may be deemed advisable and fit including any mortgage of immovable property of the Trust.

6. Subject to the provisions of any law relating to government investments of Trust funds under any law governing Public Charitable Trusts and applicable to the Trust hereby established, these Trustees will invest its funds according to pattern - investment as laid down in Sec. 11 (5) of the Income Tax Act, 1961.

7. Subject to legal Provisions of to add to, restrict or modify the objects of the Trust or the other provisions of this constitution as may be required for the limited purpose or bringing the objects of the Trust and the other provisions here in conformity with the provisions of the Income Tax Act, Gift Tax Act and other Acts, if any, so as to make Trust Fund eligible for reliefs, concessions and deductions under the said Acts.

8. To apply to the central / state Governments, public Bodies, Urban, Local, Municipal, District and other Bodies, corporations, companies or persons for and to accept grants of money, donation gifts, subscription and other assistance with a view to promoting the objects of the Trust. To discuss and negotiate with the Government Departments, public and other Bodies, Corporation, Companies persons, inquiries relating to Research and other work and matters within the objectives of the Trust and to conform to any proper condition which such grants and other payments may be made.

9. There is also the provision to receive input from others who may be invited to its meetings.

Organizational chart and processes
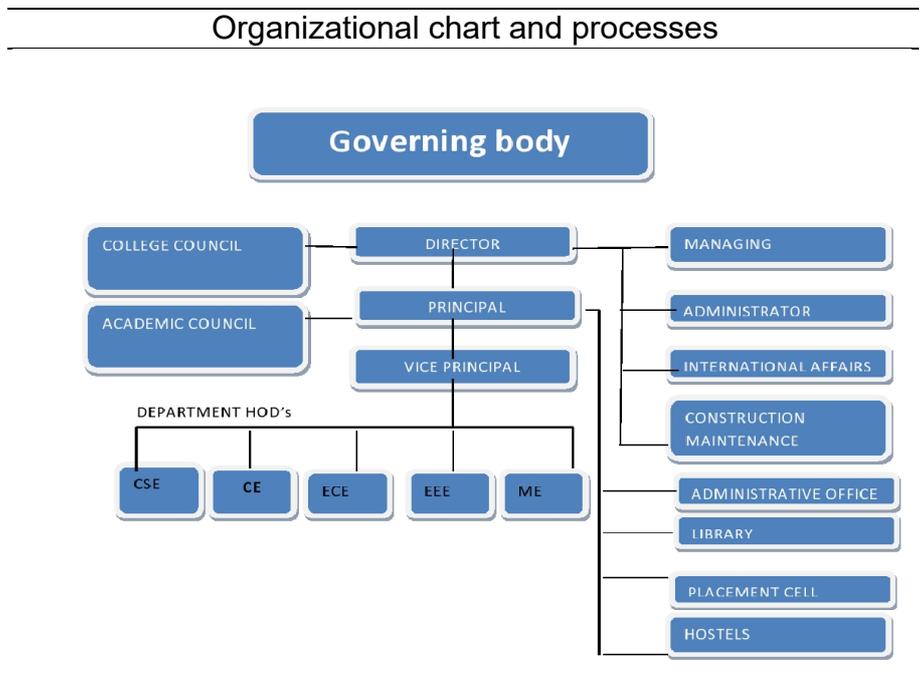
Organizational Chart

Powers and Functions of office bearers (Managing committee) of the Governing Council:

Each Officer of the trust shall be nominated by governing body members and shall hold the office for a period of one year but shall be eligible for re-nomination. Each Officer will continue to hold office until his successor assumes office.

Functions and Responsibilities of the Governing Council:

1. To form the following Sub-Committees and consider the recommendations made by these committees: - Finance Committee: Equipment Committee: Building Committee: Staff Selection Committee
2. To approve the budget estimates- recurring and non- recurring for the financial year in advance.
3. To scrutinize and accept the audited statement of account for each year
4. To estimate the workload, approve the staffing pattern and create posts-teaching and non-teaching (technical and administrative) for the Institution.
5. To consider and approve the proposals for creation of infrastructure such as building, equipment, library and staff on a continuous
6. basis.
7. To consider and make provisions for meeting the general and specific conditions laid by the Council (AICTE), the State Government and Affiliating Body and monitor the progress in fulfilling the conditions.
8. To consider the report of the Principal on status of admission.
9. To consider the report of the Principal on the academic performance of the students
10. To supervise the observance of service conditions of the staff as prescribed by the Affiliating Body/ Government.
11. To consider the proposals of the Principal for improvement in academic performance of the staff.
12. To consider any other matter in so far as it enhances the academic atmosphere in the institution
13. To consider any proposal for expansion of educational activities to be made to the Council/Government/Affiliating Body.

SL. No.	Name of the Body	Members	Frequency of Meeting	Functions

1				
1	Finance Committee	Governing Council Chairperson or nominee,At least one member of the Governing Council,Director of VVIT,Principal	once in a year	• The Principal of the Institute should consult the Manager about requirement need of the expenses related to the Institute. • To examine the accounts, the progress of expenditure and all new proposals involving fresh expenditure in the light of provisions made. • To examine the annual statement of the accounts and financial estimates of the Institute prepared by the Accounts Office and submit it to Governing Council for further action. • To recommend to Governing Council the limits for the total recurring and nonrecurring expenditure for the year based on income and resources of the Institute • To take necessary steps to have the Institute accounts audited by Auditors appointed by the Governing Council. • To inform the Governing Council about the financial position of the Institute • To report to the Governing Council any lapses or irregularity in the financial matters which comes to its notice. • To prepare detailed plan of the activities to be undertaken for academic year as advised by Governing Council. • To ensure smooth functioning of the Institution by coordinating all the activities of different Departments and Committees. • To take a follow up of activities and to assign tasks to different committees from time to time and advise for any discrepancies. • The Director should justify and then forward it to Governing Council with his clear remarks.

