



Mar Ephraem

College of Engineering & Technology

(NAAC Accredited Institution)

Run by Catholic Diocese of Marthandam

Department of Civil Engineering

SELF ASSESSMENT REPORT (TIER - II)

Submitted to





Mar Ephraem

College of Engineering & Technology

(NAAC Accredited Institution)

Run by Catholic Diocese of Marthandam

Elavuvilai, Marthandam, Kanniyakumari District, Tamilnadu – 629 171

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Department of Civil Engineering

SELF ASSESSMENT REPORT (SAR)

(UNDERGRADUATE ENGINEERING TIER - II)



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PART A
INSTITUTIONAL INFORMATION

1. Name and Address of the Institution

Mar Ephraem College of Engineering and Technology,
Malankara Hills,
Elavuvillai, Marthandam.- 629171
Tamil Nadu
E-mail: marephraem@gmail.com
Phone No:04651 - 273111,271111
Fax: 04651 – 272158
Website: www.marephraem.edu.in

2. Name and Address of Affiliating University

Anna University, Guindy,
Chennai – 600025
Tamil Nadu
Website: www.annauniv.edu

3. Year of establishment of the Institution: 2009

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
Malankara Catholic College	1998	30	Kaliakkavilai, Kanyakumari District, Tamil Nadu
Mar Chrysostom College of Education	2006	1	Kirathoor, Kanyakumari District, Tamil Nadu
Kanyakumari Community College	1997	3	Mariagiri, Kanyakumari District, Tamil Nadu

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

Name of Program	Program Applied	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for	Program for Duration
B.E Civil Engineering	UG	2009	2009	60	Yes	120	Applying first time	--	--	Yes	4
B.E Mechanical Engineering	UG	2009	2009	60	Yes	120	Applying first time	-	-	Yes	4
B.E Compute Science Engineering	UG	2009	2009	60	No	60	Applying first time	-	-	Yes	4
B.E Electronics & Communication Engineering	UG	2009	2009	60	Yes	120	Not Eligible	-	-	No	4
B.E Electrical & Electronics Engineering	UG	2012	2012	60	No	60	Not Eligible	-	-	No	4
M.E Computer Science and Engineering	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2
M.E Applied Electronics	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2
M.E Manufacturing Engineering	PG	2013	2013	18	No	18	Eligible, but not applied	-	-	No	2

Sanctioned Intake for Last Five Years for the B.E Civil Engineering	
Academic Year	Sanctioned Intake
2020-21	120
2019-20	120
2018-19	120
2017-18	120
2016-17	120
2015-16	60
2014-15	60

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

S.No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Mechanical Engg.

9. Total number of employees in the institution

A. Regular Employees (Faculty and Staff)

Items	2020-21		2019-20		2018-19	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	62	62	59	59	60	60
Faculty in Engineering (Female)	35	35	31	31	33	33
Faculty in Maths, Science & Humanities (Male)	2	2	6	6	5	5
Faculty in Maths, Science & Humanities (FeMale)	19	19	25	25	27	27
Non-teaching staff (Male)	27	27	27	27	28	28
Non-teaching staff (FeMale)	20	20	21	21	21	21

B. Contractual Employees (Faculty and Staff)

Items	2020-21		2019-20		2018-19	
	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

Items	2020-21	2019-20	2018-19
Total no. of Boys	832	976	1094
Total no. of Girls	229	241	258
Total	1061	1217	1352

Engineering and Technology- PG

Items	2020-21	2019-20	2018-19
Total no. of Boys	21	26	32
Total no. of Girls	25	37	43
Total	46	63	75

11. Vision of the Institution

A world class Malankara institution of higher learning renowned for its excellence in science and technology, and for its commitment to the holistic development of the individuals and society.

12. Mission of the Institution

To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement.

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

- i) Name : Dr.A Lenin Fred
 Designation : Principal
 Mobile No : 9443483072
 Email id : leninfred.a@gmail.com

- ii) NBA coordinator, if designated:
 Name : Dr.Anand Rejilin
 Designation : Professor / Head, Civil Engineering
 Mobile No : 9944468703
 Email id : rej.anand@gmail.com

PART B:
CRITERIA SUMMARY

Name of the program: **B.E. Civil Engineering**

Criteria No.	Criteria	Mark/Weightage
Program Level Criteria		
1.	Vision, Mission and Program Educational Objectives	60
2	Program Curriculum and Teaching – Learning Processes	120
3.	Course Outcomes and Program Outcomes	120
4.	Students’ Performance	150
5.	Faculty Information and Contributions	200
6.	Facilities and Technical Support	80
7.	Continuous Improvement	50
Institute Level Criteria		
8.	First Year Academics	50
9.	Student Support Systems	50
10.	Governance, Institutional Support and Financial Resources	120
	Total	1000

Criterion 1	Vision, Mission and Program Educational Objective	60
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1. Vision, Mission And Program Educational Objectives (60)

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

Vision of the institute

A world class Malankara institution of higher learning renowned for its excellence in Science and Technology and for its commitment to the holistic development of the individual and Society.

Mission of the institute

To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement.

Vision of the department

To be a world class center of excellence in providing Civil Engineering Education, innovative research & ethical values to serve the society.

Mission of the department

Mission No.	Mission Statements
M1	To provide quality teaching to produce graduates with the required technical competence & ethical values
M2	To align the teaching learning process & to provide basic foundation for the students to adapt to the changing industrial needs for socio economic development
M3	To establish centers of excellence in the emerging area of research
M4	To promote scientific & value-based education to address societal needs through extension activities.

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

PEO No.	Program Educational Objectives Statements
PEO1	Graduates will perform optimized planning, designing and Execution of Civil Engineering Projects using modern technology
PEO2	Graduates will practice ethical standards and discharge their duties with professional integrity for the sustainable development of the society.
PEO3	Graduates will provide valid conclusion to complex Civil Engineering Problems by research-based knowledge and research methods.

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

Table 1.3.1: Published details of Vision, Mission and PEOs

Internal Stake holders	Area where Published
Management	Website, Program Invitations, Department Magazine and News letter
Governing Board Members	Website, Program Invitations, Department Magazine and News letter
Faculty	Website, Department Magazine & Newsletters prominent locations of every block and Course file
Supporting Staff	Website, Printed Stationeries, Department Magazine & Newsletters, prominent locations of department and department notice Boards
Students	Website, Department Magazine & Newsletters Records, prominent locations of department and department notice Boards, HoD Room, Intimation letter, Prospectus, and Lab Manual

Table 1.3.2: Published area (of Vision, Mission and PEOs)

External Stake holders	Area where Published
Employers	Website, e-mail , News letter
Industry	Website, e-mail, News letter
Alumni	Website, e-mail, News letter
Funding Agencies	Website, e-mail
Parents	Website, e-mail, Prospectus, Program Invitations and Department Magazine

Table 1.3.3: Process for dissemination of the vision and mission of the department and PEOs of the program

Dissemination methods	Target Stakeholders	
	Internal Stakeholder	External Stakeholder
Department Induction Speech By HoD	Students and Staff	-
Alumni Meeting	Management, Faculty, supporting staff	Alumni
PTA Meeting	Management, Faculty, Supporting staff	Parents
Technical Events	Management, Faculty, Supporting staff, Students	Industrial Experts
Workshops/Trainings	Faculty, Supporting staff,	Industrial Experts

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

a. Process for defining the Vision and Mission of the Department

The Department vision is framed by (PAC) in consultation with external and internal. The mission to achieve the vision is then framed by the Department PAC. The process is shown below

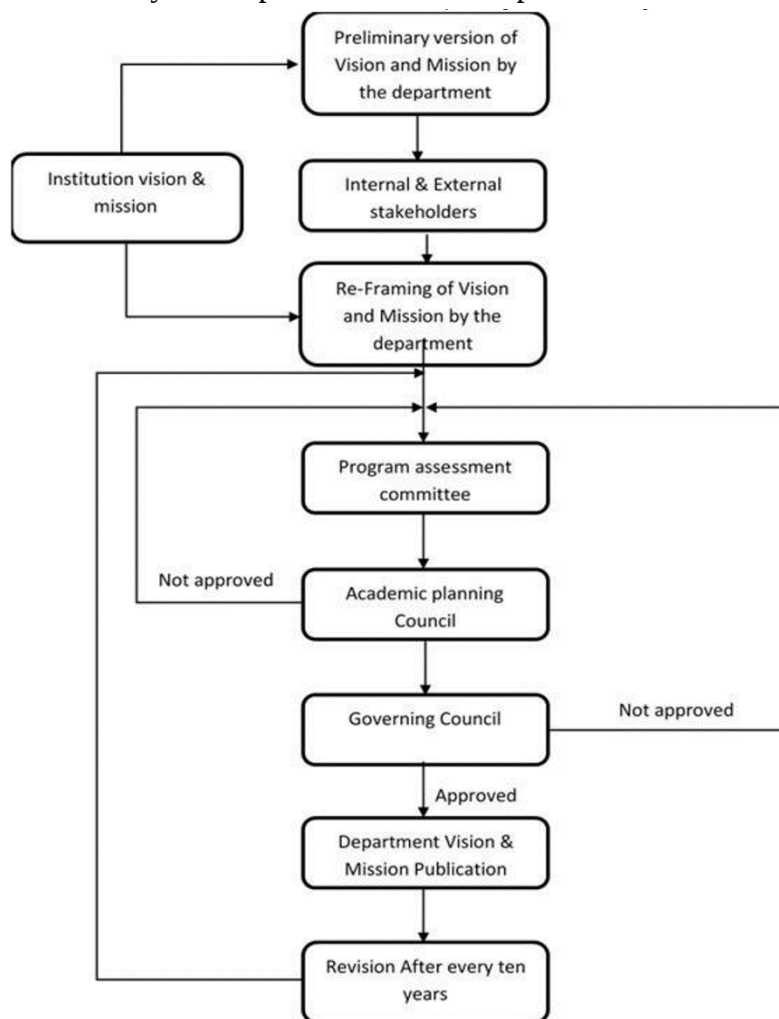


Figure 1.4.1: Process for Establishing Vision and Mission

- The rural background of the students is considered in formulating the Department mission statement.
- Fundamentals to adapt new technologies, communication, managerial skills with ethical values and Hands-on experience are taken into account while formulating the mission.
- The brainstorming session with faculty & students is held and a preliminary version of vision & mission statement is prepared.
- The preliminary version is communicated to the stakeholders and inputs/ suggestions for enhancement is obtained to formulate the next version of vision & mission statements.
- The formulated vision & mission is discussed in the program assessment committee (PAC) consisting of internal and external stakeholders in which the department vision & mission is framed.
- Department specific vision and mission is framed in line with the vision and mission of the institute.
- The formulated Department Vision and Mission is forwarded to the Academic Planning Council for approval.

- If the framed Department Vision and Mission is found to be satisfied, the Academic Planning Council sends the same to the Governing Council for final approval. If not, it is returned to the Program Assessment Committee for reframing.
- If the framed Department Vision and Mission is found to be satisfied, the Governing Council approves the same. If not, it is returned to the Program Assessment Committee for reframing.
- The approved Department Vision and Mission is Published by the department.
- The Department Vision and Mission is revised once in every ten years by fulfilling the above-mentioned strategies.

b. Process for defining the PEOs

The Program Educational Objectives are established through the brainstorming process involving all the stakeholders.

The PEOs are established through the following process steps:

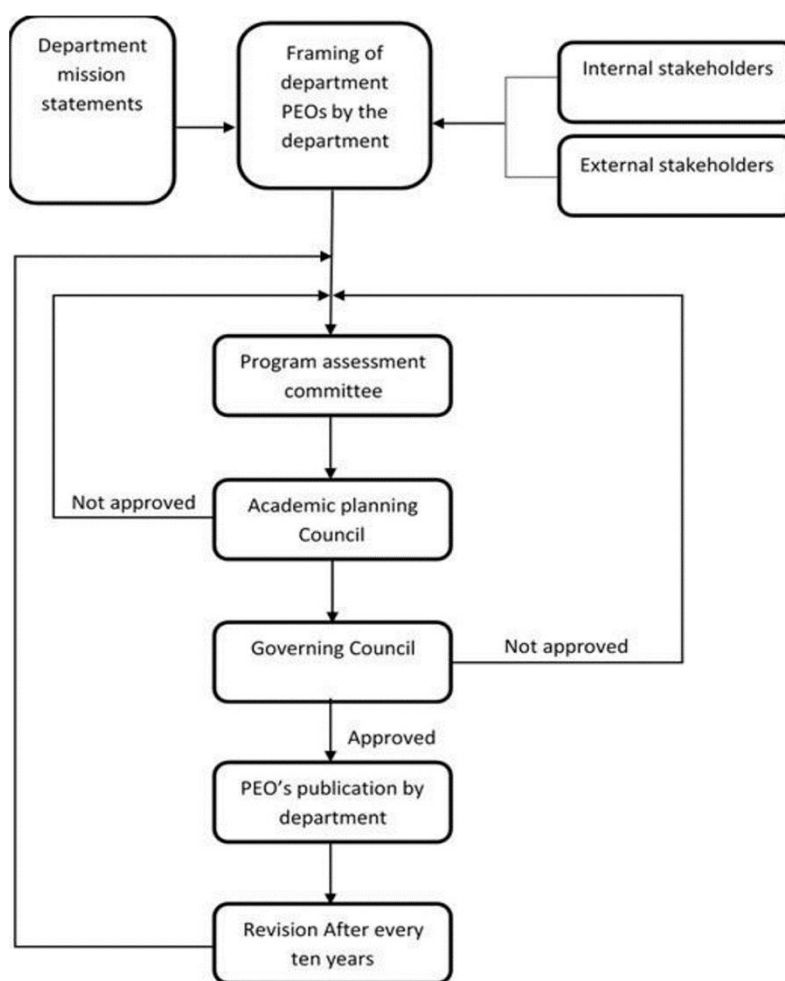


Figure 1.4.2: Process for Establishing PEOs

- PEOs are framed in line with the Department mission statements.
- The brainstorming session with faculty & students is held and a preliminary version of PEOs statement is prepared.

- The preliminary version is communicated to the stakeholders and inputs/ suggestions for enhancement is obtained to formulate the next version of PEOs.
- The formulated PEOs are discussed in the program assessment committee (PAC) consisting of internal and external stakeholders in which the department PEOs are framed.
- The framed PEOs are forwarded to the Academic Planning Council for approval.
- If the framed PEOs are found to be satisfied, the Academic Planning Council sends the same to the Governing Council for final approval. If not satisfied it is returned to the Program Assessment Committee for reframing.
- If the framed PEOs are found to be satisfied, the Governing Council approves the same. If not, it is returned to the Program Assessment Committee for reframing.
- The approved PEOs are Published by the department.
- The PEOs are revised once in every ten years by fulfilling the above-mentioned strategies.

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

The consistency between PEOs and the Department mission statement is established through mapping and is given in Table 1.5(a). The justification of the correlation of PEOs with Department mission statements is given in Table 1.5(b). The mission of the Department is reframed in relation to the university curriculum and present trends.

Table 1.5.a: Mapping of PEOs with the Department mission

PEO	M1 (Value Based Education)	M2 (Industrial Development of the Nation)	M3 (Socio-Economic Development of the Nations)	M4 (Teaching and Learning, Research, Extension and Community Involvement)
PEO 1 - Graduates will perform optimized planning, designing and Execution of Civil Engineering Projects using modern technology.	2	3	2	3
PEO 2 - Graduates will practice ethical standards and discharge their duties with professional integrity for the sustainable development of the society.	3	2	3	2
PEO 3 - Graduates will provide valid conclusions to complex Civil Engineering Problems by research-based knowledge and research methods.	2	3	2	2

Table 1.5.b: Correlation of PEOs with mission statements

PEO	PEO Mission Matrix		Justification of the Department mission statement
PEO 1	M 1	2	• Consultancy • Seminar on ethical values for Civil Engineers • Charity through Ephraem Manna
	M 2	3	• Value added courses • Project works • Internship and Industrial Visit • Total station surveying • Industry Institute interaction program
	M 3	2	• Seminar on low-cost construction • Workshop on concrete mix design • Seminar on sustainable architecture and green building
	M 4	3	• Seminar on QA and QC. • Seminar on research-based material selection for construction • Design of cost-effective buildings for the needy in association with MIDS (NGO) • Funded Project.
PEO 2	M 1	3	• Seminar on professional Ethics for Civil Engineering • Seminar on professional integrity • Seminar on sustainable development
	M 2	2	• Interaction with successful alumni members to create the inspiration.
	M 3	3	• Seminar on low-cost construction • Workshop on concrete mix design • Seminar on sustainable architecture and green building • Project works • Design contest-Sustainable architecture.
	M 4	2	• Project works. • Consultancy • Survey camp
PEO 3	M 1	2	• Seminar on professional Ethics for Civil Engineering • Seminar on research methodology
	M 2	3	• Internship • Industrial Visit • Real time design of buildings during design project • Research based Projects to solve civil engineering problems
	M 3	2	• Consultancy for government institutions like Southern Railway and PWD. • Courses on solving complex civil Engineering challenge
	M 4	2	• Industry supported lab. • Industrial visit

Criterion 2	Program Curriculum And Teaching - Learning Processes	120
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2 Program Curriculum And Teaching - Learning Processes

2.1 Program Curriculum (20)

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

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

This Institute is affiliated to Anna University, Chennai and hence Civil Engineering department curriculum is framed by Anna University, Chennai. Curriculum includes Basic Science & Engineering, Humanities, Professional Courses, Core and Electives along with project works. The process to identify extent of compliance of the University curriculum is as follows:

- Before the start of every new regulation, the department will conduct the PAC meeting to identify the curricular gaps.
- The University curriculum is passed to the Program Assessment Committee (PAC).
- Suggestions from alumni, Industrial Experts, Employers and Faculty Members are taken into account.
- The possibilities related to attainment of POs and PSOs are analysed by the committee members.
- The committee will analyse and finalize the curricular gaps.
- An action plan is formulated to fill the gaps.

Program Assessment Committee (PAC) Members:

Table 2.1.1.a: Mar Ephraem Members in PAC

S.No	Name	Designation	Department
1	Prof. Dr. D.R. Anand Rejilin	Professor / Head	CIVIL
2	Prof.Dr.N.Austin	Professor	MECH
3	Prof. Dr. V. Rajesh Kumar	Professor	CIVIL
4	Mr. Charles Dyson	Assistant Professor	CIVIL
5	Mrs.J. Anne Chandra	Assistant Professor	CIVIL
6	Mr.P John Thangam	Assistant Professor	CIVIL
7	Mrs. M. Jeba Priya	Assistant Professor	S&H
8	Mrs. B.P Asha Beulah	Assistant Professor	S&H

Table 2.1.1.b: Alumni members in PAC

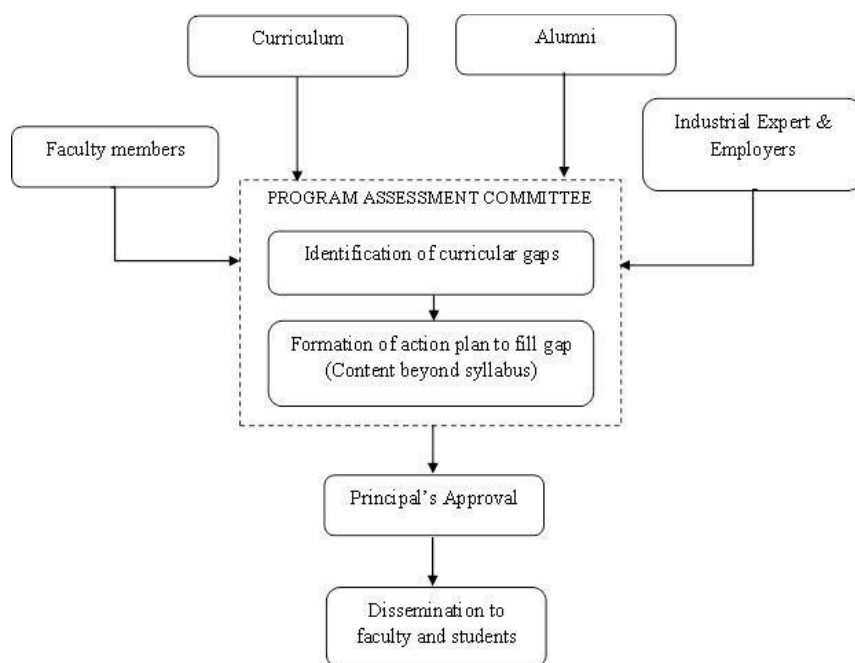
S.No	Name	Batch	Current position
1	Mr.P Vijin Raj	2010-14	Director, Big Builders, Aline
2	Mrs. Vinny Ann Titus	2009-13	Assistant Professor, Mount Zion Engineering College, Kerala
3	Mr.S. Jenil Jebaraj	2010-14	Co- Owner, Landmark Constructions

Table 2.1.1.c: Industry Experts in PAC

S.No	Name	Designation	Company
1	Mr. Manavalan Joseph	Regional Head	Technical Services at UltraTech Cement Ltd.
2	Mr. Satheesh Gopi	Deputy Chief Hydrographer	Kerala Port Department

Table 2.1.1.d: Employers in PAC

S.No	Name	Designation	Company
1	Er. A. T. Samuel	Director	STUP Consultants, Bangalore
2	Er P.A. Faizal	Director	SAFA Construction, Ernakulam.

**Figure: 2.1.1: The process to identify extent of compliance of the University curriculum****B. List the curricular gaps for the attainment of defined POs & PSOs****Table 2.1.1.e: List of curricular gaps**

S.No	Course code	Name of the Course	List of Curricular Gaps
1	MA6351	Transforms and Partial Differential Equations	Common Derivatives and Integrals
2	CE6301	Engineering Geology	Occurrence of Coal and Petroleum in India
3	CE6303	Mechanics of Fluids	Power transmission through pipes
4	CE6304	Surveying I	- Advanced Surveying Equipment - Micro optic theodolite

5	CE6312	Computer Aided Building Drawing	- Perspective view of one story building - Building walk through
6	CE6403	Applied Hydraulic Engineering	Scouring of Earthen Channels
7	CE6404	Surveying II	DGPS
8	CE6412	Hydraulic Engineering Laboratory	Determination of efficiency of Pelton wheel turbine
9	CE6501	Structural Analysis I	Kanis method of structural Analysis
10	CE6502	Foundation Engineering	Hands on Experience On Field Tests
11	CE6504	Highway Engineering	- Composite pavement Design - Pedestrian path Design
12	CE6505	Design of Reinforced Concrete Elements	- Application of analysis result in design Reinforcement detailing of beam-to-beam connection and beam to column connection - Design of long column - Combined axial load and uniaxial bending theory.
13	GE6674	Communication and Soft skills- Laboratory Based	- Phonetics - IELTS Training
14	CE6511	Soil Mechanics Laboratory	- Liquid limit and Plastic limit test in clay soil - Determination of relative density
15	CE6601	Design of Reinforced Concrete & Brick Masonry Structures	Bar bending schedule
16	CE6603	Design of Steel Structures	- North light roof truss - PEB (Pre Engineering Building)
17	CE6604	Railways, Airports and Harbor Engineering	- Travel demand Study - Airport Zoning System
18	CE6605	Environmental Engineering II	Advanced Waste Water treatment method
19	CE6002	Concrete Technology	Construction errors study of SCC
20	CE6611	Environmental Engineering Laboratory	- Determination of turbidity - Determination of hardness
21	CE6612	Concrete and Highway Engineering Laboratory	California bearing test
22	CE6701	Structural Dynamics and Earthquake Engineering	- Design of PEB structures in earthquake loading - Design of Shear walls - Effect and failure of connections in earthquake loading

			• Design of dampers. • Analysis using software packages
23	CE6702	Prestressed Concrete Structures	• More preferable to use American Concrete Institute • Code book for doing Magnel Method , Guyon method
24	CE6703	Water Resources and Irrigation Engineering	• Improvement of ground water storage • Ground Water storage
25	CE6006	Traffic Engineering and Management	• Pedestrian Traffic Analysis
26	EN6501	Municipal Solid Waste Management	• Waste pyrolysis to fuel oil • Waste plastic refining to oil technology
27	CE6711	Computer Aided Design and Drafting Laboratory	• Design of buildings with seismic loads
28	MG6851	Principles of Management	• Management challenges faced by an entrepreneur
29	CE6021	Repair and Rehabilitation of Structures	• Concrete Crack Repair by Stitching • Drilling and Plugging of Cracks Method
30	CE6605	Environmental Engineering II	• Advanced Waste Water treatment method
31	CE6701	Structural Dynamics and Earthquake Engineering	• Effect and failure of connections in earthquake
32	CE6006	Traffic Engineering and Management	• Traffic Analysis
33	CE6711	Computer Aided Design and Drafting Laboratory	• Design of buildings with seismic loads
34	CE6304	Surveying I	• Micro optic theodolite
35	CE6312	Computer Aided Building Drawing	• Building walk through
36	CE6412	Hydraulic Engineering Laboratory	• Determination of efficiency of Pelton wheel turbine
37	CE6501	Structural Analysis I	• Kani's method of structural Analysis
38	CE6021	Repair and Rehabilitation of Structures	• Drilling and Plugging of Cracks • Method
39	CE6403	Applied Hydraulic Engineering	• Scouring of Earthen Channels

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs

2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Determination of efficiency of Pelton wheel turbine	Seminar	21-09-20	Dr.J. Arul Prakash, Professor, Department of Civil Engineering, NICHE, Nagercoil.	58	PO1, PO2, PO3,PO4
2	Kani's method of structural Analysis	Seminar	04/10/20	Mr.J Praveen Senior Engineer in Ultra Tech	60	PO1, PO2,PSO1
3	Drilling and Plugging of Cracks Method	Seminar	06/02/21	Mr. Manavalan Joseph Regional Head, Technical Services at UltraTech Cement Ltd. Trivandrum.	54	PO1, PO2, PO3,PSO1, PSO2
4	Scouring of Earthen Channels	Seminar	19/03/21	Mrs. Paulin Jini Manohar, Asst. Prof. Mar Ephraem College of Engineering and Technology	63	PO1, PO2

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	• Advanced treatment method	Industrial Visits and NPTEL Video Lecture	16/8/19	Mrs. D.S. Manju Ram, Asst. Prof. Mar Ephraem College of Engineering and Technology	95	PO1,PO2, PO3,PO4

2	Effect and failure of connections in earthquake loading •	Workshop with Tutorial Classes	27/08/19	Mr. Manavalan Joseph, Regional Head, Technical Services at Ultra Tech Cements Ltd. Trivandrum.	98	PO1, PO2, PO3, PO4, PSO1, PSO2
3	• Traffic Analysis	NPTEL Video Lecture	08/09/19	Mr.L. Sujin Kumar, Senior Engineer, (L & T. Chennai)	93	PO1, PO2
4	• Design of buildings with dynamic loads	Guest Lecture with Mini projects	05/01/20	Er. Anbu Thomas Samuel, Director, STUP Consultancy Pvt. Ltd. Bangalore.	100	PO1, PO2, PO3, PSO1
5	• Micro optic theodolite	Seminars and NPTEL Video Lecture	13/02/20	Mr. Satheesh Gopi, Deputy Chief Hydrographer, Kerala Port Department, Cochin.	95	PO1, PO2, PO3, PO4, PO 5
6	• Building walk through	Value Added Course with Animated videos	24/02/20	Mr. R. Prabin, Assistant Manager, InterCADD Pvt. Ltd., Trivandrum.	97	PO1, PO2, PO3, PO4, PO5, PSO2

2018-19

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	• Advanced Waste Water treatment method	Industrial Visits and NPTEL Video Lecture	27/08/18	Mrs. D.S. Manju Ram, Asst. Prof. Mar Ephraem College of Engineering and Technology	95	PO1, PO2, PO3, PO4
2	• Design of PEB structures in earthquake loading • Design of Shear walls •	Workshop with Tutorial	08/09/18	Mr. Manavalan Joseph, Regional Head, Technical	98	PO1, PO2, PO3,

	Effect and failure of connections in earthquake loading • Design of dampers. • Analysis using software packages	Classes		Services at Ultra Tech Cements Ltd. Trivandrum.		PO4,PSO1, PSO2
3	• Pedestrian Traffic Analysis	NPTEL Video Lecture	10/10/18	Mr.L. Sujin Kumar, Senior Engineer, (L & T. Chennai)	93	PO1, PO2
4	• Design of buildings with seismic loads	Guest Lecture with Mini projects	16/11/18	Er. Anbu Thomas Samuel, Director, STUP Consultancy Pvt. Ltd. Bangalore.	100	PO1, PO2, PO3,PSO1
5	• Advanced Surveying Equipment • Micro optic theodolite	Seminars and NPTEL Video Lecture	05/01/19	Mr. Satheesh Gopi, Deputy Chief Hydrographer, Kerala Port Department, Cochin.	95	PO1, PO2, PO3,PO4,PO5
6	• Perspective view of one story building • Building walk through	Value Added Course with Animated videos	24/01/19	Mr. R. Prabin, Assistant Manager, InterCADD Pvt. Ltd., Trivandrum.	97	PO1, PO2, PO3,PO4, PO5, PSO2
7	• Scouring of Earthen Channels	Seminars, Industrial Visits and Case Study Discussion	09/02/19	Mrs. Paulin Jini Manohar, Asst. Prof. Mar Ephraem College of Engineering and Technology	100	PO1,PO2
8	• Determination of efficiency of Pelton wheel turbine	NPTEL Video Lecture	20/02/19	Dr.J. Arul Prakash, Professor, Department of Civil Engineering, NICHE, Nagercoil.	97	PO1,PO2, PO3,PO4
9	• Application of analysis result in design • Reinforcement detailing beam to beam	Guest Lecture with	08/03/19	Er. Anbu Thomas Samuel, Director, STUP Consultancy	93	PO1,PO2, PO3, PSO1

	connection and beam to column connection • Design of long column • Combined axial load and uniaxial bending theory.	Tutorial Classes		Pvt. Ltd. Bangalore.		
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2017-18

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	• Perspective view of one story building • Building walk through	Value Added Course with Animated videos	28/08/17	Mr. R. Prabin, Assistant Manager, InterCADD Pvt. Ltd., Trivandrum.	100	PO1,PO2, PO3,PO4, PO5, PSO2
2	• Kani's method of structural Analysis	Guest Lecture	04/09/17	Mr.J Praveen Senior Engineer in Ultra Tech	98	PO1, PO2,PSO1
3	• Composite pavement Design • Pedestrian path Design	Guest Lecture with Tutorial Classes	05/09/17	Mr. L.Sujin Kumar, Senior Engineer, (L & T. Chennai)	98	PO1,PO2, PO3
4	• Application of analysis result in design • Reinforcement detailing beam to beam connection and beam to column connection • Design of long column • Combined axial load and uniaxial bending theory.	Guest Lecture with Tutorial Classes	13/10/17	Er. Anbu Thomas Samuel, STUP Consultancy Pvt. Ltd. Bangalore.	100	PO1,PO2, PO3,PSO1
5	• Bar bending schedule	Workshop by Guest Lecture and Internships	04/11/17	Mr. J. Praveen Senior Engineer in Ultra Tech. Cements Ltd.	100	PO1,PO2, PO3, PSO1

6	• North light roof truss • PEB (Pre Engineering Building)	Industrial Visits and Guest Lecture	10/12/17	Mr.L. Sujin Kumar, Senior Engineer, (L & T. Chennai)	100	PO1, PO2, PO3,PO4,PSO 1,PSO2
7	• Advanced Waste Water treatment method	Industrial Visits and NPTEL Video Lecture	16/12/17	Mrs. D.S. Manju Ram, Asst. Prof. Mar Ephraem College of Engineering and Technology	93	PO1,PO2, PO3,PO4
8	Design of PEB structures in earthquake loading • Design of Shear walls • Effect and failure of connections in earthquake loading • Design of dampers. Analysis using software packages	Workshop with Tutorial Classes	20/02/18	Er. Anbu Thomas Samuel, STUP Consultancy Pvt. Ltd. Bangalore.	98	PO1, PO2, PO3,PO4,PSO 1,PSO2
9	• Design of buildings with seismic loads	Guest Lecture with Mini projects	05/03/18	Er. Anbu Thomas Samuel, Director, STUP Consultancy Pvt. Ltd. Bangalore.	97	PO1,PO2, PO3,PSO1
10	• Management challenges faced by an entrepreneur	Guest Lecture with Case Study Discussion	19/03/18	Er. P. Gino Paul, MD, Creative Designers, Marthandam.	93	PO8,PO9,PO10,PO11,PO12
11	• Concrete Crack Repair by Stitching • Drilling and Plugging of Cracks Method	Guest Lecture	27/03/18	Mr. Manavalan Joseph Regional Head, Technical Services at UltraTech Cement Ltd. Trivandrum.	100	PO1,PO2, PO3,PSO1,PSO2

2.2 Teaching - Learning Processes (100)

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

The Institution follows various practices for the attainment of Program outcomes and program specific outcomes in acquiescence with university curriculum:

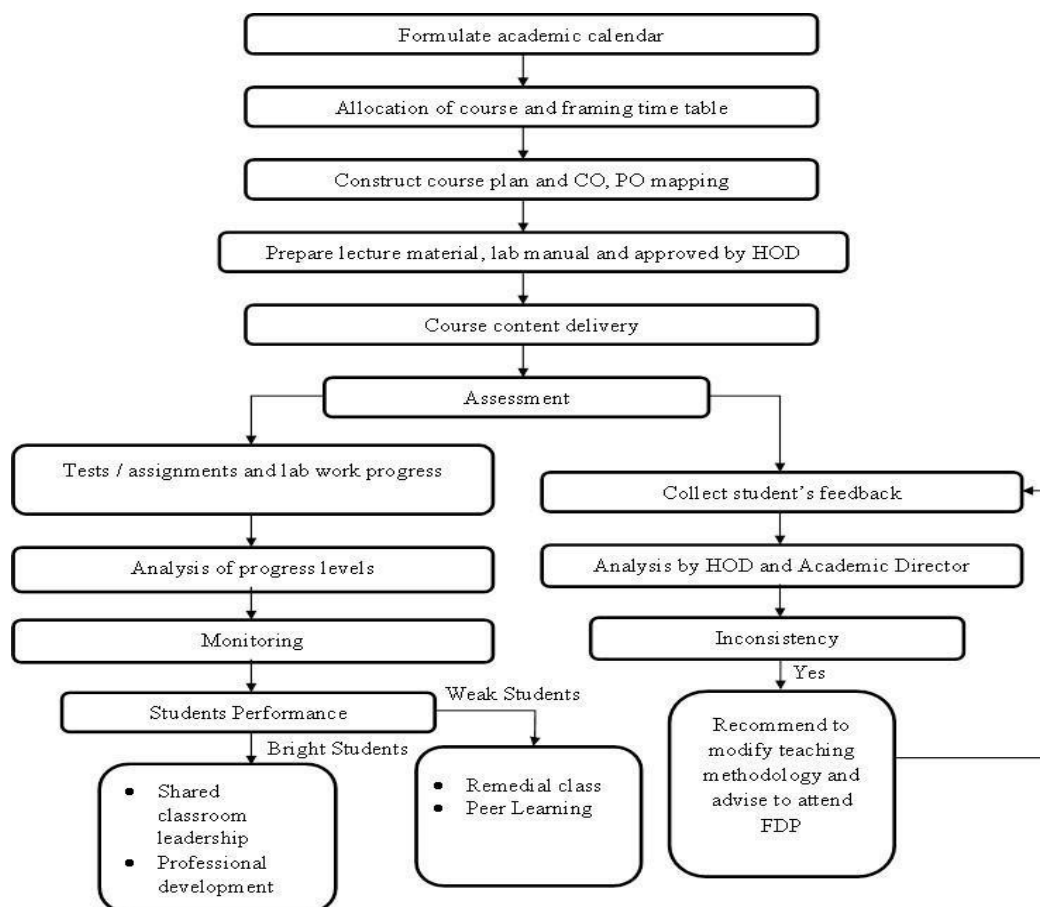


Fig 2.2.1.a: Teaching Learning Processes

2.2.1 A. Adherence to Academic Calendar

Academic Calendar:

The academic calendar is prepared and published every academic year in advance by the academic planning council. The activities includes

1. Class committee meetings.
2. Professional society activity.
3. Internal assessment schedule.
4. Industrial visit.
5. Internship.
6. Syllabus coverage schedule.
7. Technical Events
8. Project review schedule.
9. Academic audit.