| 2 | Equipment Committee | Governing Council Chairperson or nominee,

 At least one member of the Governing Council,

 Director of VVIT,

 Principal | once in year | The Principal of the institute should consult the Manager about requirement /need of the expenses related to institute. To identify areas other than buildings where consistent maintenance activity is needed. (e.g., computers, Photocopier etc.) and finalize the annual maintenance contracts with prior intimation to finance committee To prepare guideline and devise general system for procurements of materials, equipment and items for the Institution. To prepare approved vendors list for items, which are of general use and ensure the procurement of such items from approved vendors. To coordinate all the purchases of various Departments and ensure the procurement of required items as per schedule. To scrutinize requisitions for equipment of various Departments and decide upon the necessity of purchasing the equipment To arrange to call and scrutinize tenders/ quotations for items of purchase and contracts costing beyond the value specified by Governing Council To carry out discussions and negotiations with suppliers and procure the best quality items with competitive price. To review the proposals passed and get the feedback of the proposals kept pending by the respective Departments and forward the same to Finance Committee. To invite quotations for items well within time and arrange their procurement after negotiations To arrange for order, inspection and acceptance/ rejection of the equipment received. To consider and scrutinize the reports and inspect the items/ equipment for disuse. The Director should justify and then forward it to Governing Council with his clear remarks. |

| 3 | Building Committee | Governing Council Chairperson or nominee, At least one member of the Governing Council, Director of VVIT, Principal, HoD CE / faculty | once in year | • Principal of the institute should consult the Director about requirement /need of the building related issues (Repair, Alternation, New construction, Maintenance & all legal formalities). • To prepare phase-wise, comprehensive, time-bound plans to construct new buildings (As per AICTE norms), as and when required and get it approved by Governing Council. • Completing all the necessary formalities regarding the sanction from the concerned authorities • To complete the legal formalities regarding land, building and municipal taxes. • To supervise and monitor all the work under construction and get the work completed strictly as per schedule. • To prepare a plan for furniture required for various Departments / cells of the Institution • To monitor the status of all buildings, to forward the proposals of renovation and maintenance, carry out routine maintenance of the buildings. • The committee shall review the work in progress and prepare a report. • To take up a special drive for providing better common facilities like drinking water, electrification, dustbins and wash-rooms and campus vigilance. • To offer better canteen facilities • To monitor housekeeping. • To install the elaborate campus map at the entrance and numbering of buildings, departments, rooms and labs • To display inspiring quotes at prominent places. • To prepare long term and short plans of campus development, prepare the expenditure proposals and forward them to FC for approval. • To establish 'Security Service Cell . |
| 4 | Staff Selection Committee | Governing Council Chairperson/nominee, Governing Council Member of the Trust, Principal /Nominee, Subject Expert | | • To prepare policy regarding recruitment, appointment rules regulations etc. • Staff Selection Committee Structure |

5	Library Committee	Principal, Head of all Departments, Student Representatives (two), Librarian	once in year	• To prepare a budget for books needed by each department and forward it to finance committee. • To procure text books in adequate number well in advance before the start of semester. • To give correct Accession Number to the books procured and enter in record books. • To add more titles every year in consultation with respective departments. • To enrich the library by procuring leading National /International journals. • To maintain the records of issues and return of books accurately. • To get the books bound as when their covers are torn or worn out. • To prepare bound volumes of journals every year. • To display new arrivals of books and journals for information to staff and students. • To keep record of students and staff visiting the library and books referred by them. • To display the renewal dates of all journals and get them renewed in time, to constantly monitor the pending issues and the necessary follow-up. • To provide photocopy facilities in library at subsidized rate. • To provide and maintain the facility of the reading room • To provide and maintain Internet facility in Library. • To maintain library books records as per the norms and update the same from time to time. • To provide book-bank facility to students. • To display the number of textbooks, titles and journals available in the library at the entrance of the library. • To manage the library with a Library Management System (KOHA)
6	Training and Placement Cell	Training and Placement, A faculty member Officer, Student Representative from each Dept.	at least four times in a year	• Training and Placement Cell monitors the employment opportunities and arrange campus interviews for students. • Conduct online Technical and Aptitude Test. • Receives and forwards feedback. • Helps every student define his/her career interest through individual expert counseling • Makes available updated database and job profile of companies and thus helps each student analyze and learn about Companies. • Organizes and coordinates Campus Placement Program, to fulfill its commitment of a job to every aspirant. • Organizes Workshops on Soft Skill Training.

7	Admission Committee	Director, Nominees from each Dept. (six), Faculty member in charge	at least four times in a year	• To prepare clear and well-defined policies for admissions. • Prepare attractive brochures, prospectus and handouts for wider publicity • To get acquainted with all the rules and regulations of admissions as prescribed by Government and guide the students seeking admission accordingly. • To prepare plan for addressing 10th standard, 12th standard students as a career counseling activity. • To provide best counseling to students and parents who come to seek admissions. • To advise the Principal on improving facilities from the feedback received from parents and students during admission counseling. • To maintain the record of admitted students and forward it to concerned department. • To guide admitted students to complete the admission procedure like paying fees, procedure for obtaining Enrollment no., I-card, time tables etc. • To liaise with state level admission committee and send requisite data
8	Student Grievance and Appeals Committee	Senior Professor, Three faculty members	once a Semester	• To consider grievance of students and appeals on any decisions made by the College • To redress grievances and to fulfill students' needs • To make recommendations, from the above, and give to Principal for action.
9	Faculty, Staff Grievance (internal complaint) & Redressal Committee	Principal, Senior faculty member, A faculty member, A faculty member (woman), A non-teaching staff member	once a Semester	• There shall be grievance committee to deal with the grievances of the teachers and other employees of the Institute to hear and settle grievances.
10	Anti-Ragging Committee	Principal, Vice Principal, Administrative Officer, A senior Faculty Member, A non-teaching staff, A representative of parents, Representative of local Civil Admin, A representative of police Admin, A fresh student	twice in a year	• Displaying posters and other material stating the evil nature, punishment of Ragging and also student's discipline. • Creation of cordial and free atmosphere. • Involving seniors and freshers jointly in value-based cultural and other activities. • Entrusting responsibilities jointly. • Interaction and admonition • Ensuring the spot solutions by adapting soft measures. • In case of need, reporting to the nearest police station.
11	Anti-ragging Squad	Principal / Senior faculty nominated by Principal, Head of Departments, Student Representatives (two)	once in year	• To supervise and maintain ragging-free campus

| 12 | Internal Complaints Committee | Principal, AO- Women rep, Vice Principal, Placement officer, Women Rep. from each Dept. | once in year | To build self-esteem & dignity among girl students & lady faculty member. To offer services such as counseling, legal aid in case of atrocities against women. To creates awareness regarding women rights. To arrange programs regarding health, personality development etc. To avoid and prohibit sexual harassment at workplace |

(Other Committees and Cells are furnished separately)

Information, Rules, Policies and Procedures

Title	Year
Rules, Policies and Procedures	2004
Rules, Policies and Procedures - R1	2009
Rules, Policies and Procedures - R2	2014
Rules, Policies and Procedures - R3	2018

Admission Rules and Regulations

Eligibility Criterion:

Students are admitted in the institute as per the provisions of Kerala Government Admission Process

{C}{C}B.Tech First Year

A pass in higher secondary or equivalent examination, with at least 45% of the total marks from three subjects Physics, Chemistry and Mathematics. Candidates should qualify KEAM (Kerala engineering and medical entrance exam) exam conducted by CEE (Common Entrance Examination). Applications from NRI quota does not need KEAM score.

{C}{C}B.Tech Second Year (Lateral Entry)

Candidates who have passed Diploma in Engineering Technology awarded by State Board of Technical Education or Institutions under Govt of India after undergoing regular course with at least 45% marks. Candidates should also qualify LET exam, if conducted by DTE.

{C}{C}M.Tech

Candidates should have completed their BE/B.Tech graduation from an institution approved by AICTE/Deemed University in India with minimum aggregate marks of 60% in the qualifying examination. Candidates should also qualify GATE exam. There is also the option to apply thorugh non-GATE category.

All candidates can apply online at www. Vedavyasa.org/vvit

Scholarships are also given to freshly enrolled students with fulfillment of certain criteria.

S No	Name of Schemes	Eligibility criteria
1	Vedavigyan Scholarship	Academic Merit
2	Tuition Fee waiver	90% above in PCM/ Plus Two

Recruitment of Teachers and other Academic Staff

The Institute follows the norms and rules of All India Conical of Technical Education (AICTE).

Pay Scales and Service Conditions and Qualifications for the Teachers and other academic staff

They are in accordance with " All India Council for Technical Education Pay Scales and Service Conditions and Qualifications for the Teachers and other academic staff in Technical Institutions Regulation 2010". The rules and policies regarding recruitment and promotion are from AICTE.

Eligibility Criterion:

As per AICTE Regulations on minimum qualifications for appointment of Teachers and other Academic Staff. Faculty Members are recruited based on the qualifications prescribed by AICTE.

Manpower Planning:

Manpower planning is the first step in recruitment. This is to be carried out at the start / end of each academic term, i.e., six months that constitute a semester, of the institute. Staff employment during the semester will be avoided as far as possible. Planning the process is a concern of the Head of the Department. He/she will convey the requirement for his / her respective department to the Management during the semester. The Management then determines if the vacancy is to be filled through in-house staff or a new employee has to be selected. As far as possible the Management will ensure that all existing employees are given the opportunity to apply for new vacancy if they so desire. Screening of the candidate for advertised post is important. Definite guidelines are to be followed for calling the qualified candidate. Head of the Department determines the Human resource requirement.

Recruitment Procedure:

{C}{C}Advertisement: In News Papers or electronic medium requesting the eligible candidates as per AICTE norms to apply within a given time

{C}{C}Applications: The applications along with the Resume and supporting documents will be received at the office of the Institute.

{C}{C}Listing: After the applications are received, a list will be prepared highlighting the eligibility, qualification and experience.

{C}{C}Merit List: List will be prepared as per the requirements of the individual department.

{C}{C}Interview Panel. A panel will be formed consisting of the Director, Principal, Vice-Principal, Head of Depts and subject experts.

{C}{C}Call Letters: Eligible Candidates will be called for interview.

{C}{C}Interview: Discussions with the candidates to know their potentials, strengths, teaching skills etc. will be conducted.

{C}{C}Appointment Letter: Issue offer of appointment letter to the selected candidate.

Staff Selection Committee

S No.	Representative	Position
1	Director	Chairman
2	Principal	Member
3	Vice Principal	Member
4	Head of Departments (Five)	Members
5	Subject Expert	Member

Code of Conduct

All employees shall follow rules and regulations, and standards of courtesy, conduct, cooperation ethics and etiquettes. Following are examples of actions, which are unacceptable to the institute and often result in disciplinary action or termination of employment:

Insubordination: Theft: Conviction of a felony involving moral turpitude: Bringing discredit to the Institute: Falsifying, grafting, or forging of any record, report, or information: Discourteous behavior: Any other misconduct interfering with performance of job tasks: Unauthorized absence from assigned work area: Sleeping on duty: Negligence: Dereliction of duty: Interfering with the work performance of another employee: Favoritism: Wasting materials: Willful damage to equipment or property of the Institute: Entering an unauthorized work area: Continued failure to perform assigned duties: Failure to report absence: Habitual absence or tardiness: Job abandonment:

Policy for Physically Handicapped People:

Discrimination is prohibited against any applicant or employee in hiring, review, promotion, demotion, discharge or other aspects of employment on the basis of that persons disability; if the person is qualified and able to perform the "essential functions" of the job.