2.2.1 B. Use of various Instructional Methods and Pedagogical Initiatives:

Table: 2.2.1.a: Various Instructional Methods and Pedagogical Initiatives

Sl. No	Instructional Methods and Pedagogical Initiatives	Description
1.	Class Room Lectures	Real world examples, tutorials and assignments are given to the students. To ensure effectiveness of teaching, the class rooms are equipped with projectors.
2.	ICT	Enable teachers to increase the quality of teaching material and visuals.
3.	Hands-on experience	Demonstrations by giving extra lab classes
4.	Tutorials/ Quiz	To assess the student's performance, tutorials and quiz are being conducted.
5.	PEER Learning	Group learning system-Combining weak students with the bright students.
6.	Adjunct/ visiting Faculty	Enrich the students in current industrial trends and provide project guidance.
7.	Mini Projects	To strengthen the learned concepts, mini projects are done by the students. Students exhibit their projects and working models in technical events.
8.	Industrial Visit / Internship	Students are encouraged to undergo internship programs and industrial visits in reputed companies.
9.	Flipped Classroom	To improve the presentation and communication skill, students are motivated to take classes on recent trends.

2.2.1 C. Methodologies to Support Weak Students and Encourage Bright Students:

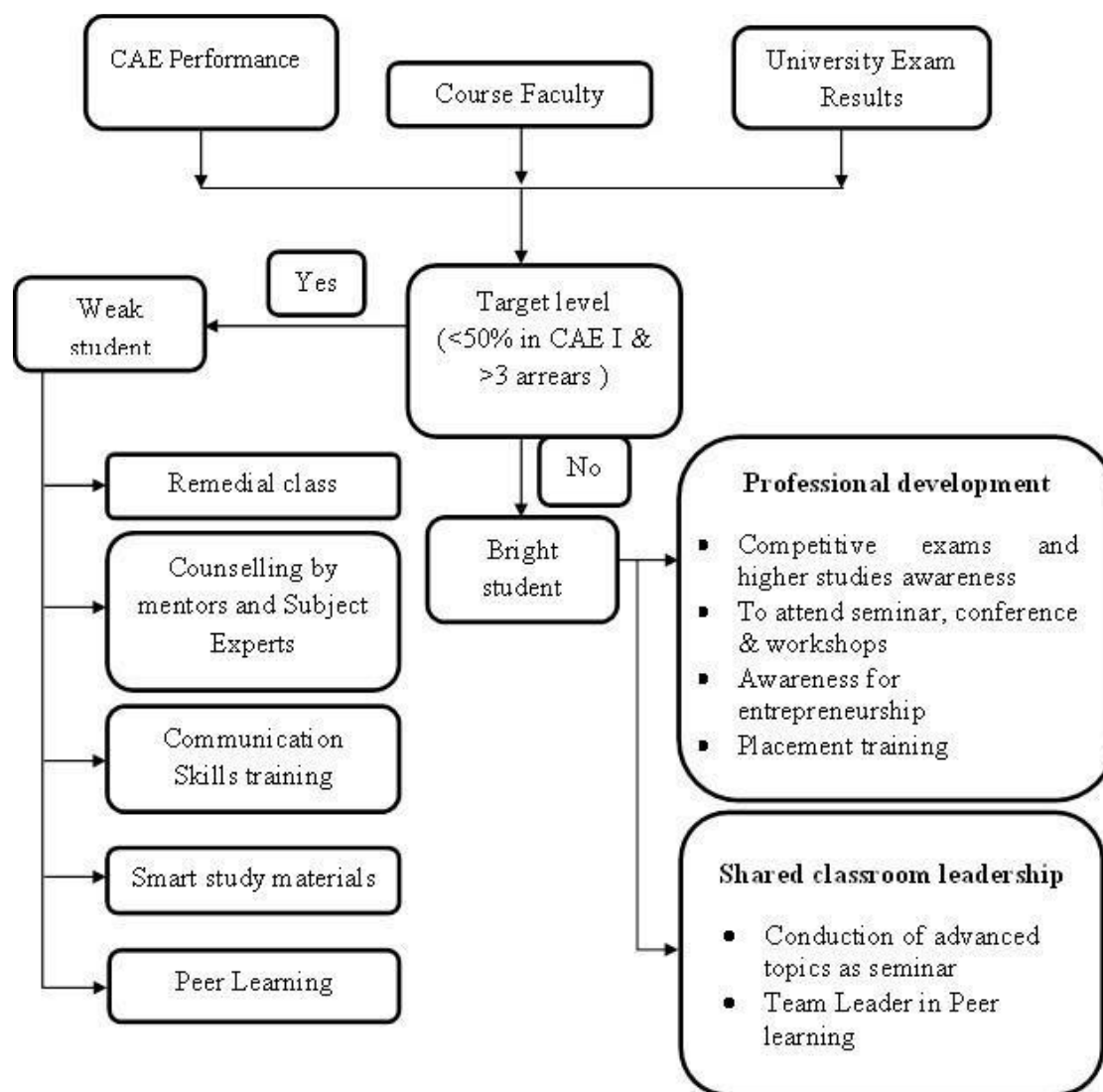


Fig 2.2.1.b. Support Weak Students and Encourage Bright Students

Weak students are identified based on University results and internal marks.

Strategy to identify weak students

- University Exam GPA
- Continuous Assessment Exam Marks
- The students fall under weak students category are:
 - Students secured less than 50% of marks in CAE 1.
 - Students having more than 3 arrears in the University Exams.

Actions taken to support weak students

Peer Learning

- The department establishes peer group by forming groups of 4 to 6 students with one bright student as leader who support the weak students.

- The faculty members will be available as facilitator to the peer learning groups. The pairing of bright students and weak students results in better academic performance.

Remedial classes

- Special classes for weak students after regular classes using simple and smart study material.
- Proper Counselling is given to weak students by mentors and subject experts.
- For students with rural background, special communication skill classes are conducted.

Actions taken to encourage bright students

Shared classroom leadership

- Seminars sessions on advance topics are led by bright students which in turn enhance soft skills and improve subject knowledge
- Team Leader in Peer learning - Bright students act as leaders in peer groups which will enhance their leadership skills.

Professional development

- Awareness of competitive exams, entrepreneurship and higher studies are given to the students
- Encouraged to attend conference, seminars, workshops & paper presentation.
- Motivation and company specific trainings are provided to the students by arranging interactive sessions with the alumni and delegates from various companies.
- Class toppers are honoured in department symposium and annual day celebrations.

D. Quality of Class room teaching:

- The class starts with discussion of learning outcomes and relevant RBT.
- A recap of previous lecture and necessary prerequisite knowledge is discussed.
- Brief background information of the topic is also given.
- Faculty use traditional chalk and board method and also use other methodologies like power point presentations for better understanding of the course.
- Innovative methods like explaining with the help of models, animations, charts, real time analogies and brain storming are made, which make the class room teaching more interactive and interesting.
- Tutorial classes are conducted for analytical courses, where a class of students is divided into number of peer learning groups.
- Industrial application of the topic is also explained.
- GATE questions are discussed in the classrooms.
- NPTEL materials and contents are also included in classroom teaching.
- Summary of the lecture is discussed by a read-through of topics covered.

E. Conduct of Laboratory Experiments:

- Faculty prepare laboratory manual well ahead of the semester which includes Do's and Don'ts of the laboratory, list of experiments, the procedure on how the experiments are to be done and sample calculations.

- All the experiments are carried out based on the relevant codes and guidelines.
- Faculty test runs the experiments before starting of the semester and makes a record in laboratory manual which helps in offering constructive suggestions to the students.
- Groups are formed depending on the equipment/experiment for effectiveness.
- Separate lab attendance cum assessment record is maintained for every laboratory.
- The dates of the experiments, observation correction, record submission and evaluation are registered carefully in the assessment record.

F. Continuous Assessment in Laboratory:

- The students maintain an observation and record of all the experiments done in the laboratory.
- The observations and records are evaluated based on laboratory assessment rubrics on weekly basis and ensure the completion within the stipulated time.
- Model exams are conducted at the completion of laboratory course.
- Internal Marks will be awarded based on the assessment of all the experiments and model exam.

The scheme of marks awarded is based on the following rubrics:

Table: 2.2.1.b: Laboratory Assessment rubrics

Parameters	Excellent (5)	Good (3-4)	Average (2)
Ability to conduct experiment	Excellent knowledge on operation procedure. No help needed from Faculty. Observations of measurements are accurate and precise. Excellent team player with leadership qualities. Follows standard/Safety procedures. Adopts proper clean up procedures.	Good knowledge on operation procedure. Minor help needed from Faculty. Observations of measurements are accurate. Good team player. Follows standard/Safety procedures. Adopts proper clean up procedures when remained.	Fair knowledge on operation procedure. Major help needed from faculty. Observations of measurements are less accurate. Not a team player. Partially follows standard/Safety procedures. Adopts proper clean up procedures when remained.
Interpret the result and conclusion	Can do the Calculations independently. Can analyze and interpret experimental results. Compare theory against experiment and calculate related errors correctly. Makes valid conclusions.	Can do the calculations with peer help. Can interpret experimental results. Compare theory against experiment and calculate related errors correctly with the help of faculty. Makes valid conclusions with the help of faculty.	Can do the calculations with the help of faculty. Cannot interpret experimental results. Cannot compare theory against experiment and calculate related errors correctly. Does not make valid conclusions with the help of faculty.

Record Preparation	Organized and excellent presentation of experiments. All technical details are available.	Organized and good presentation of experiments. Some technical details are available.	Disorganized and poor presentation of experiments. Technical details are not available.
Submission	Submission of observation and record on time. Submission of observation and record in its entirety.	Submission of observation and record with some delay. Submission of observation and record in its entirety.	Late Submission of observation and record. Incomplete Submission of observation and record.

G. Students Feedback on teaching learning process and Action Taken:

1. Centralized online student feedback System:

The faculty members are evaluated through the online feedback system on their teaching and learning process twice (After CAE I & CAE II) in the semester. The consolidated feedback is generated by the head of the department and submitted to IQAC and consolidated department report is forwarded to academic director. The report is analysed by the academic director along with the HOD. Necessary suggestions are given to the faculty for improvement and the report is submitted to the Principal.

Course Feedback Report - CIVIL - CE6603 - Design of Steel Structures

Name of the Course Instructor	: Mr. Abhishek G.L.	Course Code/Title	: CE6603 / Design of Steel Structures
Name of the Department	: Civil Engineering	Programme	: UG
Year	: 2018	Academic Year	: 2017 - 2018
Semester	: 6	Section	: B
Total Students	: 65	Total Students Participated	: 62
Students % (Participated)	: 95	Feedback	: Feedback I

SINo	Parameters	Score 10 Max
1	Availability of faculty 2 minutes prior to the commencement of each class	8.05
2	Audibility of faculty's Voice and Teachers control over class	7.75
3	Capability of communicating in English	7.79
4	Initiatives taken for slow learners through remedial classes and advanced learners through training of competitive examination/ placement questions.	7.61
5	Coverage of syllabus and additional contents within given time.	7.92
6	Providing inspiration and positive energy to students.	7.85
7	Applicability/relevance to real life situations and integration of content with other courses.	8.93
8	Reference of other books, journals, magazines and NPTEL videos in class.	7.67
9	Clarifying doubts inside and outside classroom.	8.05
10	Ability to use digital technology devices in classroom.	7.62
11	Involving students during lecture through interactions.	7.61
12	Addition of relevant topics required for Industries (Content Beyond Syllabus) and sharing current technologies and updates in class.	7.93
13	Ability to design quiz/test/mini project/assignments/self learning content /industrial visits to evaluate students understanding.	7.97
Average Marks		7.90

Corrective action planned

- Instructed to use more PPTs & other digital technology
-
-

Approved By 

Date 24/8/19 **Proposed by : HOD** **Academic Director**

Verification of Corrective action

- Verified his PPT usage in class room
-
-

Verified By 

Date 5/9/19 **HOD**

Figure 2.2.1.c: Sample of Students feedback

2. Class committee meeting.

- 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.
- The class committee is constituted by the Head of the Department.
- The Chairperson of the class committee may invite the Class adviser(s) and the Head of the Department to the class committee meeting.
- The Head of the Institution may participate in any class committee of the institution.
- The class committee shall be constituted within the first week of each semester. At least 4 student representatives shall be included in the class committee.
- The first class committee meeting is held within one week from the date of commencement of the semester. The students are informed about the University Curriculum, Academic calendar and weightage of assessments within the framework of the Regulations. Two subsequent meetings are held in a semester at suitable intervals.
- During these meetings the student members representing the entire class, shall interact and express the opinions and suggestions of the other students of the class in order to improve the effectiveness of the teaching-learning process.
- The functions of the class committee include
 - Solving problems experienced by students in the class room and in the laboratories.
 - Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
 - Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
 - Identifying the weak students, if any, and requesting the teachers concerned to provide some additional help/guidance to such weak students.
- The chairperson is required to prepare the minutes of every meeting, submit the same to Academic Director and Head of the Institution within two days of the meeting and arrange to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the management, the same shall be brought to the notice of the Management by the Head of the Institution.

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

2.2.2 A. Process for internal semester Question Paper Setting, Evaluation and effective process implementation

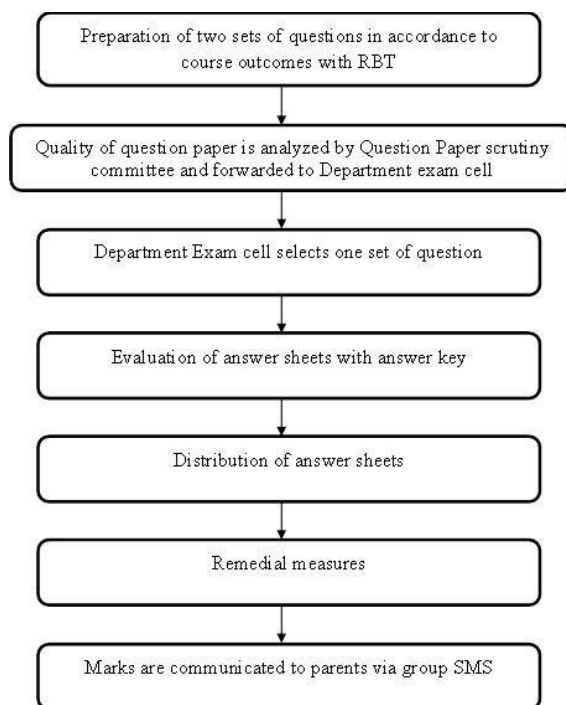


Figure. 2.2.2.a: Process for internal Assessment

2.2.2 B. Process to ensure questions from outcomes/learning levels perspective

The Continuous Assessment Exams and Model exam are important tools for calculation of outcome attainment. The faculty members prepare the question papers considering outcome / learning levels perspective (Revised Blooms Taxonomy). The HOD Constitutes a Question Paper scrutiny committee to ensure questions from outcomes/learning levels perspective.

The Constituents of Question Paper scrutiny committee:

- Senior faculty - Chairman
- Faculty (3Nos) – Members

The role of Question Paper scrutiny committee is to ensure the quality of question papers and coverage of COs. The Question Paper scrutiny committee accepts/recommends for modification and resubmit / rejects and resubmit.

2.2.2 C. Evidence of COs coverage in class test/ mid-term tests

- Course instructors set the questions considering different cognitive levels of learning and the coverage of course outcomes.
- Cognitive levels (RBT) of questions are marked in the question paper. COs coverage of each question is specified in the question paper.
- The CAE 1 covers the portions with CO1 and CO2, the CAE 2 covers the portions with CO3 and CO4, the Model Exam covers the entire syllabus with all COs. After preparation of question paper

by individual faculty members, the QP scrutiny committee will check for the CO coverage and approve the question paper.

Table. 2.2.2.C - CO coverage pattern for class test/ mid-term tests

Internal exam/course outcome	CO1	CO2	CO3	CO4	CO5	CO6
CAE 1	✓	✓				
CAE 2			✓	✓		
Model Exam	✓	✓	✓	✓	✓	✓

Course Outcomes (COs) for Assessment in this Examination

CO1	Analyze the response of materials due to External Loads.
CO2	Analyze the stresses on composite section for any loading condition.
CO3	Compute the shear force and bending moment in determinate beams for any load condition.
CO4	Calculate the deflection of determinate beams on any load condition.
CO5	Design circular shafts and helical springs for any site condition.
CO6	Analyze the pin jointed plane and space trusses based on the loading condition.

CL-Cognitive Level: Re-Remember; Un-Understand; Ap-ApPLY; An-Analyze; Ev-Evaluate; Cr-CreatE

Answer all questions.			
PART A – (10 X 2 = 20 marks)			
Q.No.	Question	CL	CO
1.	Draw the shear stress diagram for 1 Section.	Rb	CO1
2.	State Hook's law.	Un	CO2
3.	State the main assumptions while deriving the general formula for shear stresses.	Rb	CO2
4.	What is mean by positive or sagging cut.	Rb	CO3
5.	In which point the bending moment is maximum.	Rb	CO3
6.	What are the methods for finding out the slope and deflection at a section?	Rb	CO4
7.	Define polar modulus.	Rb	CO5
8.	Write down the expression for power transmitted by a shaft.	Rb	CO5
9.	What are the methods for Analysis the frame?	Rb	CO6
10.	What is mean by Imperfect frame?	Rb	CO6

G.No.		PART B – (5 X 13 = 65 marks)		Question		CL	CO
11.a		A steel tube 50mm external diameter 5mm thick encloses centrally a copper bar of mm diameter. The bar and tube are rigidly connected together at the end at a temperature of 30°C. The composite bar is subjected to an axial compressive load of 60kN and the temperature is raised to 350°C. Determine the stresses in the steel tube and copper rod as $\alpha_s = 12 \times 10^{-6}/^\circ\text{C}$, $\alpha_c = 18 \times 10^{-6}/^\circ\text{C}$, $E_s = 200 \text{ GPa}$, $E_{cu} = 100 \text{ GPa}$.				An	CO
11.b		The normal stresses acting on two perpendicular planes at a point in a strained material are 70 MN/m ² tensile, 35 MN/m ² compressive. In addition, shear stress of 40 N/mm ² act on these planes. Calculate the following: (i) The magnitude of the principle stresses. (ii) The direction of the principal planes. (iii) The magnitude of the maximum shear stress.				An	CO
12.a		A beam 6m long and simply supported at each end has a uniformly distributed load of 80N/m extending from the left end to a point 2 m away. There is also a clockwise couple of 1500 Nm, applied at the center of the beam AB. Draw the shear force and bending moment diagrams for the beam and find the maximum bending moment.				An	CO
		(or)					
12.b		A T – section of a beam has the following dimensions with of the flange 100mm, overall depth 80mm, thickness of the web 10mm, thickness of flange 10mm. Determine the maximum bending stress in the beam, when the bending moment of 200 kNm is acting one of the section.				An	CO
13.a		A cantilever of length 2.5m is loaded with an udl of 100 kN/m over a length 1.5m from the fixed end. Determine the slope and deflection at the free end. Determine the slope and deflection at the free end of the cantilever if $E = 95000 \text{ N/mm}^2$, $I = 210 \text{ Gm}^4/\text{m}^3$ or Macaulay's method.				An	CO
		(or)					

13.b	A steel cantilever of 2.5m effective length carries a load of 25kN at its free end. If the deflection at the free end is not exceed 40mm. What must be the I value of the section of the cantilever. Take $E = 210 \text{ GN/mm}^2$ using moment area method.	An	CO3
14.a	A solid circular shaft transmits 75kW power at 200rpm. Calculate the shaft diameter, if the twist in the shaft is not to exceed one degree in 2m length of shaft and shear stress is not exceed 50 N/mm ² . Assume the modulus of rigidity of the material of shaft as 100 kN/mm ² .	An	CO4
14.b	(or) A closely coiled helical spring made out of a 10mm diameter steel bar has 12 complete coils, each of mean diameter of 100mm. Calculate the stress induced in the section of rod, the deflection under the pull and the amount of energy stored in the spring during the extension. It is subjected to an axial pull of 200N. Modulus of rigidity is 0.84N/mm ² .	An	CO4
15.a	Analyze using method of joints.	An	CO3
15.b	Analyze using method of section.	An	CO3

Q.No.	Question	CL	CO
16.a	Part C – (1 X 15 = 15 marks) Question Analyse the pin-connected plane frame shown in Fig. The cross-sectional area of each member is 3000 mm². Take E equal to 210 kN/mm².	An	CO
16.b	(or) Determine the forces in all the members of the 3D truss shown in fig. Use method of tension coefficient.	An	CO

Prepared by

Verified by

Figure 2.2.2.b: Question paper model

2.2.2 D. Quality of Assignment and its relevance to COs

- Assignments play an important role in the course plan.
- Assignments are used to gather extra information beyond the content taught in the class and to improve reading, problem-solving and writing skills of the students.
- Assignments are used to kindle the creativity of students.
- Assignments are mapped with COs and POs.

Table. 2.2.2. a: Assignment Evaluation Rubrics

Parameter for Assessment	Excellent (16-20marks)	Good (11–15 marks)	Fair (06-10 marks)	Unsatisfactory (<=5 marks)
Application of Learned Concepts	Applied the learned concepts and Analyse the outcomes.	Applied the learned concepts	Tried to apply the learned concepts	Not Applied any learned Concepts
Reference of Resources	Referred more than 2 resources	Referred up to 2 resources	Referred one resource	has not referred any resource
Uniqueness of Content	Uniqueness > 90%	Uniqueness > 70-90%	Uniqueness > 40-70%	Uniqueness > 0-40%
Timely Submission	Submitted on time	Late submission with justification	Late submission without justification	Submitted very late without any explan
Neatness of the Report	Very neat with charts, table, references as per the given instructions	Report is in satisfactory minor deviations from given instructions	Report is in satisfactory major deviations from given instructions	Instructions not followed

Relevance to CO

The assignment topic is based on CO. The Assignment 1 covers the portions with CO1 and CO2, the Assignment 2 covers the portions with CO3 and CO4, the Assignment 3 covers the portions with CO5 and CO6. The sample assignment CO coverage is given below:

Table. 2.2.2. D2. Relevance to CO

Assignment / course outcome	CO1	CO2	CO3	CO4	CO5	CO6
Assignment 1	✓	✓				
Assignment 2			✓	✓		
Assignment 3					✓	✓

Content Sources for Assignments

The content for assignments is taken from the following tools which help the students for getting ideas and writing the assignments.

- Reference Books, Lectures
- Online Sources, Data Bases
- NPTEL Videos
- Articles in journals, Newspaper, News letter

- Conference or seminar papers in published proceedings – Print / online•
- Encyclopaedia – Print / online

Dictionary /

Feedback on Assignments

- The assignment is evaluated based on the rubrics and discussed with the student about the depth of the assignment topic and the critics were given about the approach to the topic.
- The number of references collected is viewed and the conclusion / inferences from the topic of assignment are verified.

The improvement needed for the assignment is intimated to the student for uplifting the self-learning capability of the student for further assignment works.

2.2.3 Quality of student projects (25)

A1. Identification of projects and allocation methodology to faculty members

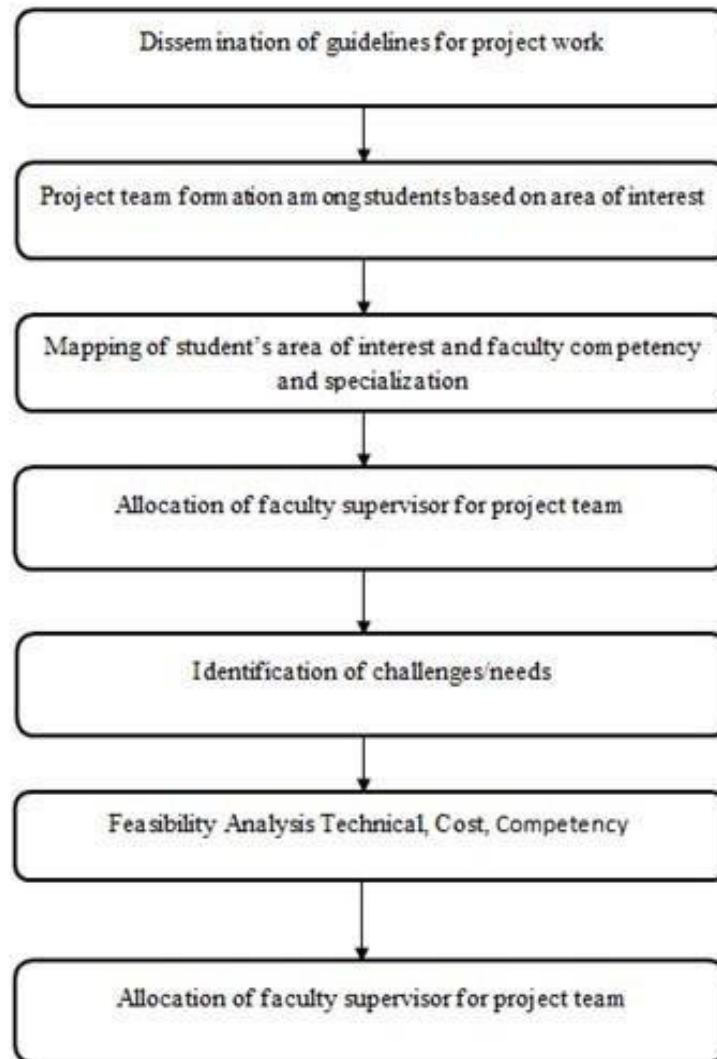


Figure 2.2.3.a. Identification of projects and allocation methodology

Dissemination of guidelines: At the beginning of the academic year project coordinator responsibility is assigned to one/two faculty in the department. The project coordinator will explain the guidelines of the University Project Works and general rules to be followed.

Project team formation: The students are given the autonomy to choose their own team members based on the area of interest with a maximum of four students per batch.

Mapping of student's area of interest and the faculty competency: The area of interest of faculty members is displayed in the department notice board and the students can opt to select their supervisor based on their area of interest and the faculty competency.

Allocation of faculty supervisor for projects: Project supervisors are allocated by the project coordinator in consultation with HOD.

Identification of challenges/needs: The student selects an area of interest and selects challenges identified from the society

Feasibility Analysis: The student analyse the feasibility of the project to address the identified challenge in terms of cost, technology and competency.

Confirmation of project: The students confirm the identified project with the project supervisors.

Project Mark Allocation: The project report shall carry a maximum 30 marks. The project report shall be submitted as per the approved format. Same mark shall be awarded to every student within the project group for the project report. The viva- voce examination shall carry 50 marks. Marks are awarded to each student of the project group based on the individual performance in the viva-voce examination.

Table: 2.2.3.a: Project Mark Allocation

Review I	Review II	Review III	End semester Examinations				
			Thesis Submission (30)		Viva-Voce (50)		
5	7.5	7.5	Internal	External	Internal	External	Supervisor
			15	15	15	20	15

B1. Types of projects

Students with the guidance of the supervisors undertake projects in research, product development and applied Engineering.

Table: 2.2.3. b: - Number of projects implemented in research, Environment, product and application areas

Sl. No.	Year	Type	Number of Projects
1	CAY 2019-2020	Research	21
		Product development	-
		Environment	11
		Application	-
2	CAY m1 2018-2019	Research	22
		Product development	-
		Environment	10
		Application	-
3	CAY m2 2017-2018	Research	31
		Product development	-
		Environment	3
		Application	-

B2. Contribution of project work towards attainment of POs

- Students apply the knowledge gained in the theoretical and practical courses in the implementation of the project; this contributes to the attainment of PO1.
- Students do literature surveys in the area of their project to analyze their topic and identify new problems; this contributes to the attainment of PO2.
- Students with the help of supervisor plan and design solutions for the identified problems; this contributes to the attainment of PO3 and PO4.
- Students are motivated to do projects which are useful to the society; this contributes to the attainment of PO3 and PO6.
- Research methodologies are adopted by the students in their projects; this contributes to the attainment of PO4.
- In the implementation of projects, students use new materials for constructing buildings, components and software for designing which are not learned in the curriculum; this contributes to the attainment of PO5.
- Socio economic impact is given due weightage in the project evaluation rubrics, this contributes to the attainment of PO7.
- Students apply ethical principles and avoid plagiarism in their projects; this contributes to the attainment of PO8.

- Maximum of four students are permitted in a project batch, working in a team allows them to learn and adjust with the team as an individual member and leader; this contributes to the attainment of PO9 and PO11.
- Three reviews make the students prepare presentation slides and orally present their progress in the project work; this contributes to the attainment of PO10.
- During reviews, students prepare and submit an abstract of the presentation. Students prepare a report based on the guidelines provided by the university. These contribute to the attainment of PO10.
- Doing project work as a team and managing the finance related to the project work contribute to the attainment of PO11.
- The work knowledge and interest gained from the project work ignite the students to learn more; this contributes to the attainment of PO12.