Drug and Alcohol-Free Workplace Policy:

The unlawful manufacture, distribution, possession or use of illegal drugs by employees of the institute is prohibited as per the institutes policy. All employees as a condition of employment must abide by the institutes policy on prohibited substances; and inform the institute if he/she is convicted for possessing / using drugs within five days of conviction. An employee convicted for felony, misdemeanor or drug violation faces a strong disciplinary action which may include termination of employment, or may be required to participate in a rehabilitation program at the discretion of the institute. When reasonable cause exists to believe that an employee is under the influence and is impaired by drugs or alcohol on the job, the employee is required to undergo a medical test. Smoking on campus is strictly prohibited.

Equal Employment Opportunity:

It is a policy of the Institute to give equal opportunity to all employees and applicants for employment without regard to religion, race, creed, caste, color, sex, disability, and age. The policy applies to initial employment, promotion, compensation, and termination. Employees / students are not denied benefits, or subjected to discrimination under any program or activity of the Institute.

Sexual Harassment:

Sexual harassment of employees or students at the Institute is prohibited and offender is dismissed or other disciplinary action is taken. All employees are prohibited from indulging in any personal activity utilizing the institutes resources and facilities. Any faculty found indulging in conducting tuition classes or coaching classes, remunerative or otherwise would be suspended with immediate effect.

Attendance:

Employees are to be prompt in reporting to work on time. It is expected that employees will remain on the job until the end of the workday unless excused by the Head of the department. An employee, who knows he / she will be absent from work on a particular day should report such anticipated absence to the Head of the Department. A record of tardiness and unexcused absences may result in loss of pay or other disciplinary action.

Conflict of Interest:

An employee of the Institute avoids actual or apparent conflicts of interest between his/ her institutes obligations/ responsibilities and outside activities.

Safety:

Safety on the job and care of property and equipment is the responsibility of all employees. Every effort should be made by the employees to avoid careless work habits. It is necessary to report unsafe working conditions and any on-the-job-injury, regardless of severity, to the Head of the Department immediately. A doctor is available on call for emergencies. First Aid Box is made available to all the employees and students.

Confidential Information:

Some employees handle confidential information as they perform their duties. Such information is not to be discussed or made available to anyone until it has been approved for release by proper authority. Any person found using such classified information invites suitable disciplinary action against him / her depending on the severity of the matter.

Gratuities:

Employees of the Institute do not accept gratuities, courtesies, or gifts in any form from any person or persons, corporations, or associations that, directly or indirectly, seek to use the connection so as to secure favorable comment or consideration on any commercial commodity, process or undertaking.

Disruptive Behavior:

While honoring the freedom of expression and the right to Peaceful dissent of an individual, the Institute in the best interests of orderly operation and preservation of an environment favorable to productive study, has adopted a policy prohibiting disruptive behavior on the part of any student, faculty or staff member. The institute stipulates that any employee, acting individually or in connivance with others, who clearly obstructs or disrupts or attempts to obstruct or disrupt any teaching, research, administrative, disciplinary, or public service activity, or any other activity authorized to be discharged or held on the campus of the Institute is considered to have committed an act of gross indiscipline and is subject to disciplinary action that may include termination of services.

Outside Employment:

Employment outside the Institute is not permitted except in cases where such employment does not interfere with the regular and punctual discharge of duties and responsibilities of the institute. The employee must discuss with the Head of the Department before indulging in any outside employment to be sure there is no conflict of interest. Use of institute property in such endeavors is prohibited. An employee must seek written permission of the Management before taking up any kind of employment.

Malpractices:

No employee indulges in or encourages any form of malpractice connected with examinations or other activities of the institute.

Revelations:

Without prior sanction from the Management no employee can give a talk to media or publish any statement either by name or anonymously about issues related to institutional matters. Employees and superiors should contact the Principal immediately if assistance is needed related to these policies.

Disciplinary Proceedings:

No order imposing any punishment on a Member shall be imposed except after, the member is informed in writing by the competent authority in regard to the allegations on which disciplinary action is proposed to be taken and is given an opportunity to make representation that he/she may wish to make in person orally or in writing. Such representation, if any, is taken into consideration by the competent authority.

No employee of the Institute shall be dismissed or removed or compulsorily retired or reduced in rank or awarded any other punishment except after an enquiry in which he/she has been informed of the charges against him/her and given a reasonable opportunity of being heard in respect of these charges by a committee appointed as per rules from time to time and where it is proposed after such an enquiry to impose on him/her any such penalty proposed, but only on the basis of the evidence adduced during such an enquiry.

Student Discipline and Conduct

{C}{C}Every student will maintain discipline and decorous behavior both inside and outside the campus with faculty and their friends and will not involve in any activity, which shall tend to bring down the prestige of the Institute.

{C}{C}Any act of indiscipline of a student reported to the Authorities, shall be discussed in meeting. The Committee shall enquire into the charges and recommend necessary action if the charges are substantiated

{C}{C}During the conduct of lectures / practical / term work student should not loiter in and around the Institute premises

{C}{C}Every student must attend all lectures, practical, term work and examinations conducted by the Polytechnic.

{C}{C}Students should not organize on their own picnic, excursion etc. without prior written permission of the Principal.

{C}{C}If a student while studying in the institute is found indulging in anti-national activities contrary to provisions of acts and laws enforced by Government s/he is liable to expulsion from the institute without notice

{C}{C}If a student is involved in any kind of ragging, the student shall be liable for strict action as per the provision of AICTE rules.

{C}{C}The students should not involve in any activity such as "common off". If they are found to be involved in "common off", are liable to disciplinary action as decided from time to time.

{C}{C}Every admitted student shall be issued photo identification (ID) card which must be retained by the student while he/she is registered at Institute. The valid ID card must be presented for identification purpose as and when demanded by authorities. Refusal shall be subjected to disciplinary action.

{C}{C}Mobile phones are strictly banned during academic hours. Mobile phones must be switched off before entering classrooms or laboratories. If any student is found using mobile phones during academic hours, s/he will be liable to necessary action.

{C}{C}All students must handle Laboratory Equipment, Machines and Computers in the institute with proper safety and care.