Table: 2.2.3 c: A few projects and their relevance to POs and PSOs

CAY (2019-2020)

Sl. No.	Project Title	Project type	Relevance to POs	Relevance to PSOs
1	Durability behaviour of CFRP strengthened concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
2	Experimental study of biodegradable plastic by using food starch	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
3	Treatment of effluent with Teak leaves and banana trunk	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
4	Durability behaviour of BFRP strengthened concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
5	An Experimental study on FRP concrete by replacement of Sea sand	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
6	Fine sand replaced by quarry dust using poly propylene fibre	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
7	Manufacture of Roof Tile using Areca nut husk Ash	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

8	Experimental study on Ferro cement aero gel concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
9	Utilization of waste Plastic in manufacturing of Brick along with Quarry dust and M Sand	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
10	Agro – Industrial waste as a cementitious binder for sustainable concrete	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
11	Treatment of grey water into portable water	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
12	Utilization of plastic waste and ceramic materials in paver block manufacturing	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
13	An alternate source of renewable energy from kitchen waste	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
14	Experimental study of natural latex in concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
15	Durability behavior of AFRP strengthened concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
16	Generating Electricity from Road vibrations	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
17	Experimental investigation of Pervious Concrete pavement	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
18	Interface behaviour between soil and FRP composites	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
19	An Experimental study on asbestos concrete by replacement of sea sand	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

20	Performance of structural concrete with recycle plastic waste as a partial replacement of sand	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
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CAYm1 (2018-2019)

Sl. No.	Project Title	Project type	Relevance to POs	Relevance to PSOs
1	Mechanical behaviour analysis of glass fiber concrete with various grades	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
2	Experimental study on fiber reinforced concrete replacing coarse aggregate by ceramic waste	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
3	Manufacturing of building blocks using plastic waste	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
4	Lightweight burnt clay brick by using rice husk	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
5	Mechanical behaviour analysis of steel fibre concrete with various grades	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
6	Soil stabilization using lime cement and fly ash	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
7	Mechanical behaviour analysis of recron fiber concrete with various grades	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
8	Water purification using natural materials	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
9	Workability and strength of polypropylene reinforced concrete and normal concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
10	Experimental study on salinity resistance concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

11	Comparative study of FRP Confined and unconfined concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
12	Workability and strength of glass fiber reinforced concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
13	Experimental study of concrete with partial replacement of cement by fly ash	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
14	Hybrid fiber reinforced concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
15	Experimental study of strength of concrete using steel fiber	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
16	Enhancement of shear strength of expansive soil using lime	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
17	Retrofitting of wall panel	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
18	Workability and strength of glass fiber reinforced concrete and normal concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
19	Soil stabilization using lime cement and silica fume	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
20	Workability and strength of steel fiber reinforced concrete and normal concrete	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

CAY m1 (2017-2018)

Sl. No.	Project Title	Project type	Relevance to POs	Relevance to PSOs
1	Experimental Analysis Of Roof Tiles Using Agricultural Waste	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
2	Low Energy Intensive Kitchen Waste Water Treatment Water Purification Using Seeds	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
3	Study On Influence Of Additives On The Drain down Characteristics Of Stone Matrix Asphalt	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
4	Water Purification By Using Drumstick Seeds &Limestone	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
5	Experimental Study On Behaviour Of Cellular Light Weight Concrete Block	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
6	Retrofitting Of Steel Section	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
7	Study Of Bioremediation On Plastics In Hospital. Waste	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
8	Study Of Bioremediation On Sharps In Hospital Waste	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
9	Experimental Analysis Of Strength Behaviour Of Concrete At Elevated	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

10	Experimental Investigation On Removal Of Hardness From Sea Water	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
11	Mechanical Properties Of Aggregate Made From Construction And Demolition Wastes	Environment	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
12	Experimental Study On Shear Strength And Durability Of Concrete With Different Coarse Aggregate	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
13	Experimental Investigation On Precast Wall Of A Room	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
14	Experimental Investigation On Modified Gpc Subjected To Acid Attack	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
15	Experimental Investigation On Partial Replacement Of Concrete By Sawdust Ash And Poly Propylene Fiber	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
16	Mechanical Behaviour Of Glass Fibre Concrete Using	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
17	Experimental Investigation Of Structural Behaviour Of Fibre Reinforced Element And Crack Analysis Using Image Processing Algorithm	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
18	Feasibility Of Concrete Recycle Materials	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
19	Investigation On Strength Parameters With Copper Slag Of As Fine Aggregate	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2

20	Performance Of Concrete Mixed With Fly Ash And Recycled Coarse Aggregate	Research	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
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C. Process for Monitoring and Evaluation:

Process of Monitoring:

- At the beginning of the academic year, review schedule is prepared by the project coordinator and approved by the HOD. The schedule is displayed on the notice board for student reference.
- In the time table, weekly 12 hours is allotted for project work.
- As per the schedule, review will be conducted with a team of senior faculty members, project supervisor, project coordinator and HOD.
- Project students meet their respective supervisor weekly once and discuss about the project progress.
- For industrial project, the corresponding supervisor will interact with the respective in charges in industry and collect details about their progress and attendance periodically.
- In-house project, students carry out the projects in the project laboratory during project hours under the guidance of their respective supervisors.
- The supervisor makes sure that every student in a team carries out an independent module in their project.

Review schedule for the project is given below.

Table: 2.2.3.d: Review schedule

Sl. No.	Review	Tentative Date	Assessment tool
1.	First Review	After 3 weeks from allocation of project supervisor	Project evaluation Rubrics
2.	Second Review	After 4 weeks from the first Review	
3.	Third Review	After 4 weeks from the second Review	
4.	Report Submission	After 1 weeks from the third Review	Project Report Evaluation Rubrics

The project is evaluated based on the rubrics mentioned below.

Table: 2.2.3.e: Project evaluation rubrics

		Project Rubrics			
S.No	Parameters	Excellent(4)	Good(3)	Average(2)	Review
1.	Problem identification considering societal issues.	Excellent explanation of the purpose and need for the project. Identification of problem statement based on literature review. Consideration of societal issues.	Good explanation of the purpose and need for the project. Identification of problem statement based on few literature review. Few consideration of societal issues.	Moderate explanation of the purpose and need for the project. Identification of problem statement not based on literature review. No consideration of societal issues.	1st
2.	Provide eco-friendly solution of the identified problem	Excellent solution for the identified problems with suitable methods. Environmental aspects considered	Solution for the identified problems with suitable methods. Few environmental aspects considered	No proper solution for the identified problems. No environmental aspects considered	1st
3.	Design and development of systems and models	Optimized design and development of models. Appropriate modern tools used	Design and development of models. Modern tools used	No proper design and development of models. Modern tools not used	2nd
4.	Conduct experiments/Testing	Sufficient number of experiments/ Testing conducted. Proper codes and standards referred	Sufficient number of experiments/ Testing conducted. Few codes and standards referred.	Insufficient number of experiments/ Testing conducted. No codes and standards referred.	2nd
5.	Results & Discussion	Excellent interpretation of Results. Suitable discussion on results available.	Good interpretation of Results. Few discussions on results available.	No interpretation of Results. Few discussions on results available.	3rd
6.	Conclusion	Exceptional summarization of Project work and Conclusion. Scope for future work included.	Good summarization of Project work and Conclusion. Scope for future work included.	Moderate summarization of Project work and Conclusion. No scope for future work included.	3rd

7.	Project Management	Excellent work plan and scheduling available. Systematic cost analysis and budget plan available.	Good work plan and scheduling available. Cost analysis and budget plan available.	Average work plan and scheduling available. No cost analysis and budget plan available.	All
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Table: 2.2.3.f: Project report evaluation rubrics

S.No	Parameters	Excellent(3)	Good(2)	Average(1)
1.	Organization of Report as per guidelines	Excellent arrangement of contents Adopted page dimension and binding specifications of University. Followed the specified preparation format Followed the specified typing instructions	Good arrangement of contents Adopted page dimension and binding specifications of University. Followed the specified preparation format with few mismatches. Followed the specified typing instructions	Poor arrangement of contents Adopted page dimension and binding specifications of University. Did not follow the specified preparation format. Followed the specified typing instructions
2.	Table of contents and indexing	Indexing of table of content is perfect	Some mismatch in Indexing of table of content	Major mismatches in Indexing in table of content
3.	Quality of Content and Technical details	Relevant, accurate and adequate contents and technical details available.	Relevant and adequate contents and technical details available.	Irrelevant and inadequate contents and technical details available.
4.	Elegance and overall presentation	Extremely neat and well presented	Neat and well presented	Disorderly presented
5.	On time Submission	Submitted on date	Late Submission with proper justification	Late Submission

Process of Evaluation:

- Three reviews will be conducted as per the University regulation and the each review carries 20 marks.
- The internal marks for project work will be based on the review sheet which is maintained by the project coordinator



Mar Ephraem

College of Engineering and Technology

REVIEW I

Department: <u>Civil Engineering</u>		Year: <u>Final Year</u>	
Project Title	Initial	<u>Mechanical Behaviour of FRP Strengthened Concrete</u>	
	Final (if modified)		
Details of the Supervisor(s)		Details of the students	
Name: <u>Abishak G.L</u> <u>AP/Civil</u>		Sl.No.	Name
Signature: <u>Abishak</u>		1	<u>Jino Lukasa</u>
		2	<u>Jiju K Aniyar</u>
		3	<u>Noel Sam Louis</u>
		4	<u>Sancho S</u>
		Reg. No.	
			<u>961415 103064</u>
			<u>961415 103063</u>
			<u>961415 103091</u>
			<u>961415 103099</u>

REVIEW 1 EVALUATION SHEET					
Parameters	Excellent(4)	Good(3)	Average(2)		
1 Problem identification considering societal, health, safety, legal and cultural issues.		✓			
2 Provide eco-friendly solution of the identified problem		✓			
3 Project Management		✓			
4 Presentation	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
5 Contribution as individual and team member	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

Abishak
PROJECT SUPERVISOR

Sancho S
PROJECT COORDINATOR



Mar Ephraem

College of Engineering and Technology

REVIEW II

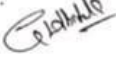
Department: <u>Civil Engineering</u>		Year: <u>Final Year</u>	
Project Title	Initial	<u>Mechanical Behaviour of FRP Strengthened Concrete</u>	
	Final (if modified)		
Details of the Supervisor(s)		Details of the students	
Name: <u>Abishak G.L</u> <u>AP/Civil</u>		Sl.No.	Name
Signature: <u>Abishak</u>		1	<u>Jino Lukasa</u>
		2	<u>Jiju K Aniyar</u>
		3	<u>Noel Sam Louis</u>
		4	<u>Sancho S</u>
		Reg. No.	
			<u>961415 103064</u>
			<u>961415 103063</u>
			<u>961415 103091</u>
			<u>961415 103099</u>

REVIEW 2 EVALUATION SHEET					
Parameters	Excellent(4)	Good(3)	Average(2)		
1 Design and development of systems and models		✓			
2 Conduct of experiments/Testing	✓				
3 Project Management		✓			
4 Presentation	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
5 Contribution as individual and team member	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

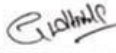
Abishak
PROJECT SUPERVISOR

Sancho S
PROJECT COORDINATOR

REVIEW III

Department: <u>Civil Engineering</u>		Year: <u>Final Year</u>		
Project Title	Initial	<u>Mechanical Behaviour of FRP Strengthened Concrete</u>		
	Final (If modified)			
Details of the Supervisor(s)		Details of the students		
Name: <u>Abhishek G.L AP/civil</u> Signature: 		Sl.No.	Name	Reg. No.
		1	<u>Jino Lukase</u>	<u>961415103064</u>
		2	<u>Jiju k Aniyann</u>	<u>961415103063</u>
		3	<u>Noel Sam Louis</u>	<u>961415103091</u>
		4	<u>Sancho S</u>	<u>961415103099</u>

REVIEW 3 EVALUATION SHEET					
	Parameters	Excellent(4)		Good(3)	
1	Results & Discussion			✓	
2	Conclusion			✓	
3	Project Management			✓	
4	Presentation	1	✓	1	✓
		2		2	
		3		3	
		4		4	
5	Contribution as individual and team member	1	✓	1	
		2	✓	2	
		3		3	
		4		4	


 PROJECT SUPERVISOR


 PROJECT COORDINATOR

Figure 2.2.3.b: – Sample Project review sheet

D. Process to assess individual and team performance:

Students are provided a forum to apply their technical and innovative knowledge by doing projects. Students are instructed to form teams based on their domain. Each team constitutes a maximum of four students uided by a faculty of the same area of interest. Reviews are conducted to assess the individual and team performance of the students as described in the rubrics.

Table: 2.2.3.g: Project Presentation rubrics

		Project Rubrics			
S.No	Parameters	Excellent(4)	Good(3)	Average(2)	Review
1.	Presentation	Clear and precise presentation with additional information. Excellent delivery of contents with exceptional communication skills. Answers all questions correctly during viva voice.	Clear and precise presentation with adequate information. Good delivery of contents with decent communication skills. Answers few questions correctly during viva voice.	Poor presentation with inadequate information. Average delivery of contents with decent communication skills. Answers very few questions correctly during viva voice.	All
2.	Contribution as individual and team member	Well defined roles and responsibilities among the team members. Excellent contribution of all team members. Exceptional coordination among the team members.	Roles and responsibilities are assigned among the team members. Good contribution of all team members. Good coordination among the team members.	Roles and responsibilities are not assigned among the team members. Few contributions of all team members. No coordination among the team members.	All

E. Quality of completed projects/working prototypes

- Final project reports/demo is evaluated by a team of their respective supervisor, a panel of senior faculty members.
- The projects are evaluated and awarded internal assessment marks for maximum 100. The marks are awarded based on the project contribution towards attainment of PO's and PSO's.
- The best projects are identified during University project viva-voce by the external and internal examiner based on their presentation and the demo/working model of the projects.

Table: 2.2.3.h: List of Best Projects sample

Academic Year	Project Title	Area of specialization	Project type
CAY 2019-2020	Durability behaviour of CFRP strengthened concrete	Concrete Technology	Research
	Utilization of waste Plastic in manufacturing of Brick along with Quarry dust and M Sand	Concrete Technology	Environment
CAY m1 2018-2019	Enhancement of shear strength of expansive soil using lime	Soil Mechanics	Research
	Experimental study on salinity resistance concrete	Concrete Technology	Research
CAY m2 2017-2018	Experimental Study On Shear Strength And Durability Of Concrete With Different Coarse Aggregate	Concrete Technology	Research
	Experimental Investigation On Modified GPC Subjected To Acid Attack	Alternate Building Martials	Research

Table: 2.2.3.i: List of Working Prototypes sample

Academic Year	Project Title	Area of specialization
CAY 2019-2020	An experimental study on Glass fiber polymer concrete by replacement of sea sand	Concrete Technology
	Utilization of waste Plastic in manufacturing of Brick along with Quarry dust and M Sand	Alternate Building Martials
CAY m1 2018-2019	Retrofitting of wall panel	Concrete Technology
	Manufacturing of building blocks using plastic waste	Alternate Building Martials
CAY m2 2017-2018	Experimental Analysis Of Roof Tiles Using Agricultural Waste	Concrete Technology
	Utilization Of Plastic Waste In Manufacture Of Paver Block And Production Of Fuel	Environmental Engineering



Fig: 2.2.3.c: - Mechanical strength of carbon reinforced polymer and aramid fibre

Evidences of papers published /Awards received by projects etc

Supervisor encourage the students to publish papers in reputed journals

Table: 2.2.3.j: A Few Publications in Symposium / Conference / Journal:

Year	Author Name	Paper	Published in Symposium / Conference / Journal	Indexing / Level
CAY 2019- 2020	Amal Biju Ashok Abraham George Anson G Johnson Ashik Thomas	Durability behaviour of CFRP strengthened concrete	Conference	International
	Bhavya C S Honey Titus A R Jeena N R	Experimental study of biodegradable plastic by using food starch	Symposium	National
	Ashily Jiji Anjana P Ankitha P A	Treatment of effluent with Teak leaves and banana trunk	Conference	National

Jibin Issac Jibin Biju Thomas Gautham Mohan Astel S M	Durability behaviour of BFRP strengthened concrete	Symposium	National
Anzil Alboo A Danieshah B Roshna S W	An Experimental study on FRP concrete by replacement of Sea sand	Conference	National
Ashwin S Albin Yohannan Aldrin Som Varghese Biljin Benny	Fine sand replaced by quarry dust using poly propylene fibre	Conference	National
Ajin M Kurien Sheroy C R Christy Sebastian	Manufacture of Roof Tile using Areca nut husk Ash	Symposium	National
Ajin Mon G Christo Cecil X Febin V S Ashlin Vinish V P	Experimental study on Ferro cement aero gel concrete	Conference	National
Jose N Adlin Jerish S Bibin Raj E Abish A	Experimental study on recycle plastic block	Symposium	National
Roshan Thomas Amal George Jacob Lijoy Shaji Alan Simon	Self Healing potential of Cementitious material incorporating crystalline admixture by Isothermal calorimetry	Conference	National
Anto Merlin V Jenish D Aravind Prasad A L Ajesh S K	Mixing and compacting temperatures for neat and modified bitumen	Conference	National
Aaromal Vijay V Abel A Tharian Abin T Wilson Anson Abraham	Effects of water quality in hydroponic green fodder	Conference	National
Robin R Shaji T Allan Geo S E	Treatment of grey water into portable water	Conference	National
Kelvin Shelton Renjith R Jino Raj J A Jijo John Cecil	Utilization of plastic waste and ceramic materials in paver block manufacturing	Symposium	National

	Anoop P Yadhu Krishnan M Varghese Kunju Karingazhakunnil Sijo Joseph	An alternate source of renewable energy from kitchen waste	Conference	National
	Vignesh B Spencer J Vishnu S Nikhil Santhosh	Experimental study of natural latex in concrete	Symposium	National
	Sajitha S Rincy Thankachan Simi Mariam Saji	Durability behaviour of AFRP strengthened concrete	Conference	National
	Vinisha L Vinitha V Saramgi S Monisha K M	Generating Electricity from Road vibrations	Symposium	National
	Allwinraj B G Yugesh M Sajith Sajin Raj S	Experimental investigation of Pervious Concrete pavement	Conference	National
	Kurian Cherian Libin Thomas Kevin C Anil Nithin Reji	Properties and utilization of waste tire rubber in concrete	Symposium	National
CAYm1 2018- 2019	Amal Raj R Huxlin Nijay R L Ajin D T	Mechanical behaviour analysis of steel fiber concrete with various grades	Conference	National
	Benjamin P Mathew Antony Francis Gokul prasad Benz Thomas	Workability and strength of polypropylene reinforced concrete and normal concrete	Symposium	National
	NibinDhas D R Jenish Y Anish Kumar Dhinesh S	Experimental study of concrete with partial replacement of cement by fly ash	Conference	National
	Abhijith Saji Jackson K O Ananthu Das H Ameesh Raj	Retrofitting of wall panel	Conference	National
	Ajin M Roy Abin C Babu Jeffin Joseph Geo Vanil Varghese	Workability and strength of steel fiber reinforced concrete and normal concrete	Conference	National

Arun Kumar M Ajith Kumar Dershlín K S Jeba Mano R J	Experimental study on fiber reinforced concrete replacing coarse aggregate by ceramic waste	Conference	International
Amal Saji Alby Abraham BlessonThampi Binso Wilson	Experimental study on salinity resistance concrete	Symposium	National
Fidelis G Cletus Abin Tom Solomon	Workability and strength of glass fiber reinforced concrete	Conference	National
Anusha A Jaya Shalini C Jenisha H Shiny C	Lightweight burnt clay brick by using rice husk	Symposium	National
JenishaP Jeshica D Abisha R	Water purification using natural materials	Conference	National
Arun Kumar M Ajith Kumar Dershlín K S Jeba Mano R J	Experimental study on fiber reinforced concrete replacing coarse aggregate by ceramic waste	Conference	International
Dayana Fredy Dominic Arundhathi Girish Bini Varghese Aleena A R	Soil stabilization using lime cement and fly ash	Conference	National
Feba Susan Thomas Christina Varghese Jancy George Greeshma Vijay L	Manufacturing of building blocks using plastic waste	Conference	International
Arun Smith T Ajin K	Experimental study of strength of concrete using steel fiber	Conference	National
Sibin M SuthanNayagam R Shiju C Vigesh Ruben V R	Building information modelling	Symposium	National
Jino Lukose Jiju K Aniyan Noel Sam Louis Sancho S	Mechanical behaviour of FRP strengthened concrete	Conference	National

	Sebin Sebastian Manu Jacob Steaphen Nirmal Abraham JibinSabu	Workability and strength of glass fiber reinforced concrete and normal concrete	Symposium	National
	Sherry P John Libin Enson Sijo Varghese Kosy Jibin Kumar V.L	Development and experimental analysis of high strength concrete	Conference	National
CAY m2 2017- 2018	Ajin Kumar Aravind Gino paul Arun V L	Experimental Analysis Of Roof Tiles Using Agricultural Waste	Symposium	National
	Ajeesha S G Benisha T Benita Sherlin K	Low Energy Intensive Kitchen Waste Water Treatment Water Purification Using Seeds	Conference	National
	Dona Renjith Geethu D S Ancy Vijayan	Study On Influence Of Additives On The Drain down Characteristics Of Stone Matrix Asphalt	Conference	National
	Ashima Blessy R Catherin Gracy	Water Purification By Using Drumstick Seeds &Limestone	Conference	National
	Alen Louis Abin Varghese Adarsh Babu Sibi Thomas	Experimental Study On Behaviour Of Cellular Light Weight Concrete Block	Conference	International
	Jazim Hameed Ajoy Mon Bino Jerson A R Anto P	Retrofitting Of Steel Section	Conference	National
	Alisha Maria Samuel Devi Priya H B Midhila M S	Study Of Bioremediation On Plastics In Hospital Waste	Conference	International
	Drishya Raj Jaimi A V arghese Geena Merin Saji	Study Of Bioremediation On Sharps In Hospital Waste	Conference	National
	Ajin Tom Thomas Fayaz Mohammed Abijith V S Abijith M S	Experimental Analysis Of Strength Behaviour Of Concrete At Elevated Temperature	Conference	National
	Allen Thomas Abijith S	Experimental Investigation On Removal Of Hardness From Sea Water	Symposium	National

Ashil Tom George Akhil S Bobby George Blesson Parayil Varkey	Mechanical Properties Of Aggregate Made From Construction And Demolition Wastes	Conference	National
Abu S Varghese Aaron T Stephen Akhil Varghese Eyochan John Pattara	Experimental Study On Shear Strength And Durability Of Concrete With Different Coarse Aggregate	Conference	National
Arun Y V Ajith Kumar K U	Experimental Investigation On Precast Wall Of A Room	Conference	National
Abin Thomas Basil Raj Bibin C Mathew	Experimental Investigation On Modified GPC Subjected To Acid Attack	Conference	International
Akash Thomas Chako Cyril Simon Ashlin Tom Varghese	Experimental Investigation On Partial Replacement Of Concrete By Sawdust Ash And Poly Propylene Fiber	Symposium	National
Ajinth Jorvin R Anfl Arun M Agesh Ram	Mechanical Behaviour Of Glass Fibre Concrete Using CFRP Stirrups	Conference	National
Asphin Raj P Ajith T Ajith D Bhenor R K	Experimental Investigation Of Structural Behaviour Of Fibre Reinforced Element And Crack Analysis Using Image Processing Algorithm	Symposium	National
Thusanth S V Rahul V Kristen C Lopez	Manufacturing of brick by using natural ingredients	Conference	National
Libin Sabu Jibin John Joseph Kiran Sam Sherin Thomas	Experimental study on deflection of concrete modified by glass fiber	Conference	National
Jestin Thomas Varghese Jino P Jhon Vipin Mohan Rufus Rajan John	Experimental Investigation Of fly ash brick using ironite	Conference	International

Table: 2.2.3.k: Best project which received awards from international / National body:

Year	Project title	Student Name	Awarding Agency
CAY 2019-2020	An Experimental study on FRP concrete by replacement of Sea sand	Anzil Alboo A Danieshah B Roshna S W	Lourds Mount college of Engineering, Karungal
	Experimental study on recycle plastic block	Jose N Adlin Jerish S Bibin Raj E Abish A	St.Xavier's college of Engineering, Chunkankadai.
CAYm1 2018-2019	Manufacturing of building blocks using plastic waste	Feba Susan Thomas Christina Varghese Jancy George Greeshma Vijay L	St.Xavier's college of Engineering, Chunkankadai.
	Enhancement of shear strength of expansive soil using lime	Jobin P John Sam P Jose Melvin Abraham Mathew	Rohini college of Engineering, Anchugramam
CAY m2 2017-2018	Study Of Bioremediation On Plastics In hospital waste	Alisha Maria Samuel Devi Priya H B Midhila M S	Lourds Mount college of Engineering, Karungal
	Experimental Investigation On Modified GPC Subjected To Acid Attack	Abin Thomas Basil Raj Bibin C Mathew	Arunachala College of Engineering, Manavilai

Table: 2.2.3.l: Number of presentations in Symposium / Conference:

Year	Presentation	
	Symposium	Conference
CAY 2019-2020	35	55
CAYm1 2018-2019	45	53
CAY m2 2017-2018	51	37

2.2.4 Initiative related to industry interaction (15)

Activities involved in the industry institute interaction are

- Industrial Visits
- MoU with Industry

- Guest Lecturers/Seminars/ Workshops
- Internships
- Placement sessions
- Regular training programs in industry/Institute Visits of faculty to industry for FDP

A. Industry Supported Laboratories

The industry supported laboratories develop best learning process using a comprehensive understanding of industry's best practices for students.

Concrete and highway engineering lab supported by Ultra tech Cements ltd.



Figure 2.2.4.a: Industry Supported Lab with Ultra tech Cements Ltd.

Purpose and Scope:

1. To establish a collaborative interaction to improve the standard of students and faculty of Mar Ephraem to industrial standards through lab-based Training programs, workshops and seminars.
2. The students will be exposed to construction standards and practices of the industry.
3. Collaborative workshops and seminars on recent construction trends and materials.
4. Collaborative Research on thrust areas of Construction Engineering.
5. To carry out consultancy works on quality of construction materials.
6. Platform for Ultratech experts to Interact with Students community on recent technologies.

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

The college is affiliated to Anna University, Chennai and the syllabus is framed by Anna University. With the help of industrial experts, the academic and industry gaps are identified and suitable areas or topics will be suggested by them to fill the gap. The industry delegates are considered as industrial partner who helps in providing suggestions to improve the industrial relationship.

Table: 2.2.4.a: Industrial partners who helps in providing suggestions to improve the industrial relationship

S.No	Name	Designation	Company
1	Er. Sathish Gopi	Deputy Chief Hydrographer,	Kerala Port Department, Cochin.
2	Er. A. T. Samuel	Director,	STUP Consultancy Pvt. Ltd, Bangalore.
3	Er. Richard Cheng	Director	Environ Constructions, Singapore
4	Er. M. Parameswaran	CEO	Traditional Constructions Pvt. Ltd.
5	Er L. Sujin Kumar	Senior Engineer	L & T. Chennai
6	Er C. Chellaswamy	Managing Director	ARMS, Chennai

7	Er. Reji Zacharia	CEO	S&R Consultants, Structural & Geotechnical Consultants,
8	Er. Manavalan Joseph	Regional Head Technical Services	UltraTech Cements Ltd. Trivandrum.
9	Er. A.Shiva Dutt	Project Engineer	Indian Institute of Science Education and Research, Thiruvananthapuram

MOU have been signed with reputed industries. Through these MOU several training and courses have been conducted for the students to incorporate both technical as well as employability skills and employment.

Table: 2.2.4.b: MOUs and Training with reputed industries

S.No	Name of the Company/Industry	Training / placement	Academic year / Class	No of students attended
1	Environ Constructions, Singapore	International placement	2018/4 th year	10
2	Ultra Tech Cements, Trivandrum	Mix Proportioning	2019/ 3 and 4 year ^{rd th}	190
			2018/ 3 and 4 year ^{rd th}	205
			2017 3 rd and 4 year th	201
3	Inter Cad Systems Pvt Ltd	REVIT Architecture, REVIT Structure, NAVIS Work, Primavera	2019/ 4 year th	108
			2018/4 th year	119
			2017/4 th year	120

The industrial experts will deliver lecture, presentations and hands on practice to the students during workshops/seminars organized to fill the industry gaps and to attain the target COs and POs.

Table: 2.2.4.c: Industrial Experts delivery details

CAY 2019 – 2020

S.No	Action taken	Date	Resource Person with designation
1	Seminar on multi story building construction	23/1/2020	Er. Libin C Varghese Engineer, Environ Constructions, Singapore
2	Online Seminar on Bar Bending Schedule (BBS)	4/08/2020	Mr. L.Sujin Kumar Senior Engineer, L & T. Chennai
3	IIIP (Pre stress concrete structures)	9/02/2020	Er. Anbu Thomas Samuel, Director, Director, STUP Consultancy Pvt. Ltd, Bangalore.

CAYm1 2018 – 2019

S.No	Action taken	Date	Resource Person with designation
1	Workshop on Design of PEB structures	08.09.2018	Mr. Manavalan Joseph Regional Head Technical Services at UltraTech Cements Ltd. Trivandrum.
2	Guest Lecture on Pedestrian Traffic Analysis	10.10.2018 & 11.10.2018	Mr. L.Sujin Kumar Senior Engineer, L & T. Chennai
3	Guest Lecture on Design of buildings with seismic loads	16.11.2018 & 17.11.2018	Er. Anbu Thomas Samuel, Director, STUP Consultancy Pvt. Ltd. Bangalore.
4	Seminars Advanced Surveying Equipment Micro optic theodolite	04.01.2019 & 05.01.2019	Mr. Satheesh Gopi, Deputy Chief Hydrographer, Kerala Port Department, Cochin.
5	Guest Lecture on beam column connection	08.03.2019	Er. Anbu Thomas Samuel, Director ,STUP Consultancy Pvt. Ltd. Bangalore.
6	Seminar on Quality Surveying	08.08.2018	P.B. Sajan, LAURY BAKER, Trivandrum.
7	IIIP on Seismic Retrofit for Reinforced Concrete Structures	20.10.2018	Mr. L.Sujin Kumar Senior Engineer, L & T. Chennai
8	Guest Lecture on Tunnel Technology	26.07.2018	Er. Libin C Varghese Engineer, Environ Constructions, Singapore
9	Guest Lecture on Pile Foundation	27.09.2018	Er.S. Krishna Kumar, Assistant Executive Engineer, Kerala PWD, Trivandrum
10	Industry institute Interaction Program on Project Management	08.01.2019	Er. K. Pal Basker, Senior Engineer. Global Petro Projects Service AG, Zurich Switzerland

CAY m2 2017-2018

S.No	Action taken	Date	Resource Person with designation
1	Industry institute Interaction Program on Quality Assurance in Construction	05/09/2017	Mr. L.Sujin Kumar Senior Engineer, L & T. Chennai
2	Industry institute Interaction Program on modern materials	13/10/2017	Er. Anbu Thomas Samuel, Director, STUP Consultancy Pvt. Ltd. Bangalore.

3	Guest Lecture on Pre Engineering Building	09/12/2017	Mr. L.Sujin Kumar Senior Engineer , L & T. Chennai
	Workshop on Opportunities of civil engineering students abroad	07/07/2017	Libin C Varghese, Engineer, Environ Constructions, Singapore
4	Hands on training Workshop on total station	15/02/2018	Mr. Satheesh Gopi, Deputy Chief Hydrographer, Kerala Port Department, Cochin.
5	Seminar on Advancements in construction field	08/12/2017	Mr. Richard Cheng, Director, Environ Constructions, Singapore
5	Seminar on Civil Software	11/08/2017	Er. Reji Zacharia, CEO, S&R Consultants, Structural & Geotechnical Consultants
6	Seminar on Earthquake resistance structure	11/01/2018	Er. M. Parameswaran, CEO, Traditional Constructions Pvt. Ltd.

C. Impact analysis of industry institute interaction and actions taken

Table: 2.2.4.d: Impact analysis of industry institute interaction

Activity	Date	Beneficiaries	Impact
Seminar on multi story building construction	23/1/2020	Final year students of batch 2020.	15 students of 2020 batch works as Assistant Engineer in construction industry.
Online Seminar on Bar Bending Schedule (BBS)	4/08/2020	Final year students of batch 2021.	Two Students of 2021 batch works as Scheduling Engineer.
IIIP (Pre stress concrete structures)	9/02/2020	Final year students of batch 2021.	One Student of 2021 batch works as Design engineer for prestressed structures. 3 students have opted for ME Structural Engineering for post graduation in the batch.
Industry institute Interaction Program on Project Management	08/01/2019	Final year students of batch 2019.	One Student of 2019 batch works as Assistant Project Manager Singapore. 9 numbers of students have opted ME Construction management for their post-graduation studies in the batch.

Workshop on PEB (Pre-Engineered building)	10/12/2017	Final year students of batch 2019.	Two Students of 2019 batch are employed in PEB Construction works as Junior Engineer. One Student of 2019 batch is working as PEB Designer.
Industry institute Interaction Program on Quality Assurance in Construction	05/09/2017	Final year students of batch 2018.	12 students of batch 2018 are working as quality engineers.
Seminar on Civil Software	11/08/2017	Third year students of batch 2019.	5 students are working in the field of drafting and design of civil structures using Revit, CAD, STADD.
Industry institute Interaction Program on modern materials	13/10/2017	Third year students of batch 2019.	14 students are working as Junior Engineer in Quality Department. 7 numbers of students have opted ME Construction management for their post-graduation studies in the batch. 91% of students have done their UG Projects in the field of material Engineering.
Hands on training Workshop on total station	15/02/2018	Final year students of batch 2018.	10 Students of batch 2019 are working in the field of surveying with total station.

Action Taken

The feedback is collected during the Industry institute Interaction Program and Invited lectures. Based on the feedback of the students, the department plans for future initiatives related to industry interaction by the industrial expert for the upcoming batches.

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

A. Industrial training/tours for students

Industrial visit/ internship is a part of the professional courses, during which students visit companies and get insight on how companies work and also useful information related to the practical aspects of the course which cannot be visualized in lectures. With an aim to go beyond academics, these visits are arranged to develop the insights of the students – attaining practical knowledge and their theoretical applications thereof.

Table: 2.2.5.a: Industrial visit for Students:

S.No	Name of the Industry	Date of visit	Type of industry	Planned / Unplanned	Total Number of Students	Year/Sem	Relevant area of training
CAY (2019-2020)							
1	NIL	-	-	-	-	-	-
CAYm1 (2018-2019)							
1	Pile foundation & Bridge construction, Trivandrum	2/9/2019	Construction	Planned	120	4th / 7th	Bridge Construction
2	Water Purification Plant, Aruvikara	7/8/2019	Construction	Planned	108	3rd / 5th	Water Treatment
3	Nuvoco RMC Plant, Bangalore	24/8/2019	Construction	Planned	119	2nd / 3rd	RMC Manufacture
CAY m2 (2017-2018)							
1	Pile foundation & Bridge construction, Trivandrum	3/9/2018	Construction	Planned	120	4th / 7th	Bridge Construction
2	Water Purification Plant, Aruvikara	7/8/2018	Construction	Planned	108	3rd / 5th	Water Treatment
3	Nuvoco RMC Plant, Bangalore	24/8/2018	Construction	Planned	119	2nd / 3rd	RMC Manufacture

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

Table: 2.2.5.b: Industrial /internship /summer training

S.No	Name of the Industry	Date of visit	Type of industry	Planned / Unplanned	Total Number of Students	Year/ Sem	Relevant area of training
CAY (2019-2020)							
-	Nil	-	-	-	-	-	-
CAYm1 (2018-2019)							
1	Serene Builders	22/12/2019 to 31/12/2019	Construction	Planned	15	II Year	Concrete placing

2	Artech Realtors Pvt Ltd.	22/12/2019 to 31/12/2019	Construction	Planned	20	II Year	Planning and scheduling
3	Realtrust Builders India (P) Ltd	22/12/2019 to 31/12/2019	Construction	Planned	19	II Year	Footing marking
4	Veritable Technologies	22/12/2019 to 31/12/2019	Construction	Planned	21	II Year	Bar Bending schedule and execution
5	Smart Tech Engineering & Contracting	1/12/2019 to 15/12/2019	Construction	Planned	21	III Year	Quality control
6	Heera Construction Co Pvt Ltd	1/12/2019 to 15/12/2019	Construction	Planned	18	III Year	Quality control
7	Leo Associates Architects & Engineers	1/12/2019 to 15/12/2019	Construction	Planned	49	III Year	Installation of support structure
8	A.M Builders Architects, Engineering and Contractors	1/12/2019 to 15/12/2019	Construction	Planned	34	III Year	Concreting
9	Telcon Infractures	6/12/2019 to 29/12/2019	Construction	Planned	28	IV Year	Placing Reinforcement
10	Palathara Construction Private Limited	6/12/2019 to 29/12/2019	Construction	Planned	25	IV Year	Planning and scheduling
11	Crysalis Hom	6/12/2019 to 29/12/2019	Construction	Planned	49	IV Year	Foundation marking
12	Smart Tech Engineering & Contracting	6/12/2019 to 29/12/2019	Construction	Planned	19	IV Year	Scaffolding

13	Artech Realtors Pvt Ltd.	6/12/2019 to 29/12/2019	Construction	Planned	17	IV Year	Planning and scheduling
CAY m2 (2017-2018)							
1	Serene Builders	22/12/2018 to 31/12/2018	Construction	Planned	15	II Year	Concrete placing
2	Artech Realtors Pvt Ltd.	22/12/2018 to 31/12/2018	Construction	Planned	20	II Year	Planning and scheduling
3	Realtrust Builders India (P) Ltd	22/12/2018 to 31/12/2018	Construction	Planned	19	II Year	Footing marking
4	Veritable Technologies	22/12/2018 to 31/12/2018	Construction	Planned	21	II Year	Bar Bending schedule and execution
5	Smart Tech Engineering & Contracting	1/12/2018 to 15/12/2018	Construction	Planned	21	III Year	Quality control
6	Heera Construction Co Pvt Ltd	1/12/2018 to 15/12/2018	Construction	Planned	18	III Year	Quality control
7	Leo Associates Architects & Engineers	1/12/2018 to 15/12/2018	Construction	Planned	49	III Year	Installation of support structure
8	A.M Builders Architects, Engineering and Contractors	1/12/2018 to 15/12/2018	Construction	Planned	34	III Year	Concreting
9	Telcon Infrastructures	6/12/2018 to 29/12/2018	Construction	Planned	28	IV Year	Placing Reinforcement

Table: 2.2.5.c: Survey camp

Year	Name of the site	Date of visit	Planned / Unplanned	Total Number of Students	Year/Sem	Relevant area of training
CAY 2019-2020	NIL	NIL	NIL	NIL	NIL	NIL
CAYm1 2018-2019	Courtallam	1-9-2019 to 10-9-2019	Planned	119	III year/ 5 sem th	Land Surveying
CAYm2 2017-2018	Courtallam	2-8-2018 to 12-8-2018	Planned	120	III year/ 5 sem th	Land Surveying

C. Impact Analysis of Industrial Training:**Table: 2.2.5.d: Impact Analysis of Industrial Training**

Activity	Period	Beneficiaries	Impact
NIL	NIL	NIL	NIL
Industrial Visit (Hydraulic structures, construction materials manufacturing plants, design offices and construction site)	2 visits per year	All students	Students shall be able to One of batch 2019 student was placed as design engineer in STUP Consultants, Bangalore
Internship (Design Offices and construction sites)	2 per year during Summer and Winter Vacation	All students	12 students of batch 2018 are working as quality engineers.
Survey Camp	1 per year	3 rd year students	Seven students of batch 2018 are working as surveyors in SUEZ, Coimbatore

D. Student Feedback on Initiative

After attending every training/ internship / visit, the students are asked to submit a feedback form which has details about the training, or activity conducted. The feedback is analyzed by the Department and necessary actions are taken during next year initiatives.


Mar Ephraem
 College of Engineering and Technology
 DEPARTMENT OF CIVIL ENGINEERING

Industrial Internship/Training / Visit Feedback

Name:	Bani / Jacob Pebin P		
Roll No.:	29	Semester:	08
Name & Address of the Industry/Organization/Company:	Name: Delhi Leasing & Finance (DLF) Address: DLF, The Sky Court Sector 28, Gurgaon, Haryana		
Period of Training/Internship/Visit:	From: 16/01/2019	To:	28/01/2019
Title/Short description of the Industrial Training/Internship/Visit:	A visit to construction site of Bridge to which pile foundation installation was in progress		
Whether report has been submitted:	Yes / No		

Put ✓ mark in appropriate cells

	5	4	3	2	1
Evaluate the Training/Internship/Visit					
Scale: 1- Poor; 2- Average; 3- Good; 4- Very Good; 5- Excellent					
Relevance of the industrial Training/Internship/Visit with the curriculum	✓				
Access to different facilities of interest - for observation, gather data and get your clarifications	✓				
Hospitality of the industry (Food / refreshments & accommodation / willingness to help you for any problems faced during the period)	✓				
Overall usefulness of the industrial Training/Internship/Visit	✓				

	Design	Analysis	Development	Testing	Others
Type of Exposure given			✓		✓

	Yes	No
Whether any specific official was assigned for you during the Training/Internship/Visit?	✓	
Whether any relevant technical literature is obtained from the industry?	✓	
Was the training based on a well-defined schedule and adherence to the schedule?	✓	
Was the opportunity given to work on real time problem or practical problem?		✓
Do you recommend this organization for Training/Internship/Visit in future?	✓	

Signature with Date: Bani / 16/1/2019

Figure: 2.2.5.a: Sample feedback on In-plant training / Internship

Criterion 3	Course Outcomes and Program Outcomes	120
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

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

Table 3.1.1: Program Outcomes (POs)

POs	Statements
PO1	Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problem researching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Table 3.1.2: Program Specific Outcomes (PSOs)

PSOs	Statements
PSO1	Analyse and provide design solutions to Structural Engineering systems.
PSO2	Develop optimal solutions in Construction Management to plan and coordinate civil engineering projects.

Table 3.1.3 Course Outcomes (COs) from 3rd semester

Course Name :Mechanics Of Fluids	
Course Code/Semester: CE6303 / III	
CO	At the end of the course, the student should be able to
C205.1	Analyze properties of fluid in static state
C205.2	Analyze properties of fluid in motion for designing hydraulic sections.
C205.3	Analyze flow through pipes for any site conditions
C205.4	Develop solutions for boundary layer problems with respect to any site conditions
C205.5	Design efficient hydraulic structures based on their dimensions and properties
C205.6	Design hydraulic structure based on model studies

Table 3.1.4 Course Outcomes (COs) from 4th semester

Course Name :applied hydraulic engineering	
Course Code/Semester: MA 6401/ IV	
CO	At the end of the course, the student should be able to
C213.1	design best hydraulic section for any uniform flow
C213.2	design suitable section for any Gradually Varied Flow
C213.3	design best hydraulic section for any Rapidly Varied Flow
C213.4	evaluate the performance of any turbine for a given flow
C213.5	evaluate the performance of any pump for a given output
C213.6	Apply the theory of fluid mechanics to design hydraulic structures and machineries.

Table 3.1.5 Course Outcomes (COs) from 5thsemester

Course Name : STRUCTURAL ANALYSIS 1	
Course Code/Semester: CE 6501/ V	
CO	At the end of the course, the student should be able to
C301.1	Analyze indeterminate frames for any loading condition
C301.2	Analyze beams and frames subjected for any moving loads and site condition.
C301.3	Evaluate indirect models and analyze its performance for any site conditions
C301.4	Analyze structural arches considering all the effects of site condition
C301.5	Analyze rigid frames by slope deflection method for any loading condition of the site
C301.6	Analyze rigid frames by moment distribution method for any loading condition of site.

Table 3.1.6 Course Outcomes (COs) from 6th semester

Course Name :Design Of Reinforced Concrete & Brick Masonry Structures	
Course Code/Semester: CE 6601 / VI	
CO	At the end of the course, the student should be able to
C310.1	Design the retaining walls as per the loading conditions.
C310.2	Design the water tank for any capacity.
C310.3	Design special structures, flat slab, stair case, mat foundation, box culvert as per the loading conditions of site.
C310.4	Design the slabs by yield line theory
C310.5	Design brick masonry structures as per the site condition.
C310.6	Design the structural elements and brick masonry structures considering IS codes based on the site condition

Table 3.1.7 Course Outcomes (COs) from 7th semester

Course Name : Structural Dynamics And Earthquake Engineering	
Course Code/Semester: Ce 6701 / Vii	
CO	At the end of the course, the student should be able to
C401.1	Apply the architectural and structural philosophies for design and construction of earth quake resistant structures for any seismic loading.
C401.2	Design and detail earth quake resistant structures for the seismic loading conditions of the site.
C401.3	Analyse earth quake resistant structures for any dynamic loading condition of the site in accordance to standards and parameters
C401.4	Evaluate various earth quake parameters for a given site.
C401.5	Create and compare theoretical models with any dynamic loading conditions of the site
C401.6	Analyse structures subjected to dynamic forces.

Table 3.1.8 Course Outcomes (COs) from 8th semester

Course Name :Principles Of Management	
Course Code/Semester: MG 6851/VIII	
CO	At the end of the course, the student should be able to
C410.1	Evaluate any organisation by implementing policies and procedures based on management tools
C410.2	Organise control over resources to improve productivity
C410.3	Evaluate leadership styles according to any management and direct resources to achieve development
C410.4	Organize resources for effective utilization and performance of any organisation.
C410.5	Organise processes, policies and activities using relevant tools
C410.6	Select suitable management strategy for any organisation.

Table 3.1.9: CO-PO Matrix for SEMESTER 3

Course Name :Mechanics Of Fluids												
Course Code/Semester: CE6303 / III												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	2	2	1	1	1	0	0	0	0	0	0	0
C205.2	2	2	2	1	1	0	0	0	0	0	0	0
C205.3	2	2	2	1	1	0	0	0	0	0	0	0
C205.4	3	3	2	1	1	0	0	0	0	0	0	0
C205.5	3	3	1	1	1	0	0	0	0	0	0	0
C205.6	2	2	1	1	1	0	0	0	0	0	0	0
Average	3.00	2.33	1.33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1.10: CO-PO Matrix for SEMESTER 4

Course Name :Applied Hydraulic Engineering												
Course Code/Semester: CE 6403/ IV												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C213.1	2	2	3	1	1	0	0	0	0	0	0	0
C213.2	2	2	2	1	1	0	0	0	0	0	0	0
C213.3	2	2	1	1	1	0	0	0	0	0	0	0
C213.4	2	2	1	1	1	0	0	0	0	0	0	0
C213.5	2	2	3	1	1	0	0	0	0	0	0	0
C213.6	2	2	2	1	1	0	0	0	0	0	0	0
Average	2.00	2.00	2.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1.11: CO-PO Matrix for SEMESTER 5

Course Name : Structural Analysis 1												
Course Code/Semester: CE 6501/ V												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301.1	1	1	2	1	2	0	0	0	0	0	0	0
C301.2	1	1	2	1	0	0	0	0	0	0	0	0
C301.3	1	1	2	0	2	0	0	0	0	0	0	0
C301.4	3	3	2	1	0	0	0	0	0	0	0	0
C301.5	3	3	2	1	1	0	0	0	0	0	0	0
C301.6	3	3	2	2	1	0	0	0	0	0	0	0
Average	3.00	2.00	2.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1.12: CO-PO Matrix for SEMESTER 6

Course Name : Design Of Reinforced Concrete & Brick Masonry Structures												
Course Code/Semester: CE 6601 / VI												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C310.1	1	1	2	2	0	0	0	0	0	0	0	0
C310.2	2	2	2	2	1	0	0	0	0	0	0	0
C310.3	3	3	2	2	2	0	0	0	0	0	0	0
C310.4	2	2	2	2	2	0	0	0	0	0	0	0
C310.5	2	2	2	2	1	0	0	0	0	0	0	0
C310.6	2	2	2	2	0	0	0	0	0	0	0	0
Average	2.00	2.00	2.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1.13: CO-PO Matrix for SEMESTER 7

Course Name : Structural Dynamics And Earthquake Engineering												
Course Code/Semester: CE 6701 / VII												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401.1	3	3	3	2	1	0	0	0	0	0	0	0
C401.2	2	2	1	1	1	0	0	0	0	0	0	0
C401.3	3	3	2	2	1	0	0	0	0	0	0	0
C401.4	3	3	2	2	0	0	0	0	0	0	0	0
C401.5	2	2	1	1	1	0	0	0	0	0	0	0
C401.6	2	2	1	1	0	0	0	0	0	0	0	0
Average	2.50	2.50	1.67	1.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3.1.14: CO-PO Matrix for SEMESTER 8

Course Name : Principles Of Management												
Course Code/Semester: MG 6851/VIII												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C410.1	3	3	2	1	1	3	0	3	3	3	3	2
C410.2	3	3	1	1	1	3	0	2	3	3	3	2
C410.3	3	3	3	2	1	3	0	2	3	3	3	2
C410.4	3	3	2	2	1	3	0	1	3	3	3	2
C410.5	2	2	2	2	1	3	0	1	3	3	3	2
C410.6	2	2	2	2	1	3	0	3	3	3	3	2
Average	2.83	2.67	2.00	1.67	1.00	3.00	0.00	2.00	3.00	3.00	3.00	2.00

Table 3.1.15: CO-PSO Matrix for SEMESTER 3

Course Name :Mechanics Of Fluids		
Course Code/Semester: CE 6303 / III		
CO	PSO1	PSO2
C205.1	0	0
C205.2	0	0
C205.3	0	0
C205.4	0	0
C205.5	0	0
C205.6	0	0
Average	0	0

Table 3.1.16: CO-PSO Matrix for SEMESTER 4

Course Name :Applied Hydraulic Engineering		
Course Code/Semester: CE6403/ IV		
CO	PSO1	PSO2
C213.1	0	0
C213.2	0	0
C213.3	0	0
C213.4	0	0
C213.5	0	0
C213.6	0	0
Average	0	0

Table 3.1.17: CO-PSO Matrix for SEMESTER 5

Course Name : Structural Analysis 1		
Course Code/Semester: CE 6501/ V		
CO	PSO1	PSO2
C301.1	3	0
C301.2	3	0
C301.3	3	0
C301.4	2	0
C301.5	3	0
C301.6	3	0
Average	3	0

Table 3.1.18: CO-PSO Matrix for SEMESTER 6

Course Name : Design Of Reinforced Concrete & Brick Masonry Structures		
Course Code/Semester: CE 6601 / VI		
CO	PSO1	PSO2
C310.1	3	0
C310.2	3	0
C310.3	3	0
C310.4	3	0
C310.5	3	0
C310.6	3	0
Average	3.0	0.00

Table 3.1.19: CO-PSO Matrix for SEMESTER 7

Course Name : Structural Dynamics And Earthquake Engineering		
Course Code/Semester: CE 6701 / VII		
CO	PSO1	PSO2
C401.1	3	0
C401.2	3	0
C401.3	3	0
C401.4	3	0
C401.5	3	0
C401.6	3	0
Average	3	0.00

Table 3.1.20: CO-PSO Matrix for SEMESTER 8

Course Name : Principles of Management		
Course Code/Semester: MG 6851/VIII		
CO	PSO1	PSO2
C410.1	0	2
C410.2	0	2
C410.3	0	2
C410.4	0	2
C410.5	0	2
C410.6	0	2
Average	0.00	2

3.1.3. A Program level course – CO matrix of all courses including first year courses (10)**Table 3.1.21 Course Details (R-2013)**

Sl. No.	Course Code	Subject Code	Subject Name
1.	C101	HS6151	Technical English – I
2.	C102	MA6151	Mathematics – I
3.	C103	PH6151	Engineering Physics – I
4.	C104	CY6151	Engineering Chemistry – I
5.	C105	GE6151	Computer Programming
6.	C106	GE6152	Engineering Graphics
7.	C107	GE6161	Computer Practices Laboratory
8.	C108	GE6162	Engineering Practices Laboratory
9.	C109	GE6163	Physics And Chemistry Laboratory -I
10.	C110	HS6251	Technical English – II
11.	C111	MA6251	Mathematics – II
12.	C112	PH6251	Engineering Physics – II

13.	C113	CY6251	Engineering Chemistry – II
14.	C114	GE6252	Basic Electrical And Electronics Engineering
15.	C115	GE6253	Engineering Mechanics
16.	C116	GE6261	Computer Aided Drafting And Modeling Laboratory
17.	C117	GE6262	Physics And Chemistry Laboratory -II
18.	C201	MA6351	Transforms And Partial Differential Equations
19.	C202	GE6351	Environmental Science And Engineering
20.	C203	CE6301	Engineering Geology
21.	C204	CE6302	Mechanics Of Solids
22.	C205	CE6303	Mechanics Of Fluids
23.	C206	CE6304	Surveying I
24.	C207	CE6311	Survey Practical I
25.	C208	CE6312	Computer Aided Building Drawing
26.	C210	MA6459	Numerical Methods
27.	C211	CE6401	Construction Materials
28.	C212	CE6402	Strength Of Materials
29.	C213	CE6403	Applied Hydraulic Engineering
30.	C214	CE6404	Surveying II
31.	C215	CE6405	Soil Mechanics
32.	C216	CE6411	Strength Of Materials Laboratory
33.	C217	CE6412	Hydraulic Engineering Laboratory
34.	C218	CE6413	Survey Practical II
35.	C301	CE6501	Structural Analysis I
36.	C302	CE6502	Foundation Engineering
37.	C303	CE6503	Environmental Engineering I
38.	C304	CE 6504	Highway Engineering
39.	C305	CE6505	Design Of Reinforced Concrete Elements
40.	C306	CE6506	Construction Techniques, Equipment And Practice
41.	C307	GE6674	Communication And Soft Skills- Laboratory Based
42.	C308	CE6511	Soil Mechanics Laboratory
43.	C309	CE6512	Survey Camp
44.	C310	CE6601	Design Of Reinforced Concrete & Brick Masonry Structures
45.	C311	CE6602	Structural Analysis II
46.	C312	CE6603	Design Of Steel Structures
47.	C313	CE6604	Railways, Airports And Harbour Engineering
48.	C314	CE6605	Environmental Engineering II
49.	C315	CE6002	Concrete Technology
50.	C316	CE 6611	Environmental Engineering Laboratory
51.	C317	CE6612	Concrete And Highway Engineering Laboratory
52.	C401	CE6701	Structural Dynamics And Earthquake Engineering
53.	C402	CE6702	Prestressed Concrete Structures

54.	C403	CE6703	Water Resources And Irrigation Engineering
55.	C404	CE6704	Estimation And Quantity Surveying
56.	C405	EN6501	Municipal Solid Waste Management
57.	C406	CE6006	Traffic Engineering And Management
58.	C407	CE 6711	Computer Aided Design And Drafting Laboratory
59.	C408	CE 6712	Design Project
60.	C410	MG6851	Principles Of Management
61.	C411	CE6016	Prefabricated Structures
62.	C412	CE6021	Repair And Rehabilitation Of Structures
63.	C413	CE6811	Project Work
64.	C414	CE0501	Value Added Course
65.	C415	CE0701	Technical Seminar

Table 3.1.22: CO-PO mapping matrix for all courses including first year courses

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	2	1	-	-	-	-	-	-	-	1.33	-	-
C102	3	2	1	-	-	-	-	-	-	-	-	-
C103	3.00	2.17	2.17	-	-	-	-	-	-	-	-	-
C104	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C105	2.83	2.17	1.40	-	1.33	-	-	-	-	-	-	-
C106	1.00	-	-	-	-	-	-	-	-	1.20	-	-
C107	2.50	1.67	0.83	-	0.83	-	-	-	-	-	-	-
C108	3.00	1.67	0.83	-	0.83	-	-	-	-	-	-	-
C109	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C110	2.83	2.17	1.40	1.50	3.00	-	-	-	-	1.00	-	-
C111	3.00	2.00	1.00	-	-	-	-	-	-	-	-	-
C112	3.00	2.50	1.83	-	-	-	-	-	-	-	-	-
C113	2.33	1.67	2.00	-	-	-	-	-	-	2.00	-	1.83
C114	2.83	1.83	1.00	-	-	-	-	-	-	-	-	-
C115	3.00	2.17	1.17	1.17	-	-	-	-	-	-	-	-
C116	1.40	1.40	1.00	-	1.25	-	-	-	-	-	-	-
C117	3.00	2.00	1.00	-	1.17	-	-	-	-	-	-	-
C201	2.83	2.50	2.20	1.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C202	3.00	2.00	2.00	2.00	2.00	2.00	3.00					
C203	2.50	2.00	2.50	2.50	1.00							
C204	2.00	2.00	2.00	2.00	1.00							
C205	3.00	2.33	1.33	1.00	1.00							
C206	3.00	2.10	1.10	2.00	1.00							
C207	3.00	3.00	3.00	2.00	2.00				2.00			
C208	2.60	3.00	3.00	3.00	2.00				1.00	2.05		
C209	3.00	3.00	3.00	2.50	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C210	3.00	1.00	2.50	2.00	1.00							
C211	3.00	1.80	2.00	1.00	1.00							
C212	2.20	1.00	2.00	1.00	1.00							
C213	2.00	2.00	2.00	1.00	1.00							
C214	3.00	1.93	2.00	1.00	1.00							
C215	2.60	3.00	2.60	2.00	2.00							
C216	3.00	2.00	2.00	2.00	1.75				2.00			
C217	3.00	2.00	1.50	2.00	1.50				2.00			
C218	3.00	2.83	1.83	1.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C301	3.00	2.00	2.00	1.00	1.00							
C302	3.00	2.00	2.00	1.00	1.00	-	1.60					
C303	3.00	2.00	1.00	1.00	1.00							
C304	2.00	2.00	1.00	1.50	1.00							
C305	3.00	2.00	1.00	1.00	1.00							
C306	3.00	3.00	2.00	2.00	2.00							
C307	3.00	3.00	3.00	3.00	3.00	-	-	-	2.00	-	-	-
C308	3.00	2.17	1.17	1.33	1.00	-	-	-	-	-	-	-
C309	3.00	2.17	1.17	1.33	1.00				2	2		
C310	2.00	2.00	2.00	2.00	1.00							
C311	2.00	2.00	2.00	2.00	1.00							
C312	2.00	2.00	2.10	2.10	1.00							
C313	1.50	2.00	1.10	1.00	1.00		2.00					
C314	2.00	2.00	2.00	2.00	2.00							
C315	3.00	3.00	2.00	2.00	2.00		3.00		3.00			
C316	3.00	3.00	2.00	2.00	2.00		3		3.00			
C317	3.00	2.50	3.00	1.50	1.00							
C401	2.5	2.5	1.67	1.5	1.00							
C402	2.40	2.00	3.00	2.00	2.00							
C403	3.00	2.00	2.00	2.00	2.00	2.00						
C404	2.00	2.00	3.00	1.68	2.00							
C405	3.00	2.40	3.00	3.00	2.00		3.00		2.60	2.90		
C406	3.00	3.00	3.00	0.67	1.00							
C407	2.83	3.00	3.00	2.50	1.00	1.00				3.00		
C408	3.00	3.00	3.00	2.00	1.00				3.0	3.0		
C410	2.83	2.67	2.00	1.67	1.00	3	-	2	3	3	3	2
C411	2.83	2.50	2.20	1.60	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C412	3.00	2.00	2.00	2.00	2.00	2.00	3.00					
C413	2.50	2.00	2.50	2.50	1.00	3	3	3	3	3	3	3
C414	-	-	-	-	3.00	-	-	-	-	3.00	-	3.00
C415	2	-	-	-	2	-	-	2	-	3	-	-

Table 3.1.23: CO-PSO mapping matrix for all courses including first year courses

Course Code	PSO1	PSO2
C101	1.00	1.00
C102	2.00	2.00
C103	1.00	1.00
C104	1.00	1.00
C105	1.00	1.00
C106	1.00	1.00
C107	2.2	1.8
C108	1.4	1.6
C109	1.4	1.6
C110	1.08	1.20
C111	0.84	0.93
C112	0.84	0.93
C113	1.00	1.00
C114	1.00	1.00
C115	1.09	1.09
C116	2.2	2
C117	2.2	1.8
C201	1.00	1.00
C202	-	-
C203	-	-
C204	1.00	-
C205	-	-
C206	-	-
C207	-	-
C208	-	2.00
C209	3.00	2.50
C210	-	2.00
C211	2.00	
C212	-	-
C213	-	-
C214	0	2.00
C215	3.00	-
C216	3.00	-
C217	-	-
C218	3.00	1.00
C301	3.00	-
C302	-	2.00
C303	-	2.00
C304	3.00	-
C305	-	2.00

C306	-	2.00
C307	-	-
C308	-	2.00
C309	3.00	0.00
C310	3.00	-
C311	3.00	-
C312	-	2.00
C313	-	2.00
C314	-	3.00
C315	-	2.00
C316	-	2.00
C317	1.50	0.00
C318	2.60	-
C401	3.00	-
C402	-	3.00
C403	-	3.00
C404	-	3.00
C405	3.00	2.00
C406	3.00	1.00
C407	0.00	1.33
C408	-	-
C410	-	2.00
C411	1.00	1.00
C412	-	-
C413	-	-
C414	-	3.00
C415	-	-

3.2. Attainment of Course Outcomes

(50)

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

(10)

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - Continuous Internal Assessment(CIA)
 - Semester End Examination(SEE)
 - Projects
 - Assignments
- **INDIRECT ASSESSMENT METHODS**
 - Course Exit survey

CO ASSESSMENT PROCESS

The CO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in fig 3.1

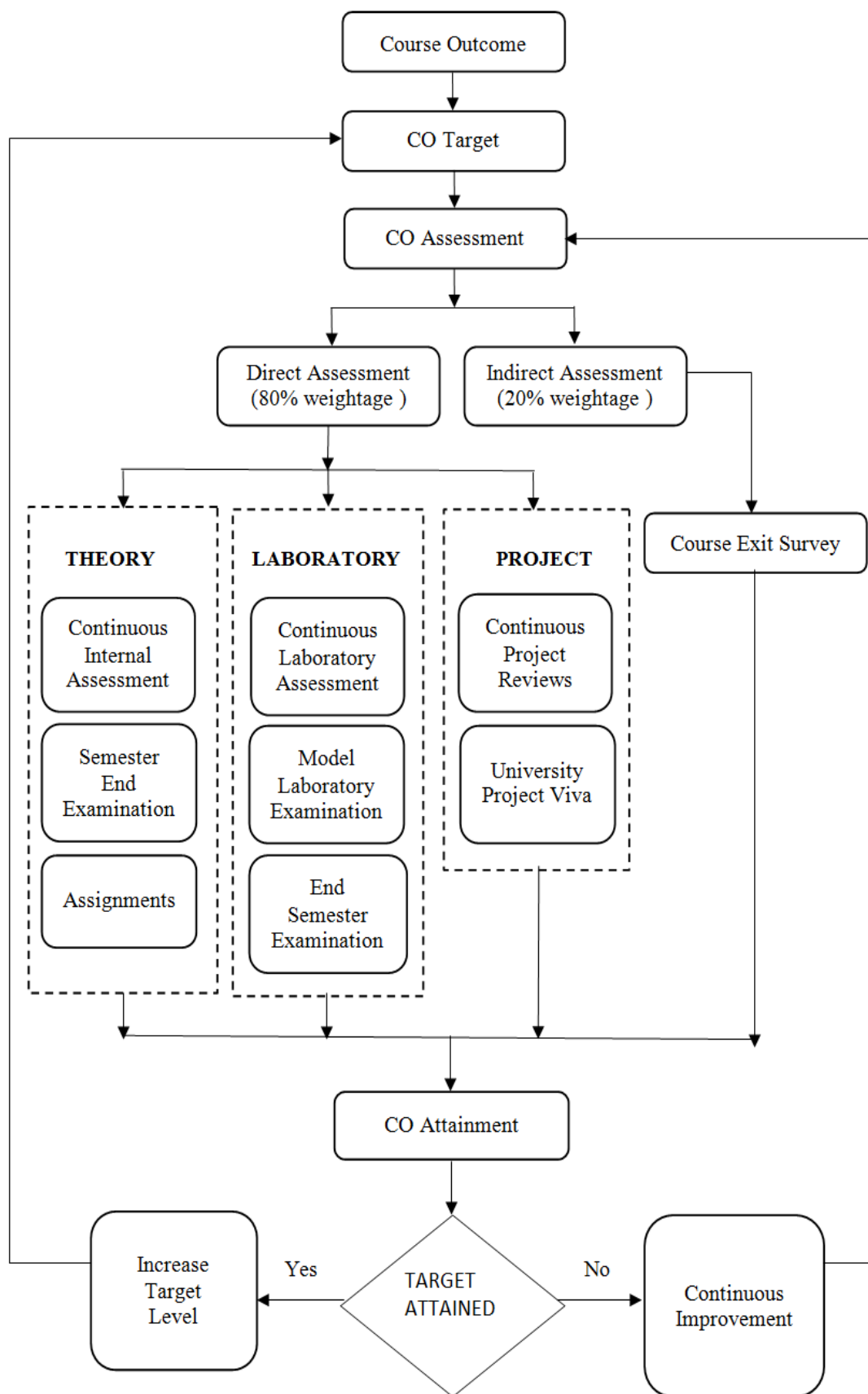


Figure 3.1 : CO Assessment Process

CO ASSESSMENT METHODOLOGY AND TOOLS

Table. 3.2.1.a: CO Assessment Methodology and Tools

Assessing Batch	Assessment methods		Assessment tools	Time interval	Responsible person
2016-2020	Direct Assessment (80%)				
	Theory courses	Continuous Internal Assessment	Examination	Thrice in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	University
		Assignments	Rubrics	Thrice in a semester	Faculty
	Lab Courses	Continuous Laboratory Assessment	Regular Lab work assessment	Once in a week	Faculty
		Model Laboratory Examination	Examination	Once in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	Faculty
	Project Work	Initial Project Review	Rubrics	Once in Pre-final semester	Project Coordinator
		Continuous Project Reviews	Rubrics	Twice in final semester	Project Coordinator
		University Project Viva	Examination	Once in a semester	University
	Indirect Assessment (20%)				
	Course Exit Survey	Survey	CO based	Once in a semester	Faculty

THE QUALITY /RELEVANCE OF ASSESSMENT PROCESSES & TOOLS USED

Table 3.2.2: Quality /Relevance of assessment process

Assessment Tool	Description/Relevance	Evaluated By
DIRECT ASSESSMENT		
Continuous Internal Assessment (CIA)	- Continuous Internal Assessment is a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. - The questions in Continuous Assessment Examination (CAE) and Model Examination (ME) are mapped against COs of respective courses. - The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department. - Question Paper scrutiny committee of the department ensures the quality of question papers and coverage of COs. - The Question Paper scrutiny committee can either accept or reject or recommend for modification of the framed question paper to ensure the quality of internal question papers. - Two Continuous Assessment Examinations and One Model Examination will be conducted for each Course. CAE – I :50 marks(CO1 & CO2) CAE – II: 50 marks (CO3 & CO4) ME : 100 marks (CO1, CO2,CO3,CO4,CO5,C06) - Students secured less than 50% of marks in CAE 1 and having more than 3 arrears in the past University Examinations will be considered as weak students and given remedial classes using simple and smart study material.	Course faculty
Semester End Examination (SEE)	- The Semester End Examination is of 3-hour duration which covers the entire Syllabus of the course. - It would generally satisfy all course outcomes for the respective courses.	University Evaluators

Assignments	• Assignments are given to students to provide practice exposure and knowledge enhancement of the course by the Faculty members concerned. • Three assignments will be given during the course optionally based on the student's performance analysis for the course by the concerned faculty and evaluated on the basis of rubrics.	Course faculty
Laboratory Assessment	• Lab courses provide hands-on experience with course concepts and an opportunity to explore the technologies used in the domain. • Continuous Lab Assessment is based on the lab assessment rubrics which include ability of the students to conduct the prescribed practical work, interpret the result and conclusion, Record Preparation and Submission. • Laboratory model examination is conducted similar to the university Practical Examination to assess whether the course outcomes are attained	Course Faculty
University Practical Examination	• The university practical examinations are of 3-hours. The evaluation is done by the External Examiner appointed by the university. • University Practical Examination assessment is to assess whether the lab course outcomes are attained.	University Evaluators
Projects	• Students apply the knowledge gained in the theoretical and practical courses in the implementation of their academic projects • Periodical reviews will be conducted to monitor and evaluate the progress of project work. • Review I : 20 MARKS (CO1 ,CO2 CO7,CO8 & CO9) • Review II : 20 MARKS (CO3 , CO4, CO7,CO8 & CO9) • Review III: 20 MARKS (CO5 ,CO6,CO7,CO8 & CO9) • Each project is evaluated both internally by project rubrics and externally by University and graded according to the quality of project	Project Supervisor, Internal Examiner and External Examiner.
INDIRECT ASSESSMENT		
Course exit survey	On completion of every semester, a feedback is Obtained from the students to assess the learning outcomes of the course.	Course Faculty

ATTAINMENT OF COURSE OUTCOME

CO Attainment calculation:

- In the CO attainment calculation for a course, 80% weightage is given to direct assessment and 20% weightage is given to Indirect assessment.