{C}{C}All students must use all internet facilities ethically

{C}{C}The library facilities shall be properly used. All students must adhere to the rules and regulations of Library

{C}{C}Every student should take utmost care of the Institute property and try to keep the Institute and its premises neat, clean and tidy. Any Intentional damage done to the Institute building, furniture, equipment by the students shall be treated as breach of discipline and the students will be severely punished.

Working hours and Workload

Muster:

A record of entry time of employees is maintained by signing in the muster without fail. A record of entry and exit time is also maintained using Biometric system. Those going out for work related matter need to fill an on-duty form or else they will be marked absent for the day.

The Standard Work week:

Since the requirements of the various operations of the Institute are Diverse, different work schedules are adopted to meet different needs. However, the standard workweek of the employees is Monday to Saturday. Every 2nd Saturday is off (Not working). The timing is 9:50 am to 5:30 pm for Administrative Staff and Faculty. All days have a thirty minutes break for lunch and 10 minutes of tea break. Weekly work load is given to all teaching faculty as per AICTE norms.

Leave Rules:

Casual Leave

{C}{C}All the employees are entitled for 12 days of casual leaves in a year in an academic year

{C}{C}Faculty and staff who have not completed one year of service can avail CLs only on Pro-rata basis.

{C}{C}Saturday (if not a working day), Sundays, Compensatory offs and Holidays availed during the period of casual leave are not counted as part of casual leave.

{C}{C}Casual Leave can either be prefixed or suffixed with vacation.

{C}{C}Casual leave not availed in an academic year will lapse.

{C}{C}The recognition of the presence of the individual for work is done only based on the signature of the individual in the attendance register kept for that purpose.

{C}{C}Saturdays (if not a working day), Sundays/public holidays/restricted holidays/ weekly offs can be prefixed and/or suffixed to casual leave.

{C}{C}Casual leave can be availed by individuals only on prior sanction. It is the responsibility of the faculty to make alternative arrangements for the academic load the faculty misses because of the casual leave. The Head of Department will monitor and take suitable steps to see that no class is unattended.

{C}{C}The rules and regulations given above may be followed while working out the pay bill for that month, Staff members who take leave without prior permission or without giving any information will be treated as leave without pay

Vacation

{C}{C}Faculties who are in regular service are eligible for a vacation as per the norms of Vedavyasa Trust.

{C}{C}In case of Medical Leave, a medical certificate from Registered Medical Practitioner should be produced.

{C}{C}In case of emergency, a special leave may be granted subject to the approval from the Principal.

{C}{C}In case of emergency / Medical Leave, the employee should inform the concerned Head of the Department.

Maternity Leave

{C}{C}All lady employees are entitled for 90 days maternity Leave (twice in the entire career) as per the prevailing norms prescribed by the authorities from time to time.

Permissions/Movements

Depending on urgency of the mater faculty/staff may leave the campus for personal reasons for up to about one hour after obtaining permission from the competent authority. Such permission can be given two times per month only.

Competent Authority:

{C}{C}For all teaching faculty- Principal

{C}{C}For all other staff - Respective Head of Department

{C}{C}For principal - GC Member

Other Policies:

Security and Vigilance on campus

Campus has a security system. It manages the security on campus. Everyone on campus should positively participate to assist the security personnel if he suspects anything odd in campus. Institute has also installed cameras at important locations as outdoor security monitoring.

Biometric Scan.

Every staff member of this Institute is required to register t finger print in biometric system and must record attendance through this system. Registration is available with office staff.

Private Coaching / Outside Employment Policy

No staff should be involved in private coaching without prior permission. Also staff must not take up any other employment such as part time or full time at any other place.

Internet Facility policy

Staff must use the internet facility provided by Institute only for office and academic purpose. Staff must not be involved in sending unsolicited mails through internet facility. Staff must not download material from internet without proper acknowledgement of original source. Staff must not watch unsolicited videos or must not waste the internet resources.

Non smoking, non alcohol and no-tobacco chewing policy

On the campus smoking, drinking and tobacco chewing are prohibited.

Deposit of keys

Institute main office keys are deposited in the security office. Department classroom, labs, staff room, Library and workshop keys are deposited in the Institute office keyboard. Proper staff members are authorized to close and lock the rooms. Heads of Departments are solely responsible for missing of any keys, misuse of electricity & water

Vehicle parking policy

All the staff members are required to park preferably at the designated parking lots for proper management. Students are required to park vehicle properly so that it should not create parking problems. Moreover, students are advised not to bring four wheelers on campus. Faculty/Staff shall not park the vehicle continually for days without prior permission

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10.1.3 Decentralization in working and grievanceredressal mechanism (10)   Institute Marks : 10.00

DELEGATED POWERS GIVEN

S. No.	Name	Designation	Additional Responsibilities
1	Dr. Kavitha S	Vice Principal & HOD/ Department of Computer Science and Engineering	R&D, Anti-Ragging Committee and Anti Ragging Squad.
2	Narayan T	Administrative Officer	Sexual harassment committee
3	Dr. Nimmi John	HOD/ Science and Humanities	Discipline i/c and Welfare Committee
4	Narayan T	Administrative Officer	Finance Committee

5	Mrs. Jeyabharathi	Chief Librarian / Library	Library Committee
6	Dr. Kavitha S	HOD/ Department of Computer Science and Engineering	Academics & NBA Accreditation
7			CiPD and Academic Audit Committee
8	Periasamy C	HOD / Electronics and Communication Engineering	Students Industry Preparatory wing
9		Prof. / Electronics and Communication Engineering	NIRF Coordinator
10	Dr. Kavitha S	HOD/ Department of Computer Science and Engineering	QAC & NAAC Accreditation
11		Prof. Science and Humanities (Chemistry)	Chief Proctor
12	Mrs. Babitha	AP / Science and Humanities	Students Training
13	Prof.Balakrishna Pillai	Prof. / Electrical and Electronics Engineering	Planning and Development
14	Dr.Sangeethaa	Prof. / Computer Science and Engineering	Student Affairs, Overall System Admin and Event Management
15	C Periasamy	HOD / Electronics and Communication Engineering	Class Committee
16	Mrs. Babitha	AP / Science and Humanities	Placement Committee
17	Rahul I R	AP / Electronics and Communication Engineering	Alumni Coordinator
18	C Periasamy	HOD / Electronics and Communication Engineering	Faculty Appraisal
19	Balakrishna Pillai	Prof. / Electrical and Electronics Engineering	Grievance Redressal Cell
20	Dr. Sangeethaa	Prof. / Computer Science and Engineering	Women Development Cell
21	Mrs. Babitha	Head Corporate relations	Promotional activities and CLD
22	Divya K K	HOD/ Civil Engineering	Infrastructure I/C

Committees

For the smooth functioning of the Institution various committee functions. Some of them
are as follows:

The members present in the committee can be viewed in our website.

https://vedavyasa.org/vvit/committees.php#

* Statutory and Non-Statutory Committees

S. No.	Committee Name	Committee Coordinator	Designation	Department	Mobile No.	E-Mail id
1	Governing Body	Dr. Arun Korath	Director	MBA	9567593304	arunkorath@gmail.com
2	Anti-Ragging Committee	Dr Sangheethaa S	Chair Person	Computer Science and Engineering	9747552961	vvit@vedavyasa.org
3	Planning and Development	Prof.Balakrishna Pillai	Prof. / Electrical and Electronics Engineering	Electrical and Electronics Engineering	6238133362	hodeee@vedavyasa.org
4	Academic Council	Dr Sangheethaa S	Chair Person	Computer Science and Engineering	9747552961	vvit@vedavyasa.org
5	Discipline and Welfare Committee	Dr Nimmi John	HOD	S&H	8848453208	hodsandh@vedavyasa.org
6	Finance Committee	Dr. Arun Korath	Director	MBA	9567593304	arunkorath@gmail.com
7	Hostel Committee	Sujikumar D. AP	AP	S&H	9952837470	sujikumar.math@gmail.com
		Ms Anjali	AP	EEE	7736012231	anjalik@gmail.com
8	Class Committee	Ms Shibi	AP	Computer Science Engineering	8714174370	shibib4@gmail.com
9	Women Development Cell	Dr Sangheethaa S	Principal	Computer Science and Engineering	9747552961	vvit@vedavyasa.org
10	Library Committee	Ms. Jeyabharathi	Librarian	Library	9895080020	jayalib@gmail.com
11	Placement Committee	Mrs .Babitha PRO	AP	Science and Humanities	9895774185	pro@vedavyasa.org
12	Alumni Relations Committee	Rahul I R	AP / Electronics and Communication Engineering	Electronics and Communication Engineering	7907923879	Rahulir1990@gmail.com
13	Academic Audit Committee	Dr Kavitha S Murugesh	Vice principal & HOD	Computer Science And Engineering	9061212493	hodcse@vedavyasa.org
14	Research Coordination Committee	Prof.C Periasamy	HOD / Electronics and Communication Engineering	Electronics and Communication Engineering	8248598882	hodece@vedavyasa.org
15	Grievance Redressal Cell	Prof. Bala Krishna Pillai	Prof. / Electrical and Electronics Engineering	Electrical and Electronics Engineering	6238133362	hodeee@vedavyasa.org
17	Faculty Appraisal	Prof.C Periasamy	HOD / Electronics and Communication Engineering	Electronics and Communication Engineering	8248598882	hodece@vedavyasa.org
18	Students Industry Preparatory Wing	Prof.C Periasamy	HOD / Electronics and Communication Engineering	Electronics and Communication Engineering	8248598882	hodece@vedavyasa.org
19	Sexual Harassment Committee	Narayan T	Administrative Officier		9946000850	

10.1.4 Delegation of financial powers (10)   Institute Marks : 10.00

Principal is authorized to sanction up to Rs. 1 Lakh for institutional expenses like organizing events, sponsoring faculty members for attending programs, purchase of items for laboratory, maintenance, etc. The Heads of the department are authorized to sanction up to Rs. 25,000/- for departmental expenses. Department heads will prepare and submit the budget proposals for purchase of capital equipment/consumables, service of equipment/machinery every year. Upon approval of the same by the management, purchases of consumables and capital equipment are made through the purchase/Finance department of the college

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

The VVIT website provides details about the faculty and staff, mandatory disclosure, audited statements, institutions policies, rules and processes. The details various activities in the college and achievements of faculty and students in various inter-college, national and international level events are posted in the college website and available in the following link. https://vedavyasa.org/vvit/ (https://vedavyasa.org/vvit/)

Figure a.10.1.6 College website page

Transparency is also maintained and all information about the college, decisions taken, rules implemented, events organized etc. are disseminated through the college mail to all faculty members and students. Each faculty and student members are provided with an e-mail account, which they may log in at any time of the day and use it for exchanging information and important documents. The information is also disseminated to the entire newly recruited faculty members during the faculty orientation conducted for the newly recruited faculty members.

Transparency in other curricular matters:

· Policy decisions taken in the Governing Body meeting is conveyed to HoDs time to time by the Principal · Decisions of HoDs meeting with Principal are also conveyed to all faculty members and students.

· Details related to examinations and assessments are duly conveyed to faculty and student members well in advance as per the schedule given in the academic calendar.

· Attendance, Continuous Assessment marks of both theory and laboratory courses are conveyed to the students and parents.

· Annual budget prepared by the department coordinators is reviewed by the HoDs and then submitted to Principal for approval. After approval of budget, quotations are called; compared and final orders are placed for purchase of items/equipment.

· High valued items/equipment (more than one lakh) quotations will be scrutinized by a committee.