Table 3.2.3: Weightage for CO Attainment calculation

Assessment type	Percentage
Direct Assessment 1 and 2	80
Indirect assessment (Course Exit Survey)	20

- 60% of the direct assessment is contributed by Semester End Examination and 40% from Continuous Internal Assessment (CIA) for theory courses.
- The 40% contribution from CIA includes Continuous Assessment Examination I Continuous Assessment Examination II ,Model Examination and Assignments
- Assignments will be provided optionally based on the student's performance analysis for the course by the concerned faculty.

Table 3.2.4: Weightage distribution of Direct Assessment for CO Attainment calculation

Assessment type	Weightage Percentage
Direct Assessment 1 (CAE1,CAE 2, ME & Assignments)	40
Direct Assessment 2 (University Examination)	60

- For Lab courses, 60% of the direct assessment is contributed by Semester End Examination (SEE) and 40% by continuous assessment process.
- The 40% contribution in lab courses by continuous assessment process include continues assessment of every experiment based on rubrics and model lab examination.
- The percentage of students in the class who scored more than threshold percentage of marks in the respective CO is the attainment.
- The threshold percentage of marks is fixed based on considering the university results for the past 3 years + 5%.
- Indirect Assessment of CO attainment is based on Course Exit Survey.

Direct Attainment

Direct Attainment = $\frac{\text{No of students scored more than threshold percentage of marks}}{\text{Total no of students}} \times 100$

Direct Attainment Levels:

Level 1: If less than 50% of students attained the threshold percentage of marks

Level 2: If 50% to 60% of students attained the threshold percentage of marks

Level 3: If more than 60% of students attained the threshold percentage of marks

Table 3.28: Direct Attainment Calculation

Indirect Attainment (Course Exit Survey)

Table 3.2.5: Indirect Attainment Calculation

$$\text{Attainment} = \frac{\sum_{i=1}^5 i * \text{no. of students gave } i \text{ option}}{5 * \text{no. of responses}}$$

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

Table 3.2.6: CO Target vs Attainment

Course Code	CO Attainment					
	CO1	CO2	CO3	CO4	CO5	CO6
C101	2.68	2.68	2.68	2.68	2.68	3.00
C102	2.36	2.36	2.36	2.16	2.16	1.4
C103	2.48	2.48	2.68	2.48	2.48	3.00
C104	2.80	2.80	3.00	2.80	2.80	3.00
C105	3.00	2.80	2.80	3.00	2.80	3.00
C106	2.48	2.68	2.68	2.48	2.68	3.00
C107	2.00	2.00	2.00	2.00	2.00	3.00
C108	2.80	2.80	2.80	2.80	2.80	3.00
C109	2.00	2.00	2.00	2.00	2.00	3.00
C110	3.00	3.00	3.00	3.00	3.00	3.00
C111	3.00	3.00	3.00	3.00	3.00	2.2
C112	3.00	3.00	3.00	3.00	3.00	2.2
C113	3.00	3.00	3.00	3.00	3.00	3.00
C114	2.52	2.52	2.52	2.52	2.52	2.52
C115	3.00	3.00	3.00	3.00	3.00	3.00
C116	2.20	2.20	2.20	2.20	2.20	3.00
C117	2.80	2.80	2.80	2.80	2.80	3.00
C201	3.00	3.00	3.00	3.00	3.00	1.68
C202	1.20	1.20	1.20	1.20	1.20	1.68
C203	2.16	2.16	2.16	2.16	2.16	2.52
C204	1.68	1.68	1.68	1.68	1.68	3.00
C205	2.16	2.16	2.16	2.16	2.16	3.00
C206	2.16	2.16	2.16	2.16	2.16	3.00
C207	1.20	1.20	1.20	1.20	1.20	3.00
C208	3.00	3.00	3.00	3.00	3.00	3.00
C209	2.00	2.00	2.00	2.00	2.00	3.00
C210	3.00	3.00	3.00	3.00	3.00	1.68

C211	2.16	2.16	2.16	2.16	2.16	3.00
C212	2.16	2.16	2.16	2.16	2.16	2.04
C213	2.16	2.16	2.16	2.16	2.16	2.52
C214	2.20	2.20	2.20	2.20	2.20	3.00
C215	2.16	2.16	2.16	2.16	2.16	2.04
C216	2.16	2.16	2.16	2.16	2.16	3.00
C217	2.80	2.80	2.80	2.80	2.80	1.56
C218	3.00	3.00	3.00	3.00	3.00	3.00
C301	3.00	3.00	3.00	3.00	3.00	3.00
C302	2.16	2.16	2.16	2.16	2.16	2.52
C303	2.16	2.16	2.16	2.16	2.16	1.68
C304	2.16	2.16	2.16	2.16	2.16	3.00
C305	2.16	2.16	2.16	2.16	2.16	2.04
C306	2.16	2.16	2.16	2.16	2.16	3.00
C307	2.16	2.16	2.16	2.16	2.16	3.00
C308	3.00	3.00	3.00	3.00	3.00	3.00
C309	2.80	2.80	2.80	2.80	2.80	3.00
C310	2.00	2.00	2.00	2.00	2.00	2.32
C311	3.00	3.00	3.00	3.00	2.36	3.00
C312	3.00	3.00	3.00	3.00	2.36	3.00
C313	3.00	3.00	3.00	3.00	2.36	3.00
C314	2.20	2.20	2.20	2.20	2.20	2.32
C315	3.00	3.00	3.00	3.00	2.36	1.68
C316	2.68	2.68	2.68	2.68	2.68	3.00
C317	2.36	2.36	2.36	2.16	2.16	3.00
C401	2.48	2.48	2.68	2.48	2.48	2.36
C402	2.80	2.80	3.00	2.80	2.80	2.52
C403	3.00	2.80	2.80	3.00	2.80	2.52
C404	2.48	2.68	2.68	2.48	2.68	3.00
C405	2.00	2.00	2.00	2.00	2.00	3.00
C406	2.80	2.80	2.80	2.80	2.80	1.68
C407	2.00	2.00	2.00	2.00	2.00	3.00
C408	3.00	3.00	3.00	3.00	3.00	3.00
C410	3.00	3.00	3.00	3.00	3.00	3.00
C411	3.00	3.00	3.00	3.00	3.00	3.00
C412	3.00	3.00	3.00	3.00	3.00	3.00
C413	2.52	2.52	2.52	2.52	2.52	2.68
C414	2.70	2.60	2.50	2.68	2.80	2.64
C415	2.58	2.68	2.74	2.64	2.88	2.74

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

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

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - **CO-PO&PSO Attainment**
 - Academic Courses
 - value added course
 - Technical Seminar
- **INDIRECT ASSESSMENT METHODS**
 - **SURVEYS**
 - Program Exit survey
 - Employer Survey

PO & PSO- ASSESSMENT PROCESS

The CO-PO&PSO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in fig 3.2

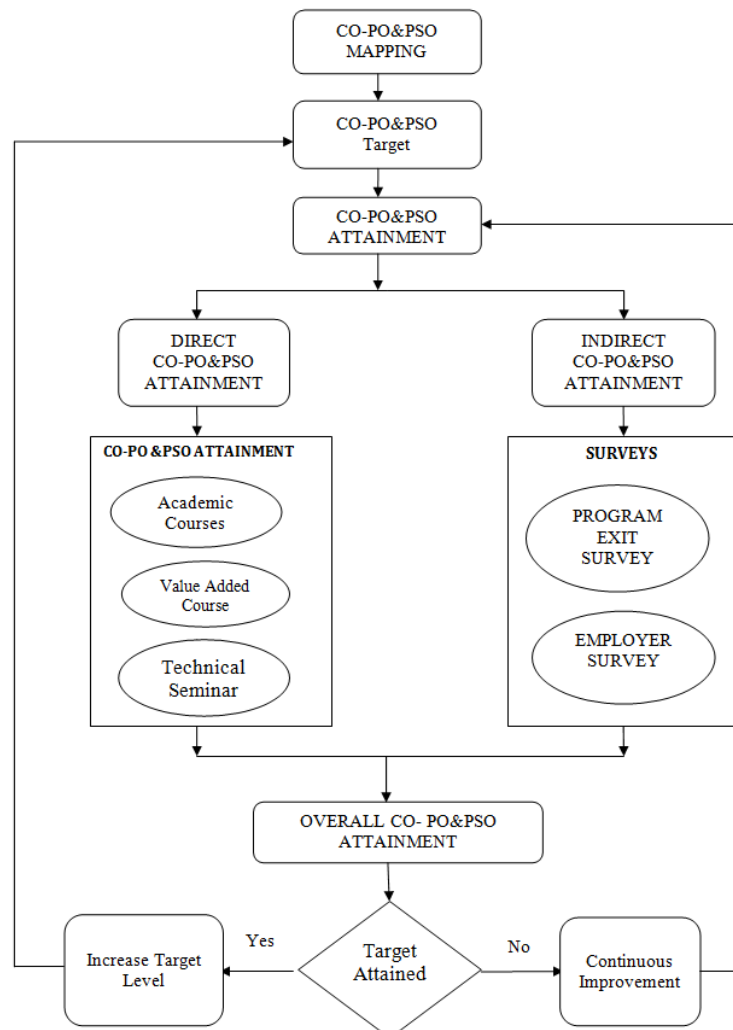


Figure 3.2 Co-PO & PSO Assessment Process

CO-PO & PSO ASSESSMENT PROCESS

The CO-PO&PSO attainment is computed through direct and indirect assessment process. The direct part is computed through the attainment of COs from all academic courses, value added course and Technical seminar. The indirect attainments of the POs are computed through Program Exit Survey and Employer Survey among stakeholders. The overall attainment of outcomes of a program (POs) is computed by adding direct attainment and indirect attainment values in the proportion ratio of 80:20. That is, 80% of direct attainment and 20% of indirect attainment is taken into consideration.

PO/PSO Attainment is computed based on the following expression:

Table 3.3.1: PO/ PSO attainment calculation

Direct	Attainment of PO/PSO through a Course: $PO_{ij} \text{ Attainment} = \frac{\sum_{k=1}^{comax} CA_k \cdot MS}{n \cdot NCO}$ Where, PO_{ij} is the Attainment of 'i' th PO through the course 'j' CA_k is the Attainment value of CO_k MS is the mapping strength of corresponding course outcome to which PO_i is addressed n is the maximum possible mapping strength NCO is the number of all associated COs for PO_i Attainment of PO/PSO through all courses Poi Attainment = Average across all Courses Addressing that POs/PSOs
Indirect	$PO_i = \frac{\sum_{i=1}^5 i * \text{no. of students gave } i \text{ option}}{5 * \text{no. of responses}}$ Where, PO_i is the attainment of the 'i'th PO

THE QUALITY/RELEVANCE OF ASSESSMENT TOOLS/PROCESSES USED

Table 3.3.2: Quality /Relevance of PO/PSO assessment process

Assessment Tool	Description	Evaluated By	Frequency
DIRECT ASSESSMENT			
CO-PO & PSO Attainment	- The overall CO-PO&PSO Attainment is based on the average attainment of all associated academic courses, value added course and Technical seminar - The value added course is conducted in the 5th semester of the program and continuous assessment of value added course is based on assessment rubrics which include ability of the students to	Course Faculty/ PAC	End of semester, for all courses.

	use modern tools, effective technical communication and lifelong learning. • Technical seminar is conducted in the 7th semester of the program and evaluated using assessment rubrics which include ability of the students to apply Engineering knowledge, use modern tools, apply ethical principles, effective technical communication and lifelong learning.		
INDIRECT ASSESSMENT			
Program Exit Survey	• Program Exit Survey is conducted for students who have graduated out of the department for that year. • Evaluation parameters are formulated in the Program Exit Survey form to evaluate attainment of POs and PSOs. • Each evaluation parameter has one to five ratings. The survey results are tabulated and the average values corresponding to each PO and PSO are determined.	PAC	End of the Program
Employer feedback	• Feedback from the employers of students is taken to assess the attainment of POs and PSOs • Evaluation parameters are formulated in the employer survey form to evaluate attainment of POs and PSOs • Each evaluation parameter has one to five ratings. The survey results are tabulated and the average values corresponding to each PO and PSO are determined.	PAC	End of the Program

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

Attainment levels are calculated from the direct assessment and indirect assessment of student performance.

Table 3.3.3: Attainment of POs and PSOs

Course code	Course	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
C101	HS6151	Technical English – I	3.00	2.70	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.5	1.67
C102	MA6151	Mathematics – I	3.00	2.70	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.7	0.78
C103	PH6151	Engineering Physics – I	2.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.5	1.67
C104	CY6151	Engineering Chemistry – I	2.00	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	1.67
C105	GE6151	Computer Programming	3.00	1.20	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	1.67
C106	GE6152	Engineering Graphics	2.00	2.70	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.5	1.67
C107	GE6161	Computer Practices Laboratory	3.00	2.80	3.00	1.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	1.4	1.4
C108	GE6162	Engineering Practices Laboratory	2.60	2.80	3.00	1.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	1.4	1.4

C109	GE6163	Physics And Chemistry Laboratory -I	2.60	2.80	3.00	1.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	1.4	1.4
C110	HS6251	Technical English – II	2.00	1.17	1.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	1.67
C111	MA6251	Mathematics – II	1.96	2.08	1.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73
C112	PH6251	Engineering Physics – II	1.34	0.61	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.73
C113	CY6251	Engineering Chemistry – II	1.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	1.67
C114	GE6252	Basic Electrical And Electronics Engineering	2.24	2.38	1.00	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84
C115	GE6253	Engineering Mechanics	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	1
C116	GE6261	Computer Aided Drafting And Modeling Laboratory	2.60	2.80	3.00	3.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	1.4	1.4
C117	GE6262	Physics And Chemistry Laboratory - II	2.60	2.80	3.00	3.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	1.4	1.4

C201	MA6351	Transforms And Partial Differential Equations	2	2.3	1	2	1	0	0	0.00	0	0	0.00	0.00	1	1
C202	GE6351	Environment al Science And Engineering	2.3	2	1.1	0.84	1	1.6	1.6	0.00	0	0	0.00	0.00	0	0
C203	CE6301	Engineering Geology	2.3	1.2	1.12	0.56	1	0	0	0.00	0	0	0.00	0.00	0	0
C204	CE6302	Mechanics Of Solids	2.3	2	1	1	1	0	0	0.00	0	0	0.00	0.00	2	0
C205	CE6303	Mechanics Of Fluids	3	3	1.36	1.36	0	0	0	0.00	0	0	0.00	0.00	0	0
C206	CE6304	Surveying I	2	2	1	1	1	0	0	0.00	0	0	0.00	0.00	0	0
C207	CE6311	Survey Practical I	3	3	2	2	1	0	0	0.00	1.7	0	0.00	0.00	0	0
C208	CE6312	Computer Aided Building Drawing	2.5	3	2	2	1	0	0	0.00	1.54	0	0.00	0.00	0	2
C210	MA6459	Numerical Methods	3	3	2	2	1	0	0	0.00	0	0	0.00	0.00	0	2.5

C211	CE6401	Construction Materials	2.4	2.42	2.3	1.6	0.6	0	0	0.00	0	0	0.00	0.00	2	0
C212	CE6402	Strength Of Materials	2	2	1	1	1	0	0	0.00	0	0	0.00	0.00	0	0
C213	CE6403	Applied Hydraulic Engineering	3	3	2	1	1	0	0	0.00	0	0	0.00	0.00	0	0
C214	CE6404	Surveying II	2	2	2	2	1	0	0	0.00	0	0	0.00	0.00	0	0
C215	CE6405	Soil Mechanics	1.5	2	1.1	1	1	0	0	0.00	0	0	0.00	0.00	2.5	0
C216	CE6411	Strength Of Materials Laboratory	2	2	2	2	2	0	0	0.00	1.7	0	0.00	0.00	2	0
C217	CE6412	Hydraulic Engineering Laboratory	3	3	2	2	2	0	0	0.00	1.54	0	0.00	0.00	0	0
C218	CE6413	Survey Practical II	3	3	2	2	2	0	0	0.00	0	0	0.00	0.00	0	0
C301	CE6501	Structural Analysis I	3	3	3	1	1	0	0	0.00	0	0	0.00	0.00	2.3	2.1

C302	CE6502	Foundation Engineering	2.24	2.38	1.52	2	2	0	0	0.00	0	0	0.00	0.00	0	2
C303	CE6503	Environmental Engineering I	2.32	2	1.52	2	1.68	0	0	0.00	0	0	0.00	0.00	0	2
C304	CE 6504	Highway Engineering	2.4	2	1.48	2	2	0	0	0.00	0	0	0.00	0.00	2.6	0
C305	CE6505	Design Of Reinforced Concrete Elements	3	2	2	2	2	0	0	0.00	0	0	0.00	0.00	0	2.1
C306	CE6506	Construction Techniques, Equipment And Practice	2	2	1.68	1.68	2	0	0	0.00	0	0	0.00	0.00	0	2
C307	GE6674	Communication And Soft Skills- Laboratory Based	3	2.4	2	3	2	0	0	0.00	0	2.9	0.00	0.00	0	0
C308	CE6511	Soil Mechanics Laboratory	3	3	1.17	0.67	1	3	3	0.00	2.85	2.6	0.00	0.00	0	2.0
C309	CE6512	Survey Camp	3	2	1.7	2.6	2	0	0	0.00	2.1	2.3	0.00	0.00	2	0

C310	CE6601	Design Of Reinforced Concrete & Brick Masonry Structures	3	3	3	2	1	0	0	0.00	0	0	0.00	0.00	2.8	0
C311	CE6602	Structural Analysis II	3	2	1.4	1	2	0	0	0.00	0	0	0.00	0.00	2.8	0
C312	CE6603	Design Of Steel Structures	2.64	3	1.11	1	1	0	0	0.00	0	0	0.00	0.00	0	2.8
C313	CE6604	Railways, Airports And Harbour Engineering	2	1.5	1.58	1.58	2	0	2.30	0.00	0	0	0.00	0.00	0	2
C314	CE6605	Environmental Engineering II	3	1.5	1.58	1.58	2	0	0	0.00	0	0	0.00	0.00	0	2
C315	CE6002	Concrete Technology	2.4	1.58	2	2	1	0	2.3	0.00	2.4	0	0.00	0.00	0	2.8
C316	CE 6611	Environmental Engineering Laboratory	2	2	1	1.33	1	0	2.1	0.00	1.8	0	0.00	0.00	0	2

C317	CE6612	Concrete And Highway Engineering Laboratory	2	2.4	1.45	1	1	0	0	0.00	0	0	0.00	0.00	2	0
C401	CE6701	Structural Dynamics And Earthquake Engineering	3	3	3	2	1	0	0	0.00	0	0	0.00	0.00	3	0
C402	CE6702	Prestressed Concrete Structures	3	3	2	2	2	0	0	0.00	0	0	0.00	0.00	0	2.6
C403	CE6703	Water Resources And Irrigation Engineering	2.6	3	3	2	2	2.1	0	0.00	0	0	0.00	0.00	0	2.2
C404	CE6704	Estimation And Quantity Surveying	1.6	2	1.3	1.68	1	0	0	0.00	0	0	0.00	0.00	0	2
C405	EN6501	Municipal Solid Waste Management	2	1	1	1	1	0	2.0	0.00	2.1	2.2	0.00	0.00	2.1	2.2
C406	CE6006	Traffic Engineering And Management	1.7	1.8	2	0.68	1	0	0	0.00	0	0	0.00	0.00	2.3	2.4

C407	CE 6711	Computer Aided Design And Drafting Laboratory	2.2	1	2	0.7	1	1.8	0	0.00	0	2.6	0.00	0.00	0	2
C408	CE 6712	Design Project	2	2	1	1	1	0	0	0.00	2.8	2.7	0.00	0.00	0	0
C410	MG6851	Principles Of Management	3		2	1.67	1	3	0	2	3	3	3	2	0	3
C411	CE6016	Prefabricated Structures	3	3	2.6	2	2	0	0	0.00	0	0	0.00	0.00	2.10	2.34
C412	CE6021	Repair And Rehabilitation Of Structures	3	2	1.6	2	1.75	2.1	2.4	0.00	2	0	0.00	0.00	0	0
C413	CE6811	Project Work	3	2	1	2	1	2.33	2.5	2.56	2.61	2.3	2.10	2.32	3	3
C414		Value Added Course	0	0	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0	3
C415		Technical Seminar	2	0	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	0.00	3.00	0	0
Direct Attainment Average			2.46	2.21	1.71	1.61	1.47	2.25	2.28	2.29	2.17	2.59	2.55	2.51	2.26	2.25

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 11	PSO 12
CO Attainment	2.57	2.37	1.97	1.89	1.77	2.40	2.42	2.43	2.34	2.67	2.64	2.61	2.41	2.40
Direct Attainment	2.46	2.21	1.71	1.61	1.47	2.25	2.28	2.29	2.17	2.59	2.55	2.51	2.26	2.25
Indirect Attainment	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Criteria 4	Students' Performance	150
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Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2020 – 21 (CAY)	2019-20 (CAYm1)	2018-19 (CAYm2)	2017-18 (CAYm3)	2016-17 (CAYm4)	2015-16 (CAYm5)	2014-15 (CAYm6)
Sanctioned intake of the program(N)	120	120	120	120	120	120	120
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	32	62	61	96	104	114	113
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	14	5	12	8	14	14	14
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	46	67	73	104	118	128	127

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
2020-21 (CAY)	46	32	0	0	0
2019-20 (CAYm1)	67	0	0	0	0
2018-19 (CAYm2)	73	18	0	0	0
2017-18 (CAYm3)	104	17	21	0	0
2016-17 (LYG)	118	22	25	23	0
2015-16 (LYGm1)	128	33	37	36	36
2014-15 (LYGm2)	127	36	38	36	33

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
2020-21 (CAY)	46	32	0	0	0
2019-20 (CAYm1)	67	0	0	0	0
2018-19 (CAYm2)	73	61	0	0	0
2017-18 (CAYm3)	104	96	104	0	0
2016-17 (LYG)	118	104	118	118	0
2015-16 (LYGm1)	128	114	128	128	56
2014-15 (LYGm2)	127	113	127	127	53

4.1 Enrolment Ratio (20)**Table 4.4 Enrolment Ratio**

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2020-21 (CAY)	120	33	27.5
2019-20 (CAYm1)	120	62	51.67
2018-19 (CAYm2)	120	61	50.83

Average [(ER1 + ER2 + ER3) / 3] : 60.83

Assessment : 14.00

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

4.2.1 Success rate without backlogs in any semester / year of study (25)

Table 4.5: Success rate without backlogs in any semester / year of study

Item	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation, LYG minus 1 (2015-16)	Latest Year of Graduation minus 2, LYGm1 (2014-15)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division, if applicable	118	128.00	127.00
Y Number of students who have graduated without backlogs in the stipulated period	10.00	36.00	33.00
Success Index [$SI = Y / X$]	0.08	0.28	0.26

Average SI [$(SI1 + SI2 + SI3) / 3$] : 0.27

Assessment [$25 * \text{Average SI}$] : 6.75

4.2.2 Success rate in stipulated period (15)

Table 4.6: Success rate in stipulated period

Item	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation, LYG minus 1 (2015-16)	Latest Year of Graduation minus 2, LYGm1 (2014-15)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and separated division, if applicable	118	128.00	127.00
Y Number of students who have graduated in the stipulated period	114	56.00	53.00
Success Index [$SI = Y / X$]	0.97	0.44	0.42

Average SI [(SI1 + SI2 + SI3) / 3]: 0.42

Assessment [15 * Average SI] : 6.30

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)

Table 4.6: Academic Performance in Third Year

Academic Performance	CAYm3 (2017-18)	LYG (2016-17)	LYGm1 (2015-16)
Mean of CGPA or mean percentage of all successful students(X)	7.03	6.11	6.32
Total number of successful students(Y)	104	118.00	128.00
Total number of students appeared in the examination(Z)	104	118.00	128.00
API [X*(Y/Z)]:	7.03	6.11	6.32

Average API [(AP1 + AP2 + AP3)/3] : 6.29

Assessment [1.5 * AverageAPI] : 9.43

4.4 Academic Performance in Second Year (15)

Table 4.7: Academic Performance in Second Year

Academic Performance	CAYm2 (2018 – 19)	CAYm3 (2017-18)	LYG (2016-17)
Mean of CGPA or mean percentage of all successful students(X)	6.57	6.21	6.48
Total number of successful students (Y)	73	104.00	118.00
Total number of students appeared in the examination (Z)	73	104.00	118.00
API [X * (Y/Z)]	6.57	6.21	6.48

Average API [(AP1 + AP2 + AP3)/3] : 6.43

Assessment [1.5 * AverageAPI] : 9.64

4.5 Placement, Higher Studies and Entrepreneurship (40)

Item	LYG (2016-17)	LYGm1 (2015-16)	LYGm2 (2014-15)
Total No of Final Year Students(N)	118	128.00	127.00
No of students placed in the companies or government sector(X)	65	112.00	112.00
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	5.00	7.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	1.00	3.00
$x + y + z =$	65	118.00	122.00
Placement Index [$(X+Y+Z)/N$] :	55.08	0.92	0.96

Average Placement [$(P1 + P2 + P3)/3$] : 0.96

Assessment [$40 * \text{Average Placement}$] : 38.27

Program Name :

Assessment Year Name : (2016-17)

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aaromal Vijay V	961416103001	TATA Consultancy Services	TCS/DT20195714176 /1318240/Trivandrum
2	Anson Abraham Mathew	961416103021	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AF0723
3	Ajin Mon G	961416103012	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AF0734
4	Astel S M	961416103033	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AF0735
5	Bibin Jose C	961416103035	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AF0738
6	Heinrich Steev S R	961416103047	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AF0739
7	Jeena N R	961416103050	Arms Rehabilitation & Co, Chennai	AR/209/23-66
8	Jenish D	961416103052	Arms Rehabilitation & Co, Chennai	AR/209/23-69

9	Jibin John J	961416103056	Arms Rehabilitation & Co, Chennai	AR/209/23-68
10	Kemilton F	961416103066	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/231
11	Libin P Mammen	961416103071	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/232
12	Nithin Reji	961416103081	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/235
13	Prince M	961416103083	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/236
14	Redison Samuel	961416103084	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/222
15	Sachin George Poovathoor	961416103092	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/233
16	Sharon K Shiji	961416103098	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/224
17	Vinisha L	961416103108	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/225
18	Vinish V	961416103109	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/226
19	Vinitha V	961416103110	George Memorial Associates, Kattathurai	2007/GM092
20	Allan Geo S E	961416103701	George Memorial Associates, Kattathurai	2007/GM093
21	Sajith P	961416103311	George Memorial Associates, Kattathurai	2007/GM095
22	Roshan Thomas	961416103309	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/501
23	Nadar Jeen Caspro Jayaraj	961416103308	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/505
24	Anzil Alboo A	961416103304	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/506
25	Ajesh S K	961416103301	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/1251

26	Allwinraj B G	961416103302	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/1253
27	Vignesh B	961416103106	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/1255
28	Sachin Sunny	961416103093	JM Wings , Alakuzhi	JM/1201/175
29	Roshanth C	961416103090	JM Wings , Alakuzhi	JM/1201/177
30	Nantha Kumar S	961416103076	JM Wings , Alakuzhi	JM/1201/180
31	Kurian Cherian	961416103069	JM Wings , Alakuzhi	JM/1201/181
32	Jerlin Raj J	961416103053	JM Wings , Alakuzhi	JM/1201/182
33	Dazzle B Mathew	961416103043	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/1588
34	Christo Cecil X	961416103039	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/1589
35	Ashlin Vinish V P	961416103029	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/1590
36	Antony Chacko	961416103024	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/1591
37	Amal Dev J	961416103017	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/1593
38	Abish A	961416103006	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2118
39	Abel A Tharian	961416103002	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2595
40	Aldrin Som Varghese	961416103015	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2596
41	Ashik Thomas	961416103026	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2597
42	Amal George Jacob	961416103018	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2598
43	Christy Sebastian	961416103040	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2599

44	Gautham Mohan	961416103046	Sky Castle Builders, Kollemcode	SKY/20-22/103
45	Jijo R M	961416103058	Sky Castle Builders, Kollemcode	SKY/20-22/104
46	Kevin C Anil	961416103067	Sky Castle Builders, Kollemcode	SKY/20-22/105
47	Kishmu C	961416103068	Sky Castle Builders, Kollemcode	SKY/20-22/106
48	John Wesly S	961416103063	Sky Castle Builders, Kollemcode	SKY/20-22/108
49	Libin Thomas	961416103072	Sky Castle Builders, Kollemcode	SKY/20-22/109
50	Nikhil Sabu Philip	961416103077	Veritable Technologies & Designs, Kochi	V22-T09/2002/555
51	Biljin Benny	961416103037	Veritable Technologies & Designs, Kochi	V22-T09/2002/565
52	Anson G Johnson	961416103022	Veritable Technologies & Designs, Kochi	V22-T09/2002/566
53	Dawn Jacob	961416103042	Veritable Technologies & Designs, Kochi	V22-T09/2002/558
54	Jibin Biju Thomas	961416103054	Veritable Technologies & Designs, Kochi	V22-T09/2002/559
55	Jibin Issac	961416103055	Veritable Technologies & Designs, Kochi	V22-T09/2002/566
56	Ashwin S	961416103031	Veritable Technologies & Designs, Kochi	V22-T09/2002/567
57	Bibin Raj E	961416103036	Buil- Tech Engineers	1991.720/BR
58	Jinesh R V	961416103059	Buil- Tech Engineers	1991.723/JR
59	Kelvin Shelton	961416103065	Buil- Tech Engineers	1991.724/KS
60	Linu Varghese	961416103073	Buil- Tech Engineers	1991.726/SJ
61	Spencer J	961416103103	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/303
62	Jijo John Cecil	961416103057	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/304
63	Abin Daniel Abraham	961416103004	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/307

64	Asish Joseph Jacob	961416103028	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/308
65	Levin K Raj	961416103070	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/309

Assessment Year Name : (2015-16)

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Jeffin Yohannan	961415103055	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/145
2	Jegan L	961415103056	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/061
3	Jenish Y	961415103059	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/105
4	Jeshica D	961415103060	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/224
5	Jibin Kumar V.L	961415103061	JM Wings , Alakuzhi	JM/1302/020
6	Jibin Sabu	961415103062	Arms Rehabilitation & Co, Chennai	AR/209/21-24
7	Jiju K Aniyan	961415103063	Landmark Builders, Reethapuram	22/09/201
8	Jino Lukose	961415103064	Darwin Constructions Pvt Ltd, Chennai	DC/2002/152
9	Jirosha Das S.R	961415103066	Safa Constructions Pvt. Ltd.	DC/13-03/152
10	Jithin Thomas Kurian	961415103067	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/151
11	Jithin V Joseph	961415103068	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/049
12	Job K George	961415103070	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03899
13	Jobin P John	961415103309	MJ Constroctions Co Pvt Ltd, Nagercoil	15-10/1993/781
14	Jobin Raj P	961415103069	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/146
15	John Jijo C	961415103071	Landmark Builders, Reethapuram	22/09/202
16	Joyal J.M	961415103072	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/071
17	Kevin C Varghese	961415103073	Environ Constructions, Singapore	ECS/1832.422
18	Levin L Rajan	961415103074	Landmark Builders, Reethapuram	22/09/204
19	Libin Enson	961415103075	MJ Constroctions Co Pvt Ltd, Nagercoil	15-10/1993/777
20	Libin John	961415103076	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/072
21	Libin Mathew	961415103077	Landmark Builders, Reethapuram	22/09/205
22	Libin S	961415103078	Landmark Builders, Reethapuram	22/09/209

23	Libin Thomas	961415103079	Habitat Constructions Pvt Ltd, Karungal	PS/004/030
24	Lizy V	961415103080	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/073
25	Mammen C James	961415103081	Creative Constructions Pvt Ltd, Marthandam	12-22019/075
26	Manu Jacob Steaphen	961415103082	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/776
27	Megha V Prince	961415103083	CADD Centre	Dated: 01/03/2019
28	Melvin Abraham Mathew	961415103084	Safa Constructions Pvt. Ltd.	SCPL/T1/2268
29	Merlin Nija R	961415103085	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03910
30	Mijin Sherly George	961415103086	CADD Centre	Dated: 01/03/2019
31	Murugesh H	961415103087	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/226
32	Nibin Dhas D R	961415103310	Elssadai Constructions Pvt Ltd, Karungal	20/15/030/ND-30
33	Nigin R M	961415103088	Buil- Tech Engineers	1991.223/NR
34	Nirmal Abraham	961415103089	JM Wings , Alakuzhi	JM/1302/013
35	Noel Sam Louis	961415103091	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03901
36	Prabin J	961415103311	Arms Rehabilitation & Co, Chennai	AR/209/21-17
37	Pravin Joel Sam	961415103092	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/050
38	Rahul J L	961415103312	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/108
39	Rose Mary Mathew	961415103094	Safa Constructions Pvt. Ltd.	SCPL/T1/2275
40	Roshit Oommen Ipe	961415103095	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/774
41	Sachin M Varghese	961415103096	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03904
42	Sajin S C	961415103097	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/057
43	Sancho S	961415103099	Habitat Constructions Pvt Ltd, Karungal	PS/004/039
44	Sebin Sebastian	961415103100	CADD Centre	Dated: 01/03/2019
45	Shaine Thomas	961415103101	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03915
46	Sheny Mol C M	961415103102	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/773
47	Sherry P John	961415103104	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/052

48	Shibin T	961415103105	STUP Consultants, Bangalore	Dated :10/06/2019
49	Shiju C	961415103107	Elssadai Constructions Pvt Ltd, Karungal	20/15/028/SC-28
50	Shiny C	961415103314	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/230
51	Sijo Varghese Kosy	961415103108	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/779
52	Sojan Thomas	961415103110	Habitat Constructions Pvt Ltd, Karungal	PS/004/038
53	Stella Prakash	961415103111	Safa Constructions Pvt. Ltd.	SCPL/T1/2277
54	Stephanose R	961415103112	Arms Rehabilitation & Co, Chennai	AR/209/21-16
55	Subaitha R	961415103113	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/232
56	Sugitha G.S	961415103114	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/107
57	Suthan Nayagam R	961415103115	Essel	Dated: 25/02/2020
58	Tarantio Jim J	961415103116	JM Wings , Alakuzhi	JM/1302/017
59	Tisson Thomas	961415103117	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/780
60	Vigesh Ruben V R	961415103119	JM Wings , Alakuzhi	JM/1302/019
61	Vineeth P V	961415103120	JM Wings , Alakuzhi	JM/1302/018
62	Aarun Joe K S	961415103001	Buil- Tech Engineers	1991.234/AJ
63	Aaxel Lorett M	961415103002	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/099
64	Abeesh J	961415103003	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/103
65	Abhijith Saji	961415103004	Buil- Tech Engineers	1991.215/AS
66	Abin C BABu	961415103302	Safa Constructions Pvt. Ltd.	SCPL/T1/2267
67	Abin Tom Solomon	961415103005	Innovate Designers & Builders	I/TVM/231/430
68	Abish S	961415103007	Arms Rehabilitation & Co, Chennai	AR/209/21-11
69	Abisha R	961415103006	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/100
70	Adarsh S P	961415103009	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/101
71	Ajin D T	961415103010	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/222
72	Ajin K	961415103303	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/065
73	Ajin M Roy	961415103304	Arms Rehabilitation & Co, Chennai	AR/209/21-19
74	Ajith Kumar	961415103305	JM Wings , Alakuzhi	JM/1302/012
75	Alby ABraham	961415103012	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/052
76	Aleena A R	961415103013	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03897
77	Amal Raj R	961415103015	Elssadai Constructions Pvt Ltd, Karungal	20/15/029/AR-29
78	Amal Saji	961415103016	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/141

79	Ameesh Raj	961415103017	Landmark Builders, Reethapuram	22/09/200
80	Ananthu Das H	961415103018	Innovate Designers & Builders	I/TVM/231/433
81	Anila Vijayan V S	961415103019	JM Wings , Alakuzhi	JM/1302/011
82	Anish Kumar	961415103307	Elssadai Constructions Pvt Ltd, Karungal	20/15/021/AK-21
83	Annie J A	961415103021	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/055
84	Antony Francis	961415103022	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/062
85	Arjun A	961415103024	Elssadai Constructions Pvt Ltd, Karungal	20/15/024/AA-24
86	Arun Kumar M	961415103026	Buil- Tech Engineers	1991.211/AK
87	Arun Smith T	961415103701	Arms Rehabilitation & Co, Chennai	AR/209/21-14
88	Arundhathi Girish	961415103025	Innovate Designers & Builders	I/TVM/231/439
89	Athira A K	961415103027	Safa Constructions Pvt. Ltd.	SCPL/T1/2272
90	Beljin Paul P	961415103028	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/053
91	Benil Jacob Robin R	961415103029	Elssadai Constructions Pvt Ltd, Karungal	20/15/022/BJ-22
92	Benjamin P Mathew	961415103030	Safa Constructions Pvt. Ltd.	SCPL/T1/2269
93	Benz Thomas	961415103031	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/066
94	Bibin Varghese	961415103032	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/229
95	Bini Varghese	961415103033	CADD Centre	Dated: 01/03/2019
96	Binso Wilson	961415103034	Landmark Builders, Reethapuram	22/09/210
97	Blesson Thampi	961415103035	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/142
98	Borish Jancial T	961415103036	Essel	Dated: 25/02/2020
99	Christina Varghese	961415103037	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AC03898
100	Dayana Fredy Dominic	961415103038	Innovate Designers & Builders	I/TVM/231/441
101	Denisha V.S	961415103039	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/109
102	Dershlin K S	961415103040	Elssadai Constructions Pvt Ltd, Karungal	20/15/026/DK-26
103	Dhinesh S	961415103041	Arms Rehabilitation & Co, Chennai	AR/209/21-12
104	Feba Susan Thomas	961415103042	Creative Constructions Pvt Ltd, Marthandam	12-2/2019/059
105	Fidelis G Cletus	961415103043	Innovate Designers & Builders	I/TVM/231/432
106	Geo Vanil Varghese	961415103045	Habitat Constructions Pvt Ltd, Karungal	PS/004/029

107	Gokul Krishna S	961415103046	Buil- Tech Engineers	1991.221/GK
108	Gokulprasad	961415103047	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/771
109	Huxlin Nijay R L	961415103049	JM Wings , Alakuzhi	JM/1302/015
110	Jackson K O	961415103050	Buil- Tech Engineers	1991.219/JK
111	Jeba Mano R J	961415103053	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/111
112	Adarsh S	961415103008	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/110

Assessment Year Name : (2014-2015)

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aaron T Steephen	961414103001	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2115
2	Abijith M S	961414103004	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/221
3	Abijith V S	961414103005	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/720
4	Abin Thomas	961414103006	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/222
5	Abin Varughese	961414103007	Veritable Technologies & Designs, Kochi	V22-T09/2002/201
6	Abraham Mathew Koshy	961414103003	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2120
7	Abu .S. Varghese	961414103008	Veritable Technologies & Designs, Kochi	V22-T09/2002/202
8	Adarsh Babu	961414103009	Elssadai Constructions Pvt Ltd, Karungal	20/15/007/AB-07
9	Agesh Ram D	961414103301	Arms Rehabilitation & Co, Chennai	AR/209/19-28
10	Ajeesha	961414103010	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/181
11	Ajin Kumar. M	961414103011	George Memorial Associates, Kattathurai	2007/GM022
12	Ajin Tom Thomas	961414103013	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2117
13	Ajinth Jorvin R	961414103012	Arms Rehabilitation & Co, Chennai	AR/209/19-20
14	Ajith D	961414103015	George Memorial Associates, Kattathurai	2007/GM023
15	Ajith T	961414103302	Habitat Constructions Pvt Ltd, Karungal	PS/004/011
16	Ajithkumar K U	961414103016	Landmark Builders, Reethapuram	22/09/151
17	Ajoy Mon A J	961414103303	Habitat Constructions Pvt Ltd, Karungal	PS/004/007
18	Akash Thomas Chacko	961414103017	Veritable Technologies & Designs, Kochi	V22-T09/2002/203
19	Akhil S	961414103018	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2118

20	Akhil Varghese	961414103019	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/099
21	Akshay Prasobh	961414103020	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00626
22	Alen Louis	961414103021	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2119
23	Allen Thomas	961414103702	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00630
24	Ancy Vijayan	961414103023	George Memorial Associates, Kattathurai	2007/GM025
25	Andrew S	961414103304	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/185
26	Anfal A	961414103024	SUEZ, Coimbatore	SUEZ/2015/101
27	Anto P	961414103025	Habitat Constructions Pvt Ltd, Karungal	PS/004/003
28	Anujudithjt J T	961414103072	ESSEL, Poland	ES/2002/156
29	Aravind K	961414103026	Arms Rehabilitation & Co, Chennai	AR/209/19-21
30	Arun M	961414103027	Modern Builders, Manavalakurichi	MB-2013/51/71
31	Arun V L	961414103028	George Memorial Associates, Kattathurai	2007/GM030
32	Arun Y V	961414103029	Arms Rehabilitation & Co, Chennai	AR/209/19-22
33	Ashil Tom George	961414103030	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2122
34	Ashlin Tom Varghese	961414103033	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/077
35	Ashpin Raj	961414103034	Habitat Constructions Pvt Ltd, Karungal	PS/004/004
36	Basil Raj	961414103037	Veritable Technologies & Designs, Kochi	V22-T09/2002/222
37	Bency S H	961414103038	George Memorial Associates, Kattathurai	2007/GM026
38	Benisha T	961414103039	Landmark Builders, Reethapuram	22/09/152
39	Benitta Sherlin K	961414103040	George Memorial Associates, Kattathurai	2007/GM027
40	Bheno R K	961414103041	Arms Rehabilitation & Co, Chennai	AR/209/19-24
41	Bibin C Mathew	961414103042	Elssadai Constructions Pvt Ltd, Karungal	20/15/008/BM-08
42	Bijo Joseph	961414103043	Veritable Technologies & Designs, Kochi	V22-T09/2002/221
43	Blessa	961414103044	Habitat Constructions Pvt Ltd, Karungal	PS/004/005
44	Blesson Parayil Varkey	961414103045	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/227
45	Bobby George	961414103046	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/101
46	Catherin Gracy R M	961414103047	George Memorial Associates, Kattathurai	2007/GM029
47	Cyril Simon	961414103048	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/072

48	Darwin	961414103306	Modern Builders, Manavalakurichi	MB-2013/51/89
49	Dona Renjith	961414103052	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/230
50	Eyochan John Pattara	961414103054	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/239
51	Fayaz Mohammed N	961414103055	Arms Rehabilitation & Co, Chennai	AR/209/19-26
52	Geena Merin Saji	961414103056	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/714
53	Geethu D S	961414103057	Landmark Builders, Reethapuram	22/09/155
54	Jaimi A Varghese	961414103058	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/226
55	Jazim Hameed S	961414103059	Arms Rehabilitation & Co, Chennai	AR/209/19-27
56	Jenishia J R	961414103060	JM Wings , Alakuzhi	JM/1302/002
57	Jerin T	961414103061	SUEZ, Coimbatore	SUEZ/2015/102
58	Jestin Thomas Varghese	961414103062	Veritable Technologies & Designs, Kochi	V22-T09/2002/229
59	Jeya Singh T	961414103063	Landmark Builders, Reethapuram	22/09/154
60	Jibin John Joseph	961414103064	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/103
61	Jibu J	961414103069	Habitat Constructions Pvt Ltd, Karungal	PS/004/008
62	Jijo John	961414103065	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00628
63	Jikku Tom	961414103066	SUEZ, Coimbatore	SUEZ/2015/103
64	Jini	961414103703	Modern Builders, Manavalakurichi	MB-2013/51/77
65	Jino.P.John	961414103067	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/106
66	Jinu Ann Varghese	961414103068	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/715
67	Jobin Geoge	961414103071	Veritable Technologies & Designs, Kochi	V22-T09/2002/207
68	Jude Cherian Rajeev	961414103073	SUEZ, Coimbatore	SUEZ/2015/172
69	Kiran Sam	961414103075	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/109
70	Kristen C.Lopez	961414103076	Veritable Technologies & Designs, Kochi	V22-T09/2002/216
71	Libin Sabu	961414103077	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/074
72	Liji Zacharia	961414103079	SUEZ, Coimbatore	SUEZ/2015/173
73	Manu Joseph	961414103080	Elssadai Constructions Pvt Ltd, Karungal	20/15/009/MJ-09
74	Mobin Abraham	961414103081	Veritable Technologies & Designs, Kochi	V22-T09/2002/209

75	Neena George	961414103082	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00640
76	Nevin Joe Augustin	961414103083	Veritable Technologies & Designs, Kochi	V22-T09/2002/210
77	Phirathiba R	961414103084	Landmark Builders, Reethapuram	22/09/160
78	Prageesh P	961414103085	Elssadai Constructions Pvt Ltd, Karungal	20/15/010/PP-10
79	Ragul Rose J A	961414103086	Habitat Constructions Pvt Ltd, Karungal	PS/004/010
80	Rahul V	961414103087	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/182
81	Remya Krishnan	961414103308	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/719
82	ROMY Philip George	961414103090	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/716
83	Ruban Raja R	961414103091	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/188
84	Rufus Rajan John	961414103092	JM Wings , Alakuzhi	JM/1302/003
85	Saajan Simon	961414103093	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/075
86	Saban	961414103309	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/186
87	Sajan Saji	961414103094	SUEZ, Coimbatore	SUEZ/2015/176
88	Sarath J V	961414103095	Modern Builders, Manavalakurichi	MB-2013/51/73
89	Sarin Rajino R	961414103096	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/189
90	Sarun Raj R	961414103097	JM Wings , Alakuzhi	JM/1302/004
91	Shaiju A	961414103310	Modern Builders, Manavalakurichi	MB-2013/51/90
92	Sherin Thomas	961414103098	Elssadai Constructions Pvt Ltd, Karungal	20/15/013/ST-13
93	Shibin Varghese	961414103099	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00638
94	Sibi Thomas	961414103312	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/102
95	Siju Sam Sabu	961414103100	SUEZ, Coimbatore	SUEZ/2015/175
96	Sobu Geevarghese Thampan	961414103101	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/076
97	Stephin K	961414103102	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00637
98	Subitha Rani S	961414103104	Landmark Builders, Reethapuram	22/09/161
99	Suji R	961414103106	Landmark Builders, Reethapuram	22/09/163
100	Sujin K	961414103105	JM Wings , Alakuzhi	JM/1302/009
101	Sunith S I	961414103107	Modern Builders, Manavalakurichi	MB-2013/51/81
102	Thushanth S V	961414103108	Elssadai Constructions Pvt Ltd, Karungal	20/15/016/TS-16
103	Tom Jepherson Babu	961414103109	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/078

104	Tony P Tomy	961414103110	Elssadai Constructions Pvt Ltd, Karungal	20/15/015/TT-15
105	Towin Jacob Thomas	961414103111	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/712
106	Vibin M	961414103112	JM Wings , Alakuzhi	JM/1302/006
107	Vijila J S	961414103113	JM Wings , Alakuzhi	JM/1302/007
108	Vijin Mon K	961414103313	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00645
109	Vineetha Elza Varghese	961414103114	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/722
110	Vinishma V S	961414103115	JM Wings , Alakuzhi	JM/1302/010
111	Vipin Mohan	961414103116	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/AB00631
112	Vishnu Rajeev	961414103117	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/718

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Abinesh A M	961413103003	Arms Rehabilitation & Co, Chennai	AR/209/17-10
2	Abish V S	961413103004	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/049
3	Ahashmon P V	961413103301	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/051
4	Ajlin Riho H P	961413103009	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/066
5	Ajo Pappachan	961413103010	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2118
6	Ajo Samson	961413103011	Arms Rehabilitation & Co, Chennai	AR/209/17-09
7	Aju Michael	961413103012	Veritable Technologies & Designs, Kochi	V22-T09/2002/151
8	Akshaya W S	961413103014	JM Wings , Alakuzhi	JM/1201/010
9	Alin Dekson V L	961413103015	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/622
10	Ancillin Julie H G	961413103016	Sky Castle Builders, Kollemcode	SKY/20-22/66
11	Anish G	961413103017	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/069
12	Anjali Mohan	961413103018	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56789
13	Anto Libin K S	961413103302	George Memorial Associates, Kattathurai	2007/GM010
14	Aravind L S	961413103020	George Memorial Associates, Kattathurai	2007/GM005
15	Arun Kumar S	961413103304	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/057
16	Asha P	961413103021	JM Wings , Alakuzhi	JM/1201/008
17	Ashish Jacob	961413103022	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2119

18	Ashwin Yesudas	961413103024	Arms Rehabilitation & Co, Chennai	AR/209/17-05
19	Athira Ramesh	961413103025	Veritable Technologies & Designs, Kochi	V22-T09/2002/161
20	Berocin Biju F	961413103026	JM Wings , Alakuzhi	JM/1201/011
21	Bibin Babu T	961413103027	Sky Castle Builders, Kollemcode	SKY/20-22/51
22	Binoy Justin	961413103028	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2120
23	Bismi V K	961413103029	Barath Constructions Pvt Ltd, Nagercoil	BC/NGL/055
24	Brilin John Bright J L	961413103030	George Memorial Associates, Kattathurai	2007/GM006
25	Debin David D F	961413103031	Sky Castle Builders, Kollemcode	SKY/20-22/61
26	Deno Felfin	961413103305	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/628
27	Devanegesh D	961413103032	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/068
28	Devika Gopal	961413103033	Sky Castle Builders, Kollemcode	SKY/20-22/52
29	Gibson Mathew Varghese	961413103038	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2121
30	Gokul S	961413103039	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/182
31	Gokul S	961413103040	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2129
32	Greashma Chanchal P	961413103041	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2123
33	Haritha H P	961413103701	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2125
34	Hemila Rani	961413103042	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/621
35	Jacob Saji	961413103043	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2130
36	Jameela John	961413103307	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/190
37	Jaya Gopan S	961413103044	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/111
38	Jayaram G J	961413103045	Sky Castle Builders, Kollemcode	SKY/20-22/63
39	Jebin J	961413103046	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/070
40	Jebin J	961413103306	JM Wings , Alakuzhi	JM/1201/022
41	Jenish J	961413103047	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/075
42	Jerald Subin J	961413103048	JM Wings , Alakuzhi	JM/1201/020
43	Jibin Thomas	961413103050	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56792
44	Jijo Mathew	961413103052	Sky Castle Builders, Kollemcode	SKY/20-22/53
45	Jincy S	961413103053	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/624

46	Jinish P	961413103054	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/074
47	John Pragin J	961413103057	Arms Rehabilitation & Co, Chennai	AR/209/17-13
48	Jomy Sam Varghese	961413103308	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56796
49	Mathew John	961413103060	JM Wings , Alakuzhi	JM/1201/005
50	Nibish A	961413103062	Darwin Constructions Pvt Ltd, Chennai	DC/13-03/072
51	Ninan Koshy Vaidyan	961413103063	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56791
52	Prakash M	961413103067	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/125
53	Priya S L	961413103310	Veritable Technologies & Designs, Kochi	V22- T09/2002/163
54	Priyadarsan D	961413103068	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2131
55	Rakhi G R	961413103070	Sky Castle Builders, Kollemcode	SKY/20-22/59
56	Ramya R R	961413103071	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/633
57	Reni Wills R L	961413103073	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/634
58	Sajo Samuel	961413103074	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56799
59	Sanil Philipose	961413103075	Veritable Technologies & Designs, Kochi	V22- T09/2002/169
60	Sanju George	961413103076	Sky Castle Builders, Kollemcode	SKY/20-22/55
61	Sanu P Mathew	961413103077	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/191
62	Senju P John	961413103078	Innovate Designers & Builders Pvt Ltd, Thiruvananthapuram	I/TVM/231/185
63	Sherin Varghese	961413103079	Veritable Technologies & Designs, Kochi	V22- T09/2002/167
64	Shilpa Susan Mathew	961413103081	Safa Constructions Pvt. Ltd from Kochi	SCPL/T1/2127
65	Siji V V	961413103082	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56798
66	Sneha Treesa Charls	961413103083	JM Wings , Alakuzhi	JM/1201/006
67	Soniya F	961413103084	MJ Constructions Co Pvt Ltd, Nagercoil	15-10/1993/637
68	Stefy Shaji	961413103085	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56794
69	Subin S	961413103086	George Memorial Associates, Kattathurai	2007/GM011

70	Thejas Varghese	961413103087	Veritable Technologies & Designs, Kochi	V22-T09/2002/165
71	Thomas Paul	961413103088	Adowa Constructions (India) Pvt. Ltd , Marthandam	135/A56795
72	Tijo Varghese	961413103090	Veritable Technologies & Designs, Kochi	V22-T09/2002/168
73	Vigin S	961413103092	Arms Rehabilitation & Co, Chennai	AR/209/17-11
74	Vijin J	961413103093	Arms Rehabilitation & Co, Chennai	AR/209/17-19
75	Vijin V	961413103311	Ideal Constructions Pvt Ltd, Nagercoil	IDC/21/115

4.6 Professional Activities (20)

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

Table 4.6.1.a: Professional Societies/Chapters

Sl. No.	Name of Professional Society	Year of Starting
1	American Society for Civil Engineers (ASCE)	2020
2	Indian Society for Technical Education (ISTE)	2015
3	Institution of Engineering and Technology (IET)	2015
4	Association of Civil Engineers Modern Era (ACME)	2010

American Society for Civil Engineers (ASCE)

The ASCE student chapter at Mar Ephraem College of Engineering and Technology was inaugurated on 17/12/2020 for the growth and technical support of the students. Through ASCE events, and programs the students will get an international exposure in the field of Civil Engineering

Table 4.6.1.b:ASCE Student Chapter Office

CAY (2020-21)	
Name	Position
Mr. Prabin R	ASCE Coordinator
Mr.Ashick Newbin A	Student Coordinator
CAYm1 (2019-20)	
Name	Position
Mr. Prabin R	ASCE Coordinator
Mr.Jinu S	Student Coordinator

Institution of Engineering and Technology (IET)

The IET Student chapter at Mar Ephraem College of Engineering and Technology imparts knowledge to the students by conducting workshops, talk by high subject experts. Details of office bearers are shown in

Table 4.6.1.c: IET Student Chapter Office

CAY (2020-21)	
Name	Position
Mr.Lin	IET Coordinator
Ms..A Bincy	Student Coordinator
CAYm1 (2019-20)	
Name	Position
Mr. Lin G	IET Coordinator
Mr.Sobin Solaman	Student Coordinator
CAYm2 (2018-19)	
Name	Position
Mr. Lin G	IET Coordinator
Mr.Amal	Student Coordinator

Indian Society for Technical Education (ISTE)

The ISTE Student chapter at Mar Ephraem College of Engineering and Technology imparts knowledge to the students by conducting workshops, Seminars, Industrial Trainings, etc.

Table 4.6.1.d: ISTE student chapter office bearers

CAY (2020-21)	
Name	Position
Mrs. Anne Chandra J	Student Chapter staff Coordinator
Ms. A Arya	Student Coordinator
CAYm1 (2019-20)	
Name	Position
Mrs. Anne Chandra J	Student Chapter staff Coordinator
Mr.Anson Abraham	Student Coordinator
CAYm2 (2018-19)	
Name	Position
Mrs. Anne Chandra J	Student Chapter staff Coordinator
Mr.Benil Jacob	Student Coordinator

Association of Civil Engineers Modern Era (ACME)

- To Elevate Civil Engineering by providing the practical exposure to the community members through technical seminars, research symposium, Conferences.
- Collaboration between the school and industry.
- Construction Industrial visits to ongoing construction sites thus giving a chance to the students to interact with key personnel of the industry.

Events Conducted By Professional Societies and Chapters

Table 4.6.1.e: Events conducted by professional societies and chapters

CAY (2020-21)				
Organized by	Event	Date	Number of Members	Level
-	Nil	-	-	-
CAY (2019-20)				
Organized by	Event	Date	Number of Members	Level
IET	Two Days FDTP on IOT and vision Robotics	11/11/2019 & 12/11/2019	30	College
	Workshop on Image Processing	25/11/2019 & 26/11/2019	30	College
	NICE 2019- IET KKLN Regional Level Competition	28/09/2019	150	College
	IET KKLN -Tech Fest	28/09/2019	150	College
ISTE	Workshop on Advanced Surveying	08/08/2019	70	College
	Application of Matlab for Engineering	04/10/2019	60	College
	Poster Presentation	28/02/2020	30	College
ACME	National level technical Symposium	28/02/2020	320	Inter College
	Building Expo	16/01/2020 to 18/01/2020	26	District
	Survey camp	26/9/2019 to 2/10/2019	104	College
	Seminar on pile foundation	29/8/2019	118	College

CAYm1 (2018-19)				
Organized by	Event	Date	Number of Members	Level
IET	Inagural Ceremony	08/08/2018	67	College
	IET Technical Paper Presentation	27/08/2018	30	College
	IET Sponsered National level Symposium	7/9/2018	50	College
	Seminar on Technology	17/9/2018	60	College
	TECHNOVATION 18	25/9/2018 & 28/9/2018	63	College
	IET Sponsered Symboisium Genesys 2019	7/3/2019	25	College
	IET Sponsered Symboisium -Elispire	8/3/2019	25	College
	Two days seminar on Recent trends in Biomedical Instrumentation	18/03/19 & 19/03/19	20	College
	IET KKLN -Aspire 19	21/03/2019	160	College
ISTE	ISTE orientation Program	21/02/2019	80	College
	Seminar on Cost effective Construction	21/02/2019	100	College
ACME	National level technical Symposium	07/09/2018	348	Inter College
	Survey camp	08/09/2018 to 15/09/2018	118	College
CAYm2 (2017-18)				
Organized by	Event	Date	Number of Members	Level
IET	Revoke the future -poster presentation	18-08-2017	100	College
	Two days work shop on python and its application	09-11-2017	29	College
	4 th installation ceremony	10-11-2017	64	College
	CFD workshop for final year students	05-02-2018	30	College
	PATW paper presentation	01-03-2018	30	College

ISTE	Workshop on Environmental Awareness	12/10/2017	35	College
	Workshop on ground water storage	17/02/2018	50	College
ACME	Symposium - National level technical symposium	15/ 09/ 2017	368	Inter College

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

Department Publishes

Krestaz

Technical Magazine once in a year which includes Technical writing and technical communications news, articles and resources for technical writers, Publications of the Faculty members and the placement history of the students are included in the magazine, Achievements and awards by the faculty members were included in the magazine.

Frames

Newsletter twice in a year which includes the activities conducted by the department.

Table 4.6.2.a: Advisory Committee and Board Editors

Academic Year	Faculty Co-ordinator	Student Co-ordinator
2020-21	Mr. Abishek G L, AP/Civil	Mr. Jibin J, IV Civil, Mr. Alfin Saji, III Civil
2019-20	Mr. Abishek G L, AP/Civil	Mr. Bibin Jose, IV Civil, Mr. Geolin, III Civil
2018-19	Mr. Abishek G L, AP/Civil	Mr. Benil, IV Civil, Mr. Abin T Wilson, III Civil



Fig 4.6.2.a: Samples of department publishes

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

Extra-curricular & Co-curricular Activities

Table 4.6.3.a: Summary of event participation

S.No.	Academic Year	Prizes Awarded		Participation	
		Co-Curricular	Extra-Curricular	Other State	Within State
1	2020-21	10	5	25	96
2	2019-20	86	29	33	115
3	2018-19	84	29	43	115

Co-Curricular Activities

Table 4.6.3.b: Co-Curricular Activities-Events within the state

CAY (2020-21)				
S.No.	Date Of Event	Name	Event	Organised Institute
1	22.1.2021	Ahana Tintu S F	Paper Presentation, Symposium	Rohini College Of Engineering & Technology

2	22.1.2021	Arya V A	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
3	22.1.2021	Asheline Alex	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
4	22.1.2021	Alana Shaji	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
5	22.1.2021	Anujith C P	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
6	22.1.2021	Bijeesh Babu Philip	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
7	22.1.2021	Geolin D S	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
8	22.1.2021	Jerry V Rejy	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
9	22.1.2021	Richu Rajesh Singh	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
10	22.1.2021	Bincy R	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
11	22.1.2021	Tibitha Merin Varghese	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
12	22.1.2021	Tony Chackochan K	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
13	22.1.2021	Angel R S	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
14	22.1.2021	Linta T Samuel	Paper Presentation, Symposium	Rohini College Of Engineering & Technology

15	22.1.2021	Merin Susanna Mathew	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
16	19.2.2021	Nevin Saji Varghese	Paper Presentation, Symposium	Ponjesly College Of Engineering
17	19.2.2021	Shalu S Davy	Paper Presentation, Symposium	Ponjesly College Of Engineering
18	19.2.2021	Sujith S	Paper Presentation, Symposium	Ponjesly College Of Engineering
19	19.2.2021	Anujith C P	Paper Presentation, Symposium	Ponjesly College Of Engineering
20	19.2.2021	Bijeesh Babu Philip	Paper Presentation, Symposium	Ponjesly College Of Engineering
21	19.2.2021	Geolin D S	Paper Presentation, Symposium	Ponjesly College Of Engineering
22	19.2.2021	Jerry V Rejy	Paper Presentation, Symposium	Ponjesly College Of Engineering
23	19.2.2021	Richu Rajesh Singh	Paper Presentation, Symposium	Ponjesly College Of Engineering
24	19.2.2021	Bincy R	Paper Presentation, Symposium	Ponjesly College Of Engineering
25	19.2.2021	Tibitha Merin Varghese	Paper Presentation, Symposium	Ponjesly College Of Engineering
26	19.2.2021	Saranya Vijayan	Paper Presentation, Symposium	Ponjesly College Of Engineering
27	19.2.2021	Sneha Susan S	Paper Presentation, Symposium	Ponjesly College Of Engineering

28	19.2.2021	Mini J	Paper Presentation, Symposium	Ponjesly College Of Engineering
29	19.2.2021	Rahul R Nair	Paper Presentation, Symposium	Ponjesly College Of Engineering
30	19.2.2021	Jomon T Jose	Paper Presentation, Symposium	Ponjesly College Of Engineering
31	19.2.2021	Vaishak S K	Paper Presentation, Symposium	Ponjesly College Of Engineering
32	19.2.2021	Marvel Samuel Jacob	Paper Presentation, Symposium	Ponjesly College Of Engineering
33	19.2.2021	Midhun Mathew	Paper Presentation, Symposium	Ponjesly College Of Engineering
34	19.2.2021	Nohin George	Paper Presentation, Symposium	Ponjesly College Of Engineering
35	19.2.2021	Jobin Johnson	Paper Presentation, Symposium	Ponjesly College Of Engineering
36	19.2.2021	Jobin Jose Chacko	Paper Presentation, Symposium	Ponjesly College Of Engineering
37	19.2.2021	Joel Philip Johnson	Paper Presentation, Symposium	Ponjesly College Of Engineering
38	19.2.2021	Levin Itty Abraham	Paper Presentation, Symposium	Ponjesly College Of Engineering
39	19.2.2021	Libin Chacko Thomas	Paper Presentation, Symposium	Ponjesly College Of Engineering
40	19.11.2020	Marvel Samuel Jacob	Paper Presentation, Symposium	Arunachala College Of Engineering

41	19.11.2020	Midhun Mathew	Paper Presentation, Symposium	Arunachala College Of Engineering
42	19.11.2020	Nohin George	Paper Presentation, Symposium	Arunachala College Of Engineering
43	19.11.2020	Saranya Vijayan	Paper Presentation, Symposium	Arunachala College Of Engineering
44	19.11.2020	Sneha Susan S	Paper Presentation, Symposium	Arunachala College Of Engineering
45	19.11.2020	Mini J	Paper Presentation, Symposium	Arunachala College Of Engineering
46	19.11.2020	Kevin Shajan Chacko	Paper Presentation, Symposium	Arunachala College Of Engineering
47	19.11.2020	Kiran Joseph	Paper Presentation, Symposium	Arunachala College Of Engineering
48	19.11.2020	Priya R S	Paper Presentation, Symposium	Arunachala College Of Engineering
49	19.11.2020	Rintu Susan Thomas	Paper Presentation, Symposium	Arunachala College Of Engineering
50	19.11.2020	Anusya Y	Paper Presentation, Symposium	Arunachala College Of Engineering
51	19.11.2020	Ashviny S V	Paper Presentation, Symposium	Arunachala College Of Engineering
52	19.11.2020	Reshma Raj	Paper Presentation, Symposium	Arunachala College Of Engineering
53	5.2.2021	Jobin Johnson	Paper Presentation, Symposium	Stella Marys College Of Engineering