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)   Total Marks 30.00

10.2.2 Utilization of allocated funds (15)   Institute Marks : 15.00

Funds are allocated by the Manager of the College. Department Heads/Section-in-charges are intimated of the extent of funds allocated against their budget proposals. Major works like construction, up-gradation of existing infrastructure, procurement and maintenance of common utilities, house-keeping, procurement of furniture etc. are controlled directly by the Manager. Actions for procurement of lab equipment, up-gradation of existing lab facilities, purchase of consumables etc. are initiated from the respective departments and the funds are released on a case by case basis from the accounts office of the college on approval by the Manager.
During the last three years, the budget was utilized to meet expenses such as staff salary, infrastructure development, purchase of equipment, expenses towards consumables and contingencies, travel etc. Every year almost 75% of the budget is spent on staff salary, 10% on infrastructure development, about 8% on purchase of equipment, about 5 % on library development and the rest 2% on other expenses. This has been the general pattern of utilization of budget for the last 5 years.Overall the utilization of allocated funds has been very efficient and optimum.
The College has been able to utilize the available funds very efficiently and effectively. The aim of the Management has been to run the college on a no-loss, no-profit basis. When major expenditures come at any time,the Management depends on bank loan and refund the loan when funds become available. Due to the efficient financial management of the college, the college never had any serious financial problems ever since its inception.

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

Budget requirements under 'recurring' and 'non-recurring' heads are collected segregated from Every Source of income before the commencement of the financial year. Allocations are made depending upon the requirements of the Departments and for general facilities. While preparing the budget, allocation for every item of expenditure are made depending upon the requirement and availability of funds. Spending is monitored periodically by the accounts section. Supplementary allocations are made in special cases.

The institution carefully monitors the expenses so that the necessities are met without affecting the smooth working of the institution. The management has been very efficiently doing this over the past several years that the institution never had any serious

budget crunch that affected the functioning of the college.

The main income of the institution is the fees collected from the students. The major expenditure of the college is the staff salary, which is paid centrally by the College office. So the staff salary does not appear in the budget of the individual Departments.

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

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

Table 1 - CFY 2021-22

Total Income 118.272				Actual expenditure(till…): 11.96			Total No. Of Students 89
Fee	Govt.	Grants	Other sources(specify) interest on FD	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
79.46	0	7.032	31.78	4.16	7.80	0	0.13

Table 2 - CFYm1 2020-21

Total Income 71.62				Actual expenditure(till…): 136.5			Total No. Of Students 97
Fee	Govt.	Grants	Other sources(specify) Interest on FD &others	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
65.32	0	0.91	5.39	128.4	8.1	0	1.41

Table 3 - CFYm2 2019-20

Total Income 125.31				Actual expenditure(till…): 186.09			Total No. Of Students 80
Fee	Govt.	Grants	Other sources(specify) Interest on FD &others	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
102.67	0	0.76	21.88	178.25	7.84	0	2.33

Table 4 - CFYm3 2018-19

Total Income 195.87				Actual expenditure(till…): 198.09			Total No. Of Students 69
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
172.99	0	0	22.88	163.48	34.61	0	2.87

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Infrastructure Built-Up	200000	161671	150000	104014	5000000	4262093	500000	494091
Library	80000	76363	150000	126300	500000	411632	500000	434088
Laboratory equipment	100000	50000	20000	16160	500000	404816	800000	750000
Laboratory consumables	500000	200000	200000	150000	300000	250000	350000	300000
Teaching and non-teaching staff salary	1500000	1313190	1200000	1139854	1500000	1416137	1400000	1225120
Maintenance and spares	500000	472395	20000	104013	800000	783336	1200000	1153999

R&D	200000	150000	100000	50000	100000	90000	150000	100000
Training and Travel	55000	27607	15000	9045	100000	92602	500000	5492078
mISC	5000	1220	3000	750	3000	2000	15000	11690
Others, specify-ups,Solar Panel	500000	300000	500000	349566	1500000	1049925	2000000	1673489
Total	**3640000**	**2752446**	**2358000**	**2049702**	**10303000**	**8762541**	**7415000**	**11634555**

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

Actions have been initiated to publish the audited statement of accounts on the college website.

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

Institute Marks :

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

Table 1 :: CFY 2021-22

249000		Actual expenditure (till…): 244665		Total No. Of Students 30
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
190000	59000	183666	60999	8155.5

Table 2 :: CFYm1 2020-21

115000		Actual expenditure (till…): 134000		Total No. Of Students 29
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
107500	7500	123000	11000	4620.69

Table 3 :: CFYm2 2019-20

279000		Actual expenditure (till…): 303667		Total No. Of Students 15
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
265000	14000	285167	18500	20244.47

Table 4 :: CFYm3 2018-19

340000		Actual expenditure (till…): 411000		Total No. Of Students 18
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
183000	157000	204000	207000	22833.33

Items	Budgeted in 2021-22	Actual Expenses in 2021-22 till	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till
Laboratory equipment	54000	54333	5000	8000	8000	10000	150000	200000
Software	38000	38333	20000	25000	45000	50000	50000	55000
Laboratory consumable	75000	80000	30000	35000	150000	152667	60000	65000
Maintenance and spares	50000	40000	40000	42000	40000	50000	40000	42000
R & D	17000	16000	10000	12000	18000	19000	20000	25000
Training and Travel	8000	8333	5000	6000	10000	12000	10000	12000
other	7000	7666	5000	6000	8000	10000	10000	12000
Total	**249000**	**244665**	**115000**	**134000**	**279000**	**303667**	**340000**	**411000**

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

Funds are allocated by the Manager of the College. Department Heads are intimated of the extent of funds allocated against their budget proposals. Actions for procurement of lab equipment, up-gradation of existing lab facilities, purchase of consumables, furniture etc. are initiated from the department and the funds are released on a case by case basis from the accounts office of the college on approval by the Manager. During the last three years, the budget was utilized to meet expenses like purchase of equipment, expenses towards consumables and contingencies, etc.

During the last three years, funds were utilized for the purpose for which they were sanctioned. Whenever there was a shortage of funds for any specific purpose, the same was informed to the management and the Management has been allocating necessary funds to overcome the shortages. The Department has been able to utilize most of the allocated funds for the purposes for which they were allocated.