54	5.2.2021	Jobin Jose Chacko	Paper Presentation, Symposium	Stella Marys College Of Engineering
55	5.2.2021	Joel Philip Johnson	Paper Presentation, Symposium	Stella Marys College Of Engineering
56	5.2.2021	Jomon T Jose	Paper Presentation, Symposium	Stella Marys College Of Engineering
57	5.2.2021	Marvel Samuel Jacob	Paper Presentation, Symposium	Stella Marys College Of Engineering
58	5.2.2021	Midhun Mathew	Paper Presentation, Symposium	Stella Marys College Of Engineering
59	5.2.2021	Mini J	Paper Presentation, Symposium	Stella Marys College Of Engineering
60	12.3.2021	Nohin George	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
61	12.3.2021	Rahul R Nair	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
62	12.3.2021	Saranya Vijayan	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
63	12.3.2021	Sneha Susan S	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
64	12.3.2021	Tibitha Merin Varghese	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
65	12.3.2021	Vaishak S K	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
66	12.3.2021	Ahana Tintu S F	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering

67	12.3.2021	Alana Shaji	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
68	12.3.2021	Anujith C P	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
69	12.3.2021	Arya V A	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
70	12.3.2021	Asheline Alex	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
71	12.3.2021	Bijeesh Babu Philip	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
72	12.3.2021	Geolin D S	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
73	12.3.2021	Jerry V Rejy	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
74	12.3.2021	George P Mathew	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
75	12.3.2021	Febin John Philip	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
76	12.3.2021	Jeffin Sabu Kurian	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
77	12.3.2021	Dody Cherian Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
78	9.9.2020	Asheline Alex	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
79	9.9.2020	Bijeesh Babu Philip	Paper Presentation, Conference	Marthandam College Of Engineering And Technology

80	9.9.2020	Geolin D S	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
81	9.9.2020	Jerry V Rejy	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
82	9.9.2020	Anujith C P	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
83	9.9.2020	Jenin K Shaji	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
84	9.9.2020	Geolin D S	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
85	9.9.2020	Godwin Raj S	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
86	9.9.2020	Jinu S	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
87	15.9.2020	Saranya Vijayan	Paper Presentation, Conference	Csi Institute Of Technology
88	15.9.2020	Sneha Susan S	Paper Presentation, Conference	Csi Institute Of Technology
89	15.9.2020	Tibitha Merin Varghese	Paper Presentation, Conference	Csi Institute Of Technology
90	15.9.2020	Vaishak S K	Paper Presentation, Conference	Csi Institute Of Technology
91	15.9.2020	Ahana Tintu S F	Paper Presentation, Conference	Csi Institute Of Technology

92	15.9.2020	Alana Shaji	Paper Presentation, Conference	Csi Institute Of Technology
93	15.9.2020	Geolin D S	Paper Presentation, Conference	Csi Institute Of Technology
94	15.9.2020	Jerry V Rejy	Paper Presentation, Conference	Csi Institute Of Technology
95	15.9.2020	Anujith C P	Paper Presentation, Conference	Csi Institute Of Technology
96	15.9.2020	Marvel Samuel Jacob	Paper Presentation, Conference	Csi Institute Of Technology

CAYm1 (2019-20)				
S.No.	Date Of Event	Name	Event	Organised Institute
1	7/8/2019	Anusha	Paper Presentation, Symposium	Rajas Engineering College
2	7/8/2019	R Benil Jacob Robin	Paper Presentation, Symposium	Rajas Engineering College
3	7/8/2019	R Abishsa	Paper Presentation, Symposium	Rajas Engineering College
4	7/8/2019	R Benil Jacob Robin	Paper Presentation, Symposium	Rajas Engineering College
5	7/8/2019	Nibin Dhas	Paper Presentation, Symposium	Rajas Engineering College
6	7/8/2019	Dershlin K.S	Paper Presentation, Symposium	Rajas Engineering College
7	7/8/2019	Athira Ak	Paper Presentation, Symposium	Rajas Engineering College
8	7/8/2019	Athira Ak	Paper Presentation, Symposium	Rajas Engineering College
9	7/8/2019	Jenisha H	Paper Presentation, Symposium	Rajas Engineering College
10	7/8/2019	Hurelin Nijay	Paper Presentation, Symposium	Rajas Engineering College

11	7/8/2019	Muruges H	Paper Symposium	Presentation,	Rajas Engineering College
12	7/8/2019	Boorish Jancial	Paper Symposium	Presentation,	Rajas Engineering College
13	7/8/2019	P Jenisha	Paper Symposium	Presentation,	Rajas Engineering College
14	7/8/2019	Arun Kumar	Paper Symposium	Presentation,	Rajas Engineering College
15	7/8/2019	Vigeesh Ruban	Paper Symposium	Presentation,	Rajas Engineering College
16	7/8/2019	Jenisha H	Paper Symposium	Presentation,	Rajas Engineering College
17	7/8/2019	Anusha A	Paper Symposium	Presentation,	Rajas Engineering College
18	7/8/2019	Benil Jacob Robin	Paper Symposium	Presentation,	Rajas Engineering College
19	7/8/2019	Dinesh.S	Paper Symposium	Presentation,	Rajas Engineering College
20	7/8/2019	Hurelin Nijay	Paper Symposium	Presentation,	Rajas Engineering College
21	14/08/2019	Bijeesh Babu Philip	Paper Symposium	Presentation,	Arunachala College Of Engineering
22	14/08/2019	Febin John Philip	Paper Symposium	Presentation,	Arunachala College Of Engineering
23	14/08/2019	Jeffin Sabu Kurian	Paper Symposium	Presentation,	Arunachala College Of Engineering
24	14/08/2019	Jerin T Joseph	Paper Symposium	Presentation,	Arunachala College Of Engineering
25	07/09/2019	Aaromal Vijay V	Paper Symposium	Presentation,	Ponjesly College Of Engineering
26	07/09/2019	Abel A Tharian	Paper Symposium	Presentation,	Ponjesly College Of Engineering
27	07/09/2019	Abin T Wilson	Paper Symposium	Presentation,	Ponjesly College Of Engineering
28	07/09/2019	Anson Abraham	Paper Symposium	Presentation,	Ponjesly College Of Engineering
29	07/09/2019	Lijoy Shaji	Paper Symposium	Presentation,	Ponjesly College Of Engineering
30	07/09/2019	Alan Simon	Paper Symposium	Presentation,	Ponjesly College Of Engineering

31	07/09/2019	Aaromal Vijay V	Paper Presentation, Symposium	Ponjesly College Of Engineering
32	07/09/2019	Abel A Tharian	Paper Presentation, Symposium	Ponjesly College Of Engineering
33	07/09/2019	Abin T Wilson	Paper Presentation, Symposium	Ponjesly College Of Engineering
34	26/02/2019	Aaromal Vijay V	Paper Presentation, Symposium	James College Of Engg And Technology
35	26/02/2019	Ashik Thomas	Paper Presentation, Symposium	James College Of Engg And Technology
36	26/02/2019	Abel A Tharian	Paper Presentation, Symposium	James College Of Engg And Technology
37	26/02/2019	Abin T Wilson	Paper Presentation, Symposium	James College Of Engg And Technology
38	26/02/2019	Aaromal Vijay V	Paper Presentation, Symposium	James College Of Engg And Technology
39	26/02/2019	Abel A Tharian	Paper Presentation, Symposium	James College Of Engg And Technology
40	26/02/2019	Abin T Wilson	Paper Presentation, Symposium	James College Of Engg And Technology
41	26/02/2019	Regilin Vincilo M	Paper Presentation, Symposium	James College Of Engg And Technology
42	26/02/2019	Joyel C Joseph	Paper Presentation, Symposium	James College Of Engg And Technology
43	26/02/2019	Kevin C Anil	Paper Presentation, Symposium	James College Of Engg And Technology
44	26/02/2019	Vignesh B	Paper Presentation, Symposium	James College Of Engg And Technology
45	26/02/2019	Ajith Kumar S	Paper Presentation, Symposium	James College Of Engg And Technology
46	06/08/2019	Alen Benz R M	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
47	06/08/2019	Abel A Tharian	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
48	06/08/2019	Abin T Wilson	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
49	06/08/2019	Regilin Vincilo M	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
50	06/08/2019	Joyel C Joseph	Paper Presentation, Symposium	Rohini College Of Engineering & Technology

51	06/08/2019	Kevin C Anil	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
52	06/08/2019	Vignesh B	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
53	06/08/2019	Ajith Kumar S	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
54	06/08/2019	Alen Benz R M	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
55	14/08/2019	Arif	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
56	14/08/2019	Amal George Jacob	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
57	14/08/2019	Lijoy Shaji	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
58	14/08/2019	Alan Simon	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
59	14/08/2019	Aaromal Vijay V	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
60	14/08/2019	Abel A Tharian	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
61	14/08/2019	Abin T Wilson	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
62	14/08/2019	Aaromal Vijay V	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
63	14/08/2019	Ashik Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
64	14/08/2019	Abel A Tharian	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
65	14/08/2019	Abin T Wilson	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
66	29/08/2019	Aaromal Vijay V	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
67	29/08/2019	Abel A Tharian	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
68	29/08/2019	Abin T Wilson	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
69	29/08/2019	Regilin Vincilo M	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
70	29/08/2019	Joyel C Joseph	Paper Presentation, Conference	Marthandam College Of Engineering And Technology

71	29/08/2019	Kevin C Anil	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
72	29/08/2019	Vignesh B	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
73	29/08/2019	Ajith Kumar S	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
74	29/08/2019	Alen Benz R M	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
75	29/08/2019	Arif	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
76	29/08/2019	Ashin Joseph	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
77	05/09/2019	Bijeesh Babu Philip	Paper Presentation, Conference	Stella Marys College Of Engineering
78	05/09/2019	Febin John Philip	Paper Presentation, Conference	Stella Marys College Of Engineering
79	05/09/2019	Jeffin Sabu Kurian	Paper Presentation, Conference	Stella Marys College Of Engineering
80	05/09/2019	Jerin T Joseph	Paper Presentation, Conference	Stella Marys College Of Engineering
81	05/09/2019	Jinu S	Paper Presentation, Conference	Stella Marys College Of Engineering
82	05/09/2019	Jomon T Jose	Paper Presentation, Conference	Stella Marys College Of Engineering
83	05/09/2019	Kiran Joseph	Paper Presentation, Conference	Stella Marys College Of Engineering
84	05/09/2019	Midhun Mathew	Paper Presentation, Conference	Stella Marys College Of Engineering
85	05/09/2019	Ajith R	Paper Presentation, Conference	Stella Marys College Of Engineering
86	05/09/2019	Bijin Verughese Jacob	Paper Presentation, Conference	Stella Marys College Of Engineering
87	23/01/2019	Githin Reji	Car Parking	Amrita College Of Engineering And Technology
88	23/01/2019	Nithin Rajan	Cad Presentation	Amrita College Of Engineering And Technology
89	23/01/2019	Solaman Punnoose	Paper Presentation	Amrita College Of Engineering And Technology
90	23/01/2019	Boaz Reji	Cad Depiction	Amrita College Of Engineering And Technology

91	23/01/2019	Sreyas S	Cadd Drafting	Amrita College Of Engineering And Technology
92	23/01/2019	Aaromal Vijay V	Cad Modelling	Amrita College Of Engineering And Technology
93	23/01/2019	Abel A Tharian	Singing Competition	Amrita College Of Engineering And Technology
94	23/01/2019	Abin T Wilson	Technical Workshop	Amrita College Of Engineering And Technology
95	23/01/2019	Aaromal Vijay V	Technical Quiz	Amrita College Of Engineering And Technology
96	23/01/2019	Ashik Thomas	Co Ordinator	Amrita College Of Engineering And Technology
97	23/01/2019	Abel A Tharian	Car Parking	Amrita College Of Engineering And Technology
98	30/01/2019	Abin T Wilson	Face Painting	Vins Christian College Of Engineering
99	30/01/2019	Aaromal Vijay V	Code Cracking	Vins Christian College Of Engineering
100	30/01/2019	Abel A Tharian	Clay Modeling	Vins Christian College Of Engineering
101	30/01/2019	Abin T Wilson	Cad Drawing	Vins Christian College Of Engineering
102	30/01/2019	Regilin Vincilo M	Car Parking	Vins Christian College Of Engineering
103	30/01/2019	Joyel C Joseph	Cad Presentation	Vins Christian College Of Engineering
104	30/01/2019	Kevin C Anil	Paper Presentation	Vins Christian College Of Engineering
105	30/01/2019	Vignesh B	Cad Depiction	Vins Christian College Of Engineering
106	30/01/2019	Ajith Kumar S	Cadd Drafting	Vins Christian College Of Engineering
107	30/01/2019	Alen Benz R M	Cad Modelling	Vins Christian College Of Engineering
108	30/01/2019	Arif	Singing Competition	Vins Christian College Of Engineering
109	30/01/2019	Ashin Joseph	Technical Workshop	Vins Christian College Of Engineering
110	30/01/2019	Bijeesh Babu Philip	Technical Quiz	Vins Christian College Of Engineering

111	30/01/2019	Febin John Philip	Co Ordinator	Vins Christian College Of Engineering
112	30/01/2019	Jeffin Sabu Kurian	Car Parking	Vins Christian College Of Engineering
113	30/01/2019	Jerin T Joseph	Face Painting	Vins Christian College Of Engineering
114	30/01/2019	Jinu S	Code Cracking	Vins Christian College Of Engineering
115	30/01/2019	Jomon T Jose	Clay Modeling	Vins Christian College Of Engineering

CAYm2 (2018-19)				
Sl. No.	Date Of Event	Name	Event	Organised Institute
1	7/8/2018	Anusha	Paper Presentation, Symposium	Rajas Engineering College
2	7/8/2018	R Benil Jacob Robin	Paper Presentation, Symposium	Rajas Engineering College
3	7/8/2018	R Abishsa	Paper Presentation, Symposium	Rajas Engineering College
4	7/8/2018	R Benil Jacob Robin	Paper Presentation, Symposium	Rajas Engineering College
5	7/8/2018	Nibin Dhas	Paper Presentation, Symposium	Rajas Engineering College
6	7/8/2018	Dershlin K.S	Paper Presentation, Symposium	Rajas Engineering College
7	7/8/2018	Athira Ak	Paper Presentation, Symposium	Rajas Engineering College
8	7/8/2018	Athira Ak	Paper Presentation, Symposium	Rajas Engineering College
9	7/8/2018	Jenisha H	Paper Presentation, Symposium	Rajas Engineering College
10	7/8/2018	Hurelin Nijay	Paper Presentation, Symposium	Rajas Engineering College
11	7/8/2018	Murugesh H	Paper Presentation, Symposium	Rajas Engineering College
12	7/8/2018	Boorish Jancial	Paper Presentation, Symposium	Rajas Engineering College

13	7/8/2018	P Jenisha	Paper Presentation, Symposium	Rajas Engineering College
14	7/8/2018	Arun Kumar	Paper Presentation, Symposium	Rajas Engineering College
15	7/8/2018	Vigeesh Ruban	Paper Presentation, Symposium	Rajas Engineering College
16	7/8/2018	Jenisha H	Paper Presentation, Symposium	Rajas Engineering College
17	7/8/2018	Anusha A	Paper Presentation, Symposium	Rajas Engineering College
18	7/8/2018	Benil Jacob Robin	Paper Presentation, Symposium	Rajas Engineering College
19	7/8/2018	Dinesh.S	Paper Presentation, Symposium	Rajas Engineering College
20	7/8/2018	Hurelin Nijay	Paper Presentation, Symposium	Rajas Engineering College
21	14/08/2018	Bijin Verughese Jacob	Paper Presentation, Symposium	Arunachala College Of Engineering
22	14/08/2018	Githin Reji	Paper Presentation, Symposium	Arunachala College Of Engineering
23	14/08/2018	Nithin Rajan	Paper Presentation, Symposium	Arunachala College Of Engineering
24	14/08/2018	Solaman Punnoose	Paper Presentation, Symposium	Arunachala College Of Engineering
25	07/09/2018	Boaz Reji	Paper Presentation, Symposium	Csi Institute Of Technology
26	07/09/2018	Sreyas S	Paper Presentation, Symposium	Csi Institute Of Technology
27	07/09/2018	Aaromal Vijay V	Paper Presentation, Symposium	Csi Institute Of Technology
28	07/09/2018	Abel A Tharian	Paper Presentation, Symposium	Csi Institute Of Technology
29	07/09/2018	Abin T Wilson	Paper Presentation, Symposium	Csi Institute Of Technology
30	07/09/2018	Aaromal Vijay V	Paper Presentation, Symposium	Csi Institute Of Technology
31	07/09/2018	Ashik Thomas	Paper Presentation, Symposium	Csi Institute Of Technology
32	07/09/2018	Abel A Tharian	Paper Presentation, Symposium	Csi Institute Of Technology

33	07/09/2018	Abin T Wilson	Paper Presentation, Symposium	Csi Institute Of Technology
34	26/02/2019	Aaromal Vijay V	Paper Presentation, Symposium	James College Of Engg And Technology
35	26/02/2019	Abel A Tharian	Paper Presentation, Symposium	James College Of Engg And Technology
36	26/02/2019	Abin T Wilson	Paper Presentation, Symposium	James College Of Engg And Technology
37	26/02/2019	Regilin Vincilo M	Paper Presentation, Symposium	James College Of Engg And Technology
38	26/02/2019	Joyel C Joseph	Paper Presentation, Symposium	James College Of Engg And Technology
39	26/02/2019	Kevin C Anil	Paper Presentation, Symposium	James College Of Engg And Technology
40	26/02/2019	Vignesh B	Paper Presentation, Symposium	James College Of Engg And Technology
41	26/02/2019	Ajith Kumar S	Paper Presentation, Symposium	James College Of Engg And Technology
42	26/02/2019	Alen Benz R M	Paper Presentation, Symposium	James College Of Engg And Technology
43	26/02/2019	Arif	Paper Presentation, Symposium	James College Of Engg And Technology
44	26/02/2019	Heinrich Steev S R	Paper Presentation, Symposium	James College Of Engg And Technology
45	26/02/2019	Joyel C Joseph	Paper Presentation, Symposium	James College Of Engg And Technology
46	06/08/2018	Jobin P John	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
47	06/08/2018	Melvin Abraham Mathew	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
48	06/08/2018	Sam P Jose	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
49	06/08/2018	Levin Itty Abraham	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
50	06/08/2018	Linta T Samuel	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
51	06/08/2018	Priya R S	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
52	06/08/2018	Rincy Thankachan	Paper Presentation, Symposium	Rohini College Of Engineering & Technology

53	06/08/2018	Jeena N R	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
54	06/08/2018	Heinrich Steev S R	Paper Presentation, Symposium	Rohini College Of Engineering & Technology
55	14/08/2018	Feba Susan Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
56	14/08/2018	Christina Varghese	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
57	14/08/2018	Jancy George	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
58	14/08/2018	Greeshma Vijay L	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
59	14/08/2018	Aaxel Lorett M	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
60	14/08/2018	Adarsh S P	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
61	14/08/2018	Amal Raj R	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
62	14/08/2018	Arjun A	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
63	14/08/2018	Bibin Varghese	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
64	14/08/2018	Jeffin Joseph	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
65	14/08/2018	Sojan Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering
66	29/08/2018	Vigeesh Ruban V R	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
67	29/08/2018	Abin T Wilson	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
68	29/08/2018	Aaromal Vijay V	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
69	29/08/2018	Abel A Tharian	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
70	29/08/2018	Amal Dev J	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
71	29/08/2018	Rincy Thankachan	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
72	29/08/2018	Jeena N R	Paper Presentation, Conference	Marthandam College Of Engineering And Technology

73	29/08/2018	Heinrich Steev S R	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
74	29/08/2018	Joyel C Joseph	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
75	29/08/2018	Kevin C Anil	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
76	29/08/2018	Tonymon T	Paper Presentation, Conference	Marthandam College Of Engineering And Technology
77	05/09/2018	Vipin Sebastian V	Paper Presentation, Conference	Stella Marys College Of Engineering
78	05/09/2018	Rincy Thankachan	Paper Presentation, Conference	Stella Marys College Of Engineering
79	05/09/2018	Jeena N R	Paper Presentation, Conference	Stella Marys College Of Engineering
80	05/09/2018	W.Jomit	Paper Presentation, Conference	Stella Marys College Of Engineering
81	05/09/2018	J.Kauspin	Paper Presentation, Conference	Stella Marys College Of Engineering
82	05/09/2018	Kiran Joseph	Paper Presentation, Conference	Stella Marys College Of Engineering
83	05/09/2018	Levin Itty Abraham	Paper Presentation, Conference	Stella Marys College Of Engineering
84	05/09/2018	Linta T Samuel	Paper Presentation, Conference	Stella Marys College Of Engineering
85	05/09/2018	Priya R S	Paper Presentation, Conference	Stella Marys College Of Engineering
86	05/09/2018	Rohin Jayan	Paper Presentation, Conference	Stella Marys College Of Engineering
87	23/01/2019	Sajis King.K	Car Parking	Amrita College Of Engineering And Technology
88	23/01/2019	Robin Roy	Cad Presentation	Amrita College Of Engineering And Technology
89	23/01/2019	T.T.Shyjo	Paper Presentation	Amrita College Of Engineering And Technology
90	23/01/2019	Sojith Sabu	Cad Depiction	Amrita College Of Engineering And Technology
91	23/01/2019	Thajulin.T	Cadd Drafting	Amrita College Of Engineering And Technology
92	23/01/2019	Sk Vaishak	Cad Modelling	Amrita College Of Engineering And Technology

93	23/01/2019	Sam Philip	Singing Competition	Amrita College Of Engineering And Technology
94	23/01/2019	Abishek	Technical Workshop	Amrita College Of Engineering And Technology
95	23/01/2019	Geolin D S	Technical Quiz	Amrita College Of Engineering And Technology
96	23/01/2019	Bringston F	Co Ordinator	Amrita College Of Engineering And Technology
97	23/01/2019	Anujith C P	Car Parking	Amrita College Of Engineering And Technology
98	30/01/2019	Adarsh S Kumar	Face Painting	Vins Christian College Of Engineering
99	30/01/2019	Aalin C L	Code Cracking	Vins Christian College Of Engineering
100	30/01/2019	Alen Benz R M	Clay Modeling	Vins Christian College Of Engineering
101	30/01/2019	Anand J Das	Cad Drawing	Vins Christian College Of Engineering
102	30/01/2019	Aaxel Lorett M	Car Parking	Vins Christian College Of Engineering
103	30/01/2019	Adarsh S P	Cad Presentation	Vins Christian College Of Engineering
104	30/01/2019	Amal Raj R	Paper Presentation	Vins Christian College Of Engineering
105	30/01/2019	Arjun A	Cad Depiction	Vins Christian College Of Engineering
106	30/01/2019	Bibin Varghese	Cadd Drafting	Vins Christian College Of Engineering
107	30/01/2019	Jeffin Joseph	Cad Modelling	Vins Christian College Of Engineering
108	30/01/2019	Sojan Thomas	Singing Competition	Vins Christian College Of Engineering
109	30/01/2019	Vigeesh Ruban V R	Technical Workshop	Vins Christian College Of Engineering
110	30/01/2019	Abin T Wilson	Technical Quiz	Vins Christian College Of Engineering
111	30/01/2019	Aaromal Vijay V	Co Ordinator	Vins Christian College Of Engineering
112	30/01/2019	Abel A Tharian	Car Parking	Vins Christian College Of Engineering

113	30/01/2019	Amal Dev J	Face Painting	Vins Christian College Of Engineering
114	30/01/2019	Rincy Thankachan	Code Cracking	Vins Christian College Of Engineering
115	30/01/2019	Jeena N R	Clay Modeling	Vins Christian College Of Engineering

Table 4.6.3.c:Co-curricular activities-Events outside the state

CAY (2020-21)				
Sl. No.	Date Of Event	Name	Event	Organized Institute
1	12.2.2021	Midhun Mathew	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
2	12.2.2021	Nohin George	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
3	12.2.2021	Saranya Vijayan	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
4	12.2.2021	Sneha Susan S	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
5	12.2.2021	Mini J	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
6	12.2.2021	Kevin Shajan Chacko	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
7	12.2.2021	Kiran Joseph	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
8	12.2.2021	Priya R S	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala

9	12.2.2021	Rintu Susan Thomas	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
10	12.2.2021	Anusya Y	Paper Presentation, Symposium	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
11	27.11.2021	Angel R S	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
12	27.11.2020	Linta T Samuel	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
13	27.11.2020	Merin Susanna Mathew	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
14	27.11.2020	Nevin Saji Varghese	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
15	27.11.2020	Shalu S Davy	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
16	27.11.2020	Sujith S	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
17	27.11.2020	Anujith C P	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
18	27.11.2020	Bijeesh Babu Philip	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
19	27.11.2020	Geolin D S	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala
20	27.11.2020	Jerry V Rejy	Paper Presentation, Symposium	Muslim Association College Of Engineering, Venjarammoodu, Kerala

21	2.12.2020	Richu Rajesh Singh	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
22	2.12.2020	Bincy R	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
23	2.12.2020	Tibitha Merin Varghese	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
24	2.12.2020	Saranya Vijayan	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
25	2.12.2020	Sneha Susan S	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala

CAYm1 (2019-20)				
Sl. No.	Date Of Event	Name	Event	Organized Institute
1	12/8/2019	Aaromal Vijay V	Technical Quiz	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
2	12/8/2019	Abel Tharian A	Technical Quiz	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
3	12/8/2019	Abin Wilson T	Technical Quiz	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
4	12/8/2019	Aaromal Vijay V	Technical Quiz	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
5	12/8/2019	Ashik Thomas	Face Painting	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
6	12/8/2019	Abel Tharian A	Face Painting	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
7	12/8/2019	Abin Wilson T	Face Painting	Mariyan College Of Engineering And Technology,

				Thiruvananthapuram, Kerala
8	12/8/2019	Aaromal Vijay V	Treasure Hunt	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
9	12/8/2019	Abel A Tharian	Treasure Hunt	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
10	12/8/2019	Abin T Wilson	Treasure Hunt	Mariyan College Of Engineering And Technology, Thiruvananthapuram, Kerala
11	20/8/2019	Regilin Vincilo M	Cadd Drawing	Mg College Of Engineering, Thiruvananthapuram, Kerala
12	20/8/2019	Joyel C Joseph	Cadd Drawing	Mg College Of Engineering, Thiruvananthapuram, Kerala
13	9/9/2019	Kevin C Anil	Cadd Drawing	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
14	9/9/2019	Vignesh B	Cadd Drawing	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
15	11/10/2019	Ajith Kumar S	Building Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
16	11/10/2019	Alen Benz R M	Building Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
17	11/10/2019	Arif	Building Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
18	11/10/2019	Ashin Joseph	Clay Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
19	11/10/2019	Bijeesh Babu Philip	Clay Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
20	11/10/2019	Febin John Philip	Clay Modelling	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
21	11/10/2019	Jeffin Sabu Kurian	Clay Modelling	Mar Baselios College Of

				Engineering And Technology, Thiruvananthapuram, Kerala
22	15/10/2019	Jerin T Joseph	Cadd Drawing	Ace College Of Engineering, Thiruvananthapuram, Kerala
23	15/10/2019	Jinu S	Cadd Drawing	Ace College Of Engineering, Thiruvananthapuram, Kerala
24	8/1/2020	Jomon T Jose	Jam Sketch	Ace College Of Engineering, Thiruvananthapuram, Kerala
25	8/1/2020	Kiran Joseph	Jam Sketch	Ace College Of Engineering, Thiruvananthapuram, Kerala
26	8/1/2020	Midhun Mathew	Jam Sketch	Ace College Of Engineering, Thiruvananthapuram, Kerala
27	10/2/2020	Ajith R	Clay Modelling	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
28	10/2/2020	Bijin Verughese Jacob	Clay Modelling	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
29	10/2/2020	Githin Reji	Technical Quiz	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
30	11/2/2020	Nithin Rajan	Cadd Drawing	Musaliar College Of Engineering, Chirayinkeezhu, Kerala.
31	11/2/2019	Solaman Punnoose	Cadd Drawing	Musaliar College Of Engineering, Chirayinkeezhu, Kerala.
32	11/2/2020	Boaz Reji	Cadd Drawing	Musaliar College Of Engineering, Chirayinkeezhu, Kerala.
33	11/2/2020	Sreyas S	Cadd Drawing	Musaliar College Of Engineering, Chirayinkeezhu, Kerala.

CAYm2 (2018-19)				
Sl. No.	Date Of Event	Name	Event	Organized Institute
1	6/8/2018	Aaxel Lorett M	Code Cracking	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
2	6/8/2018	Adarsh S P	Code Cracking	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala

3	6/8/2018	Amal Raj R	Code Cracking	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
4	6/8/2018	Arjun A	Sketch Up	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
5	6/8/2018	Bibin Varghese	Sketch Up	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
6	6/8/2018	Jeffin Joseph	Sketch Up	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
7	6/8/2018	Sojan Thomas	Sketch Up	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
8	6/8/2018	Vigeesh Ruban V R	Sketch Up	Mar Baselios College Of Engineering And Technology, Thiruvananthapuram, Kerala
9	6/8/2018	Abin T Wilson	Technical Quiz	Muslim Association College Of Engineering, Venjarammoodu, Kerala
10	6/8/2018	Aaromal Vijay V	Technical Quiz	Muslim Association College Of Engineering, Venjarammoodu, Kerala
11	6/8/2018	Abel A Tharian	Debate	Muslim Association College Of Engineering, Venjarammoodu, Kerala
12	6/8/2018	Amal Dev J	Debate	Muslim Association College Of Engineering, Venjarammoodu, Kerala
13	6/8/2018	Rincy Thankachan	Debate	Muslim Association College Of Engineering, Venjarammoodu, Kerala
14	6/8/2018	Jeena N R	Debate	Muslim Association College Of Engineering, Venjarammoodu, Kerala
15	6/8/2018	Heinrich Steev S R	Debate	Muslim Association College Of Engineering, Venjarammoodu, Kerala
16	6/8/2018	Joyel C Joseph	Debate	Muslim Association College Of Engineering, Venjarammoodu,

				Kerala
17	17/9/2018	Kevin C Anil	Cadd Drawing	Mg College Of Engineering, Thiruvananthapuram, Kerala
18	17/9/2018	Tonymon T	Cadd Drawing	Mg College Of Engineering, Thiruvananthapuram, Kerala
19	17/9/2018	Vipin Sebastian V	Cadd Drawing	Mg College Of Engineering, Thiruvananthapuram, Kerala
20	10/10/2018	Rincy Thankachan	Building Modelling	P.A Aziz College Of Engineering And Technology, Thiruvananthapuram, Kerala
21	10/10/2018	Jeena N R	Building Modelling	P.A Aziz College Of Engineering And Technology, Thiruvananthapuram, Kerala
22	17/9/2018	W.Jomit	Connections	Sree Chitra Thirunal College Of Engineering, Thiruvananthapuram, Kerala
23	17/9/2018	J.Kauspin	Connections	Sree Chitra Thirunal College Of Engineering, Thiruvananthapuram, Kerala
24	10/10/2018	Kiran Joseph	Tech War	Ace College Of Engineering, Thiruvananthapuram, Kerala
25	10/10/2018	Levin Itty Abraham	Tech War	Ace College Of Engineering, Thiruvananthapuram, Kerala
26	15/10/2018	Linta T Samuel	Build It Up	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
27	15/10/2018	Priya R S	Build It Up	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
28	7/2/2019	Rohin Jayan	Working Model	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
29	7/2/2019	Sajis King.K	Working Model	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
30	7/2/2019	Robin Roy	Take On Topic	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
31	7/2/2019	T.T.Shyjo	Take On Topic	Mohandas College Of Engineering And Technology,

				Nedumangad, Kerala
32	7/2/2019	Sojith Sabu	Take On Topic	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
33	7/2/2019	Thajulin.T	Take On Topic	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
34	7/2/2019	Sk Vaishak	Take On Topic	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
35	7/2/2019	Sam Philip	Take On Topic	Mohandas College Of Engineering And Technology, Nedumangad, Kerala
36	11/3/2019	Abishek	Technical Quiz	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
37	11/3/2019	Geolin D S	Technical Quiz	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
38	11/3/2019	Bringston F	Technical Quiz	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
39	11/3/2019	Anujith C P	Technical Quiz	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
40	11/3/2019	Adarsh S Kumar	Technical Quiz	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
41	11/3/2019	Aalin C L	Mehandhi Design	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
42	11/3/2019	Alen Benz R M	Mehandhi Design	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.
43	11/3/2019	Anand J Das	Mehandhi Design	Heera College Of Engineering & Technology, Nedumangadu, Thiruvananthapuram.