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

The Department submits its Budget requirements under "recurring" and "non-recurring" heads to the Management every year before the commencement of the financial year. Allocations are made by the Management depending upon the availability of funds. Spending by the Department is periodically monitored by the accounts section. Supplementary allocations are made available in special cases. The Department as well as the College carefully monitors the expenses so that the necessities are met without affecting the smooth working of the Department and the Institution as a whole. The College Management has been very efficiently doing this over the past several years, so that the Department never had any serious budget crunch that affected the functioning of the Department.

10.4 Library and Internet (20)   Total Marks 20.00

10.4.1 Quality of learning resources (hard/soft) (10)   Institute Marks : 10.00

Availability of learning resources are extremely important for modern technical education.

Vedavyasa Institute   Of Technology realizes this and provides necessary support for students. Specifically, the following facilities are provided for the students.

General Infrastructure

24/7 internet access with Wi-Fi connectivity made available to all students all time.

Smart classrooms with audio-visual aids Campus academic software AES, Language lab, Computer Labs etc.

Spacious halls with projection facilities for conducting workshops, seminars, conferences, group discussions etc.

Learning Resources

Committed faculty who motivate students in their learning process.

Full-fledged library with more than 50,000 books, good number of Journals and digital resources .

Online Databases and Digital Video facility .

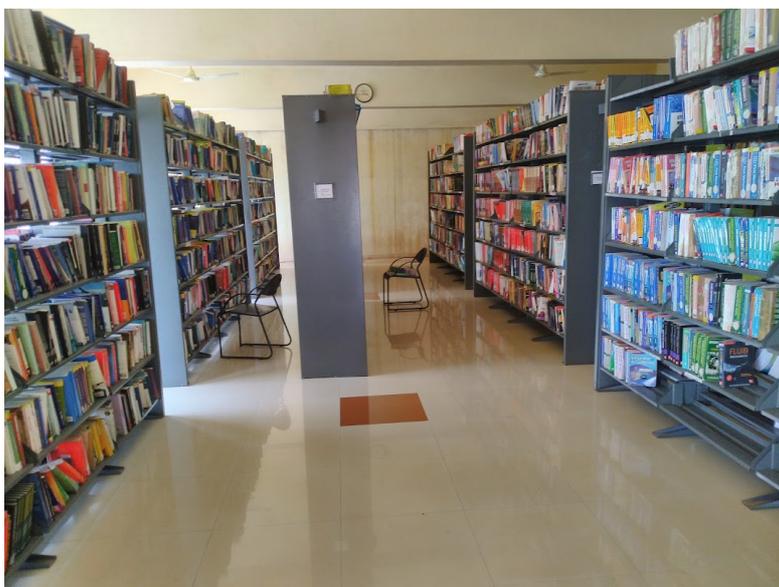Licensed Software for various applications in different Departments.

Library Facilities

Fig 10.4.1.a Library

Fig 4.1.b Self Learning

The institution possesses a state of the art library with following features:
A central library with 835 sq mtr area.

Number of volumes in the Central library and Department Libraries: 22980

Total number of Titles:4590
Journals and Periodicals: 150 printed journals and 8 periodicals

Reference books: 760

CD/DVD collection, Total: 850

List of Newspaper- 4

Separate section for reference, periodicals and PG.

Open: 9.00 am to 4:00 pm

E-Resources

IP authenticated Full text access provided to Online Journals of ASCE, Elsevier (Science Direct) E-books of EBSCo (IT core package) ,ASME ,ASTM ,IEEE , J-GATE ,McGraw Hill ,Springer ,

E-learning materials of McGraw-Hill Access Engineering Library: E-books and interactive tools like Videos, Data Vis, Spreadsheets and Graphs and Videos

NPTEL Video Lectures

Previous Years University Question Papers from 2016 onwards.

Online Public Access Catalogue (OPAC) available to access Library resources. Students have access to library facilities on all working days. The institution encourages all teachers and students to make good use of the above facilities to make learning efficient.

In addition to these, the institution supports a variety of self-learning activities that are described in Section 9 of this document.

Support to Students for Self Learning activities

- Laboratories and Library is made available beyond working hours to help the students in selflearning.
- The campus is fully residential which enables learning beyond working hours with formal and Informal interaction with faculty and peer groups.
- Students are encouraged to involve themselves in various co-curricular and extra-curricular activities at Institute and Department level activities.
- Many eminent personalities are invited to interact with students on many occasions to help students learn recent trends in engineering, technology.
- This apart, students are also endowed with various resource materials by the teachers for their self-development and they are also encouraged by them to participate in various competitions of technical innovations for which again they have to participate in innovative thinking and experimentations.
- The Tech-Fest organized by the institute also serves to create opportunities for students' selfdevelopment based on extra-syllabus technological knowhow.
- The Department of Humanities regularly organizes Soft Skill classes for various departments, based on availability and requirement, to enhance the students' communication skills, grooming and body language to equip them for the professional world.

10.4.2 Internet (10)   Institute Marks : 10.00

Name of the Internet provider	Bharat Sanchar NigamLimited
Available band width	50 Mbps
WiFi availability	Wifi connectivity available in the entire campus,including hostels,internet access in labs,classrooms library and officeand in all departments.
Internet access in labs, classrooms, library and offices of all Departments	Yes
Security arrangements	Noton firewall protection that exposes hidden risks, blocks unknown threats and automatically responds to incidents

Annexure I

(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

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

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	Basic knowledge of computer applications to model computational problems by applying mathematical concepts and design solutions using suitable data structures and algorithmic techniques.
PSO2	Design computer-based systems of varying complexity and develop software solutions by following standard software engineering principles by using suitable programming languages and platforms.
PSO3	Develop system solutions involving both hardware and software modules.

Declaration

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

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

Head of the Institute
Name : Dr.S.Sangheethaa
Designation : Principal
Signature :

Seal of The Institution :

Place : VVIT Karadparamba
Date : 27-03-2022 14:18:47