Extra-curricular activities

Table 4.6.3.d: Prizes / awards in Extra-curricular activities

CAY (2020 – 21)					
S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	25.2.2021	Jobin Johnson	Group Dance	Stella Marys College Of Engineering	First prize
2	25.2.2021	Jobin Jose Chacko	Group Dance	Stella Marys College Of Engineering	First prize

3	25.2.2021	Joel Philip Johnson	Group Dance	Stella Marys College Of Engineering	First prize
4	25.2.2021	Jomon T Jose	Group Dance	Stella Marys College Of Engineering	First prize
5	25.2.2021	Marvel Samuel Jacob	Group Dance	Stella Marys College Of Engineering	First prize

CAYm1 (2019 – 20)

S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	7/8/2019	Athira Ak	Paper Presentation, Symposium	Rajas Engineering College	1st Prize
2	07/09/2019	Abel A Tharian	Paper Presentation, Symposium	Ponjesly College Of Engineering	3rd prize
3	06/08/2019	Abin T Wilson	Paper Presentation, Symposium	Rohini College Of Engineering & Technology	3rd prize
4	05/09/2019	Bijin Verughese Jacob	Paper Presentation, Conference	Stella Marys College Of Engineering	2nd Prize

CAYm2 (2018-19)

S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	7/8/2018	Anusha	Paper Presentation, Symposium	Rajas Engineering College	3rd prize
2	7/8/2018	Vigeesh Ruban	Paper Presentation, Symposium	Rajas Engineering College	1st Prize
3	23/01/2019	Sk Vaishak	Cad Modelling	Amrita College Of Engineering And Technology	3rd prize
4	30/01/2019	Alen Benz R M	Clay Modeling	Vins Christian College Of Engineering	2nd Prize
5	30/01/2019	Arjun A	Cad Depiction	Vins Christian College Of Engineering	2nd Prize
4	20/01/2018	Sharmil Raj S	Car Parking	Amrita College Of Engineering And Technology	2nd Prize
5	25/01/2018	Vijin Mon K	Face Painting	Vins Christian College Of Engineering	3rd prize
6	25/02/2018	Kevin C Anil	Singing Competition	Amrita College Of Engineering And Technology	1st Prize

Table 4.6.3.e: Prizes / Awards In Co-Curricular Activities

CAY (2020 – 21)					
S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	2.12.2020	Richu Rajesh Singh	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala	Best project award
2	2.12.2020	Bincy R	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala	Best project award
3	2.12.2020	Tibitha Merin Varghese	Paper Presentation, Symposium	Mohandas College Of Engineering And Technology, Nedumangad, Kerala	Best project award
4	19.11.2020	Marvel Samuel Jacob	Paper Presentation, Symposium	Arunachala College Of Engineering	Best project award
5	19.11.2020	Midhun Mathew	Paper Presentation, Symposium	Arunachala College Of Engineering	Best project award
6	19.11.2020	Nohin George	Paper Presentation, Symposium	Arunachala College Of Engineering	Best project award
7	19.11.2020	Saranya Vijayan	Paper Presentation, Symposium	Arunachala College Of Engineering	Best project award

8	15.9.2020	Geolin D S	Paper Presentation, Conference	Csi Institute Of Technology	Best project award
9	15.9.2020	Jerry V Rejy	Paper Presentation, Conference	Csi Institute Of Technology	Best project award
10	15.9.2020	Anujith C P	Paper Presentation, Conference	Csi Institute Of Technology	Best project award

CAYm1 (2019 – 20)

S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	07/09/2019	Aaromal Vijay V	Paper Presentation, Symposium	Ponjesly College Of Engineering	Best Project Award
2	07/09/2019	Abel A Tharian	Paper Presentation, Symposium	Ponjesly College Of Engineering	Best Project Award
3	07/09/2019	Abin T Wilson	Paper Presentation, Symposium	Ponjesly College Of Engineering	Best Project Award
4	07/09/2019	Anson Abraham	Paper Presentation, Symposium	Ponjesly College Of Engineering	Best Project Award
5	14/08/2019	Roshan Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
6	14/08/2019	Amal George Jacob	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
7	14/08/2019	Lijoy Shaji	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
8	14/08/2019	Alan Simon	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award

CAYm2 (2018-19)

S.No	Event Date	Name Of The Student	Events Name	Venue	Recognition Received
1	06/08/2018	Jobin P John	Paper Presentation, Symposium	Rohini College Of Engineering & Technology	Best Project Award

2	06/08/2018	Melvin Abraham Mathew	Paper Presentation, Symposium	Rohini College Of Engineering & Technology	Best Project Award
3	06/08/2018	Sam P Jose	Paper Presentation, Symposium	Rohini College Of Engineering & Technology	Best Project Award
4	14/08/2018	Feba Susan Thomas	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
5	14/08/2018	Christina Varghese	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
6	14/08/2018	Jancy George	Paper Presentation, Conference	St. Xaviers Catholic College Of Engineering	Best Project Award
4	24/02/2018	Alisha Maria Samuel	Paper Presentation, Symposium	Lourds Mount College Of Engineering	Best Project Award
5	24/02/2018	Devi Priya H B	Paper Presentation, Symposium	Lourds Mount College Of Engineering	Best Project Award
6	24/02/2018	Midhila M S	Paper Presentation, Symposium	Lourds Mount College Of Engineering	Best Project Award

Criteria 5	Faculty Information And Contributions	200
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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	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with the Institution(Yes/No)	In case of NO, Date of Leaving	IS HOD?
Dr. Anand Rejilin D.R	Exempted	ME/M. Tech and PhD	01/10/18	Concrete Technology	3	0	0	Professor	21/09/20	17/07/10	Regular	Yes		Yes
Mr. Bright Brabin Winsley .J	Exempted	M.E/ M.Tech	18/05/10	Construction Material And Management	2	0	0	Assistant Professor		10/01/11	Regular	Yes		No
Mr. Lin G	Exempted	M.E/ M.Tech	18/05/10	Urban Engineering	2	0	0	Assistant Professor		13/06/11	Regular	Yes		No
Mr. Charles	Exempted	M.E/ M.Tech	17/05/11	Structural Engineering	2	0	0	Assistant Professor		30/06/11	Regular	Yes		No

Dyson														
Mr. John Thangam P	Exempted	M.E/ M.Tech	18/05/11	Structural Engineering	1	0	0	Assistant Professor		30/06/11	Regular	Yes		No
Mrs. Sonia Vini Parrot M V	Exempted	M.E/ M.Tech	16/05/12	Construction Material And Management	2	0	0	Assistant Professor		01/07/11	Regular	Yes		No
Mr. G.L. Abishek	Exempted	M.E/ M.Tech	18/05/11	Structural Engineering	1	0	0	Assistant Professor		04/07/12	Regular	Yes		No
Mrs. Manju Ram D.S	Exempted	M.E/ M.Tech	14/05/14	Structural Engineering	1	0	0	Assistant Professor		04/07/12	Regular	Yes		No
Mr. Prabin R	Exempted	M.E/ M.Tech	14/05/13	Structural Engineering	1	0	0	Assistant Professor		12/07/13	Regular	Yes		No
Mr. Babin T. Praise	Exempted	M.E/ M.Tech	17/05/11	Remote Sensing	2	0	0	Assistant Professor		02/07/2012	Regular	Yes		No
Mr.Jeron R	Exempted	M.E/ M.Tech	13/05/15	Structural Engineering	1	0	0	Assistant Professor		01/07/15	Regular	Yes		No
Ms. Anne Chandra J	Exempted	M.E/ M.Tech	20/05/15	Structural Engineering	1	0	0	Assistant Professor		01/07/15	Regular	Yes		No
Mr. Jein Jenish	Exempted	M.E/ M.Tech	18/05/16	Structural Engineering	0	0	0	Assistant Professor		04/07/16	Regular	Yes		No
Mrs.Pauline Jinni Manohar	Exempted	M.E/ M.Tech	12/05/15	Structural Engineering	0	0	0	Assistant Professor		04/07/16	Regular	Yes		No
Mr.Bravin Ebanesh	Exempted	M.E/ M.Tech	18/05/16	Structural Engineering	1	0	0	Assistant Professor		04/07/16	Regular	Yes		No

Mr. Justin Raj D R	Exempted	M.E/ M.Tech	18/05/16	Structural Engineering	0	0	0	Assistant Professor		04/07/16	Regular	Yes		No
Dr. V.Rajesh Kumar	Exempted	ME/ M.Tech and PhD	19/05/09	Structural Engineering	1	0	0	Professor	03/01/19	04/06/18	Regular	Yes		No
Dr.S.Charles Ruskin Kumar	Exempted	ME/ M.Tech and PhD	15/05/18	Remote Sensing	1	0	0	Professor	03/01/19	03/01/19	Regular	Yes		No
Mr. Riyo Jose	Exempted	M.E/ M.Tech	19/05/15	Construction Material And Management	0	0	0	Assistant Professor		02/05/16	Regular	Yes		No
Mr. Praveen J	Exempted	M.E/ M.Tech	18/05/10	Construction Material And Management	0	0	0	Assistant Professor		02/05/16	Regular	Yes		No
Mr.Jyothis J.P	Exempted	M.E/ M.Tech	20/05/15	Construction Material And Management	0	0	0	Assistant Professor		02/05/16	Regular	Yes		No
Mr.Neeraj R D	Exempted	M.E/ M.Tech	19/05/15	Construction Material And Management	0	0	0	Assistant Professor		02/05/16	Regular	Yes		No
Dr. Balamurugan R	Exempted	ME/ M.Tech and PhD	16/05/12	Structural Engineering	5	0	0	Professor	06/02/17	06/02/17	Regular	No	05/05/18	No
Mrs. Pamela Jennifer J.P	Exempted	M.E/ M.Tech	18/05/16	Structural Engineering	0	0	0	Assistant Professor		02/05/16	Regular	No	02/06/18	No

Mr. Job Geo Jacob	Exempted	M.E/ M.Tech	13/05/15	Construction Material And Management	0	0	0	Assistant Professor		04/04/16	Regular	No	04/05/18	No
Mr.Jebaraj J	Exempted	M.E/ M.Tech	20/05/03	Structural Engineering with Computer Application	0	0	0	Assistant Professor		06/02/17	Regular	No	05/06/18	No
Mrs.Ancy V S	Exempted	M.E/ M.Tech	17/05/16	Structural Engineering	0	0	0	Assistant Professor		06/02/17	Regular	No	07/06/18	No
Mrs. J R .Jenishia	Exempted	M.E/ M.Tech	17/05/20	Structural Engineering	0	0	0	Assistant Professor		15/03/21	Regular	Yes		No

5.1 Student-Faculty Ratio (20)

No. of UG Programs in the Department: 1

B.E Civil Engineering						
Year of Study	CAY		CAYm1		CAYm2	
	(2020-21)		(2019-20)		(2018-19)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	120	12	120	13	120	8
3rd Year	120	13	120	8	120	16
4th Year	120	8	120	16	60	15
Sub-Total	360	33	360	37	300	39
Total	393		397		339	
Grand Total	393		397		339	

PG

No. of PG Programs in the Department	0	
Grand Total	0	

SFR

No. of UG Programs in the department 1

No. of PG Programs in the department 0

Description	CAY (2020 – 21)	CAYm1 (2019-20)	CAYm2 (2018-19)
Total No. of students in the department (S)	393	397	339
No. of faculty in the department (F)	23	22	22
Students Faculty Ratio (SFR)	17	18	16
Average (SFR)	17		

Note: 75% should be Regular/full time faculty and the remaining shall be Contractual Faculty/Adjust Faculty/Resource persons from industry as per AICTE norms and standards. The contractual faculty will be considered for assessment only if a faculty is drawing a salary as prescribed by the concerned State Government for the contractual faculty in the respective cadre.

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 (2020-21)	23	0
CAYm1 (2019-20)	22	0
CAYm2 (2018-19)	22	0

Average SFR for three assessment years : 17

Assessment SFR : 18

5.2 Faculty Cadre Proportion (25)

Year		Professors		Associate Professors		Assistant Professors
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2020-21)	2	3	4	0	12	20
CAYm1 (2019-20)	2	2	4	0	12	20
CAYm2 (2018-19)	2	2	4	0	12	20
Average Numbers	2	2.34	4	0	12	20

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 : 22.95

5.3 Faculty Qualification (25)

	X	Y	F	$FQ = 2.5 \times [(10X + 4Y) / F]$
CAY (2020-21)	3	20	17	16.18
CAYm1 (2019-20)	3	19	18	14.72
CAYm2 (2018-19)	3	19	18	14.72

Average Assessment : 15.21

5.4 Faculty Retention (25)

Description	2018-19	2019-20	2020-21
No of Faculty Retained	22	22	23
Total No of Faculty	22	22	23
% of Faculty Retained	100	100	100

Average : 100

Assessment Marks : 25.00

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

CAY (2020 – 21)

S.No	Name of the Faculty	Name of the Course	Innovation Made	Description
1	Mr. Bright Brabin Winsley J	Soil Mechanics	Animated video on soil formation	Video showing the formation of soil through the processes of weathering and natural erosion, etc.
2	Mr. G.L. Abishek	Construction Techniques and Practices	Video on Smart buildings	Video showing a smart building that uses automated processes to automatically control the building's operations including heating, ventilation, air conditioning, lighting, security and other systems.
3	Dr. Anand Rejilin D.R	Municipal solid waste management	Block Diagram on solid waste management process	Sequence of waste management process is shown using animation and block diagram for better understanding of students.

4	Mr. Charles Dyson	Engineering Geology	Animation video on volcanoes and types of volcanic eruption.	Animation videos of different types of volcanic eruptions and mass movements are shown for visual understanding
5	Dr.V.Rajesh Kumar	Structural Dynamics and Earthquake Engineering	Monogram on Effects of Earthquake on Structures	A monogram showing the effects of earthquake on structures are demonstrated to the students
6	Mr.Jyothis J.P	Estimation and Quantity Surveying	Chart on building components	Chart showing different building components
7	Mrs.Pauline Jini Manohar	Fluid Mechanics	Live model of fluid types	Samples of different types of fluids
8	Mr.Jyothis	Concrete Technology	Video on special concrete	A detailed video showing different advancements in concrete technology and various types of special concrete
9	Mrs. Manjaram D S	Water Supply Engineering	Models of appurtenance	Models of different appurtenance that are used for efficient water supplying.
10	Mrs. Anne Chandra	Surveying	Demonstration on total station instrument	A hands on Demonstration of total station instrument for better understanding its working principle and handling in field.

CAYm1 (2019 – 20)

S.No	Name of the Faculty	Name of the Course	Innovation Made	Description
1	Dr. Anand Rejilin D.R	Municipal Solid Waste Management	Animation on Waste transfer station.	Sequence of waste transfer inside a transfer station is shown using animation for better understanding of students.
2	Dr.V.Rajesh Kumar	Structural Dynamics and Earthquake	Monogram on Effects of Earthquake on Structures	A monogram showing the effects of earthquake on structures are demonstrated to the students

		Engineering		
3	Dr.S.Charles Ruskin Kumar	Environment and Agriculture	Video on Environmental impact of modern agriculture	Video showing environmental impacts of modern agriculture is explained with the video
4	Mr.Bright Brabin Winsley J	Foundation Engineering	Chart on Floating foundation	A chart containing pictures of floating Foundation is explained to the students
5	Mr. Charles Dyson	Engineering Geology	• Animation video • of volcanoes and types of volcanic eruption. Animation video of mass movement.	Animation videos of different types of volcanic eruptions and mass movements are shown for visual understanding
6	Mr. John Thangam P	Strength of Materials I	• Demonstration • video on stress • Animation video on strain Demonstration video on deflection Animation video on thermal stress and strains	Videos on how stress and strain are acting on a body and its response such as deflection is visualised using videos and animation. Effects on stress and strain due to temperature is demonstrated using animation video
7	Mrs. Sonia Vini Parrot M V	Air Pollution and control engineering	Monogram on air pollution	A monogram on air pollution due to various sources are demonstrated to the students for better understanding
8	Mr. Praveen J	Construction Materials	Demonstration on Construction Equipment's	Demonstration of construction equipments using pictures and scale models are explain for application oriented understanding
9	Mr. Babin T. Praise	Surveying	Video on 3d- Animation surveying for levelling	The process of levelling is explained using a 3D animation video
10	Mr. Prabin R	Structural Analysis I	Demonstration Video on Sway and non sway in frames	A demonstration video on sway and non-sway of frames is shown for better understanding
11	Ms. Anne Chandra J	Surveying	Demonstration Video Of Total Station Instrument	A demonstration video of total station as shown for understanding the features of total station

12	Mr. Jyothish J.P	Estimation and Quantity Surveying	Animation Video on Estimation methods of Building Works	Animation video on estimation methods of welding works was explained for visual understanding
13	Mr. Riyo Jose	Water Resources and Irrigation Engineering	Video on canal irrigation	Video showing canal irrigation is shown for visualisation
14	Mrs. Pauline Jini Manohar	Fluid Mechanics	• Video on types of fluid flows • Video on Bernoulli's equation animation • Video on Laminar and Turbulent Flow	Videos on fluid flows and Bernoulli's equation showing laminar and turbulent flow is shown for better understanding

CAYm2 (2018 – 19)

Sl.No.	Name of Faculty	Name of the Course	Innovation Made	Description
1	Mr. Bright Brabin Winsley J	Soil Mechanics	Video Animation on soil three phase diagram	A video animation showing the three phases of soil is explain the for better understanding of students
2	Mr. Lin G	Railways, Airports and Harbour Engineering	Chart on Airport wind rose diagram	A chart showing airport wind rose diagram is explain to the students
3	Mr. John Thangam P	Strength of Materials II	• Demonstration video on Buckling • Animation video on Indeterminate trusses	A demonstration video on buckling and intermediate trusses are are shown to the students for better understanding
4	Ms. Manju Ram D.S	Water Supply Engineering	Video on Sedimentation Process	A video on sedimentation process is shown for better visualisation
5	Mr. G.L. Abishek	Prefabricated Structures	Animation video on Prefabrication buildings	Animation video of prefabricated structures and buildings are played for or better visualisation.
6	Mr. Prabin R	Structural Analysis II	Demonstration Video on Shear force and	A demonstration video showing shear force and bending moment diagram for

			Bending moment diagram	different type of structures are visualised
			Chart on Steel Structures and connections	A chart containing different type of steel structures and connections are shown for better understanding
7	Mr. Neeraj R D	Design of Steel Structures		

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

	Name of the faculty	Max 5 Per Faculty		
		2019-20 CAYm1	2018-19 (CAYm2)	2017-18 (CAYm3)
1	Dr. Anand Rejilin D.R	5	3.00	5.00
2	Mr. Bright Brabin Winsley .J	5	5.00	3.00
3	Mr. Lin G	5	3.00	3.00
4	Mr. Charles Dyson	5	3.00	3.00
5	Mr. John Thangam P	6	3.00	3.00
6	Mrs. Sonia Vini Parrot M V	3	5.00	3.00
7	Mr. G.L. Abishek	10	3.00	3.00
8	Mrs. Manju Ram D.S	20	3.00	3.00
9	Mr. Prabin R	5	3.00	3.00
10	Mr. Babin T. Praise	10	3.00	3.00
11	Mr.Jeron R	5	5.00	3.00
12	Ms. Anne Chandra J	5	3.00	3.00
13	Mr. Jein Jenish	6	4.00	3.00
14	Mrs.Pauline Jini Manohar	5	3.00	3.00
15	Mr.Bravin Ebanesh	6	3.00	3.00
16	Mr. Justin Raj D R	5	3.00	3.00
17	Dr.V.Rajesh Kumar	6	3.00	3.00
18	Dr.S.Charles Ruskin Kumar	5	3.00	3.00
19	Mr. Riyo Jose	5	3.00	3.00
20	Mr. Praveen J	5	3.00	3.00
21	Mr.Jyothis J.P	5	3.00	3.00
22	Mr.Neeraj R D	5	5.00	3.00
23	Dr. Balamurugan R	0	0.00	0.00
24	Mrs. Pamela Jennifer J.P	0	0.00	0.00

25	Mr. Job Geo Jacob	0	0.00	0.00
26	Mr.Jebaraj J	0	0.00	0.00
27	Mrs.Ancy V S	0	0.00	0.00
Sum		143	75.00	68.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratio As per 5.1		17	18	18
Assessment [$3 \times (\text{Sum} / 0.5\text{RF})$]		50.47	25	22.67

Average assessment over 3 years: 32.71

5.7 Research and Development (30)

5.7.1 Academic Research (10)

Table 5.7.1.a: Details of Journal Publications

S.No	Name of the Faculty	No. of publications
1	Dr. Anand Rejilin D.R	3
2	Dr.Balamurugan R	1
3	Mr.Bright Brabin Winsley J	5
4	Mr. Lin G	3
5	Mr. Charles Dyson	4
6	Mr. John Thangam P	3
7	Mrs. Sonia Vini Parrot M V	1
8	Mr. Praveen J	1
9	Mr. Babin T. Praise	1
10	Ms. Manju Ram D.S	2
11	Mr. G.L. Abishek	5
12	Mr. Prabin R	1
13	Mr.Jeron R	5
14	Ms. Anne Chandra J	2
15	Mr. Jyothish J.P	1
16	Mr. Riyo Jose	1
17	Ms. Pamela Jennifer J.P	1
18	Mr. Jein Jenish	3
19	Mrs.Pauline Jini Manohar	2
20	Mr.Bravin Ebanesh	3
21	Mr. Justin Raj D R	3
22	Mr.Jebaraj J	1
23	Dr.V.Rajesh kumar	2
24	Dr.S.Charles Ruskin Kumar	1

Table 5.7.1.b: List of Quality Publications

Sl. No .	Name of the Faculty	Title of the Article	Journal in which Published	Year of Publication	UGC Recognized Journal & Scopus/SCI journals
1	Dr. Anand Rejilin D.R	Flexural Performance of Geopolymer Concrete Modified with Pozzalone Minerals and Secondary Reinforcement	Journal of Computational and Theoretical Nanoscience	2018	Scopus
2	Mr.Bright Brabin Winsley J	A preliminary study on the physical properties of an alternative coarse aggregate made with red soil and fly ash	The Open Construction & Building Technology Journal 12 (1)	2018	Scopus
3	Mr.Bright Brabin Winsley J	Expanded Fly Ash Clay Aggregate a Sustainable Alternative Coarse Aggregate for Concrete	Journal of Materials and Engineering Structures «JMES» 5 (4), 347-353	2018	ESCI
4	Mr.Bright Brabin Winsley J	Glass Fiber reinforced Compressed Stabilized Earth Block - A green alternative to Cement Concrete Blocks	International Journal of Engineering and Advanced Technology 9 (IS4), 196-199	2020	Scopus
5	Mr.Bright Brabin Winsley J	Information Security: A Scientometric Study	Innovations in the Designing and Marketing of Information Services, 231-246	2020	Scopus
6	Mr. Lin G	Experimental study on the properties of cement mortar with various admixtures”	International Journal of Science, Technology & Management	April 2016	UGC Recognized Journal

7	Mr. Lin G	Study on influence of additive on the Drain Down characteristic of SAM (Stone Matrix Asphalt)	Institute of Integrative Omics and Applied Biotechnology (IIOAB)	2017	UGC Recognized Journal
8	Mr. Charles Dyson	Experimental Investigation in Effect of Low-Calcium Fly Ash Geopolymer Concrete	International Journal of Engineering Research (IJER)	1st Sept. 2016	Scopus
9	Mr. Charles Dyson	Study on influence of additive on the Drain down characteristic of SAM (Stone Matrix Asphalt)	Institute of Integrative Omics and Applied Biotechnology (IIOAB)	2017	UGC Recognized Journal
10	Mr. John Thangam P	Strengthening the RC member with GFRP stirrups	International Journal of Science, Technology & Management	2017	UGC Recognized Journal
11	Ms. Manju Ram D.S	Experimental Investigation On Composite Flexural Member On Geo polymer And Conventional Concrete.	International Journal of Science, Technology & Management	2015	UGC Recognized Journal
12	Mr. G.L. Abishek	Experimental Investigation of High – Strength Characteristics of Self Curing Concrete	IJ International Journal for Modern Trends in Science and Technology (IJMTST)	July 2016	Google Scholar
13	Mr. G.L. Abishek	Experimental Investigation in Effect of Low-Calcium Flyash Geopolymer Concrete	International Journal of Engineering Research (IJER)	Sept. 2016	Google Scholar
14	Mr. G.L. Abishek	Experimental Study On Behaviour Of Paper Sludge Concrete	Institute of Integrative Omics and Applied Biotechnology (IIOAB)	July 2017	Google Scholar

15	Mr.Jeron R	Experimental study of concrete using natural(bamboo) fibre	International Journal of Science, Technology & Management	2018	UGC Recognized Journal
16	Mr.Jeron R	Strengthening the RC member with GFRP stirrups	International Journal of Science, Technology & Management	2017	UGC Recognized Journal
17	Ms. Anne Chandra J	Demolition Waste as Cement Replacement in Concrete	International Journal of Science, Technology & Management	2017	UGC Recognized Journal
18	Mr. Jein Jenish	Experimental study on the properties of cement mortar with various admixtures	International Journal of Civil and Structural Engineering Research	April 2016	UGC Recognized Journal
19	Mr. Jein Jenish	Experimental Investigation Of Encapsulated Phase Changing Material In Incorporated Concrete	International Journal Of Advanced Research Trends In Engineering And Technology	April 2018	UGC Recognized Journal
20	Mr.Pauline Jini Manohar	Strengthening the RC member with GFRP stirrups	Institute of Integrative Omics and Applied Biotechnology (IIOAB)	2017	UGC Recognized Journal
21	Mr.Bravin Ebanesh	Flexural Performance of Geopolymer Concrete Modified with Pozzolanic Minerals and Secondary Reinforcement	Journal of Computational and Theoretical Nanoscience	2018	Scopus
22	Mr. Justin Raj D R	Experimental Investigation Of Encapsulated Phase Changing Material In Incorporated Concrete	International Journal Of Advanced Research Trends In Engineering And Technology	April 2018	UGC Recognized Journal
23	Mr. Justin Raj D R	Study on influence of additive on the Drain Down characteristic of SAM (Stone Matrix Asphalt)	International Journal of Science, Technology & Management	2017	UGC Recognized Journal

Table 5.7.1.c: Details of faculty presented in conferences

Sl.No.	Name Of Faculty	Title Of The Paper	Name Of The Organizing Institution	Sponsoring Agency (If Any)	Date/ Duration Of The Programme	International/ National State/ Local
1.	Dr. Balamurugan R	Strength Parameters Of An Alternate Coarse Aggregate" At National Conference On International Conference On Technological Advancements And Green Governance	Sivaji College Of Engineering	Nil	2018	International Conference On Technological Advancements And Green Governance (Ictagg'14), 2014
2	Dr. Anand Rejilin D.R	Mechanical Performance Of Concrete With Partial Replacement Of Coarse Aggregate With Treated Plastic Waste.	St. Xaviers Catholic College Of Engineering	Nil	2019	Inter National
		Experimental Investigation On Partial Replacement Of Cement With Marble Dust Powde	The Rajas Engineering College, Vadakkangulam	Nil	05.04.2013	Inter National
3	Mr.Bright Brabin Winsley	Study On Workability Parameters Of	Kalasalingam University	Nil	2014	National Conference

		Burnt Clay As Coarse Aggregate" At National Conference On Advances In Materials, Construction And Sustainable Environment				On Advances In Materials, Construction And Sustainable Environment Amcse2014
		Strength Parameters Of An Alternate Coarse Aggregate" At National Conference On International Conference On Technological Advancements And Green Governance	Sivaji College Of Engineering	Nil	2018	International Conference On Technological Advancements And Green Governance (Ictagg'14), 2014
4	Mr. Lin G	Experimental Study On Flexible Pavement	Arunachala College Of Engineering For Women	Nil	2018	International
		Experimental Investigation On Replacement Of Bitumen By Plastic Waste	Sivaji College Of Engineering And Technology	Nil	2018	National
		Study on the innovations used in road construction	Rohini College Of Engineering & Technology	Nil	2021	National
5	Mr. Charles Dyson	Experimental Study On Steel & Glass	Sun College Of Engineering And	Nil	24/3/2011 & 25/3/2011	International

		Fiber Concrete & Comparing It In Artificial Neural Network	Technology		Two Days	
		Experimental Study On Steel & Glass Powder Mixed Concrete & Comparing It In Artificial Neural Network	Sengunthar Engineering College	Nil	8/4/2011	National
		Experimental Study On Flexural Behaviour Of Self Compacting Steel Fiber Concrete	The Rajaas Engineering College	Nil	22/3/2012	National
		Experimental Study On The Mechanical Behaviour Of Copper Slag Bricks & Copper Slag Blocks	Rohini College Of Engineering & Technology	Nil	27/3/2014 & 28/3/2014 Two Days	National
		Comparative Study Of Copper Slag Bricks & Blocks	Karpagam College Of Engineering & Technology	Nil	19/2/2016 & 20/2/2016 Two Days	International
		Bioremediation On Hospital Waste	Arunachala College Of Engineering For Women	Nil	22/3/2018 & 23/3/2018 Two Days	International
6	Mr. John Thangam P	Strengthening The Rc Member With Gfrp Stirrups	Bethlehem College Of Engineering And Technology	Nil	2017	International

		Comparative Study Of Copper Slag Bricks And Blocks	Sivaji College Of Engineering And Technology	Nil	2018	National
		Comparative study on Self Compacting Concrete on partial replacement of Brick bats	Ponjesly College Of Engineering	Nil	2021	National
7	Mrs. Sonia Vini Parrot M V	Experimental Investigation On Geopolymer Concrete	Lourd Mound College Of Engineering	Nil	2018	National
8	Mr. Praveen J	Waste Water Treatment Using Land Scale Industries Reed And Plant Bed System	Ponjesly College Of Engineering And Technology	Nil	2018	International
9	Mr. Babin T. Praise	Experimental Study Of Capello As Fibre In Concrete	Bethlehem College Of Engineering And Technology	Nil	2019	National
10	Ms. Manju Ram D.S	Waterbtreatment Using Kalvalai Plant	Lourd Mount College Of Engineering And Technology	Nil	2019	International
		Waste Water Treatment Using Land Scale Industries Reed And Plant Bed	Ponjesly College Of Engineering And Technology	Nil	2018	International

		System				
11	Mr. G.L. Abishek	Shear Strength Of Reinforced Concrete Beams Which Are Partially Curved In Elevation	The Indian Engineering College, Vadakkangulam	Nil	16.04.2010	National
		Experimental Study On The Effect Of Low-Calcium Fly Ash Geopolymer Concrete	The Rajas Engineering College, Vadakkangulam	Nil	22.03.2012	National
		Experimental Study On Behaviour Of Paper Sludge Concrete	Karpagam College Of Engineering, Coimbatore	Nil	19.02.2016 & 20.02.2016	International
		Experimental Study On Concrete Reinforced With Recycled Nylon Fibre	Mar Thoma College, Tiruvalla	Nil	06.08.2019 & 07.08.2019	National
		Experimental Study On Light Weight Concrete Using Polystyrene	Karpagam College Of Engineering & Technology	Nil	2019	National
12	Mr. Prabin R	Experimental Study On Retrofitting Of Structural Elements	The Rajas Engineering College, Vadakkangulam	Nil	22.03.2013	Inter National
		Experimental Study On Retrofitting Of	St. Xaviers Catholic College Of Engineering	Nil	05.04.2013	Inter National

		Structural Elements				
		Mechanical Performance Of Concrete With Partial Replacement Of Coarse Aggregate With Treated Plastic Waste.	St. Xaviers Catholic College Of Engineering	Nil	2019	Inter National
13	Mr.Jeron R	Demolition Waste As Cement Replacement In Concrete	Ponjesly College Of Engineering And Technology	Nil	2017	International
		Experimental Study Of Capello As Fibre In Concrete	Mar Thoma College, Tiruvalla	Nil	2019	International
14	Ms. Anne Chandra J	Demolition Waste As Cement Replacement In Concrete	Ponjesly College Of Engineering And Technology	Nil	2017	International
15	Mr. Neeraj R D	Experimental Investigation On Flexural Behavior Of Steel Structures.	Sivaji College Of Engineering And Technology	Nil	2018	National
16	Mr. Jyothish J.P	Experimental Study On Light Weight Concrete Using Polystyrene	Karpagam College Of Engineering & Technology	Nil	2019	National
17	Mr. Riyo Jose	Experimental Investigation On Replacement Of Bitumen By Plastic	Sivaji College Of Engineering And Technology	Nil	2018	National

		Waste				
18	Mr. Job Geo Jacob	Comparative Study Of Copper Slag Bricks And Blocks	Karpagam College Of Engineering & Technology	Nil	19/2/2016 & 20/2/2016	Inter National
19	Ms. Pamela Jennifer J.P	Waste Water Treatment Using Land Scale Industries Reed And Plant Bed System	Ponjesly College Of Engineering And Technology	Nil	2018	International
20	Mr. Jein Jenish	Soil Stabilization For Black Cotton Soils Using Geonails And Yard Waste Soil	Kalaivani College Of Technology, Coimbatore	Nil	12-03-2015 13-03-2015 14-03-2015	Inter National
		Experimental Study Of Capello As Fibre In Concrete	Bethlehem College Of Engineering And Technology	Nil	2019	National
		Study on the innovations used in road construction	Rohini College Of Engineering & Technology	Nil	2021	National
21	Mrs.Pauline Jini Manohar	Experimental Study On Replacement Of Coarse Aggregate By Ceramic Waste	Lourd Mound College Of Engineering	Nil	2018	National
		Comparative study on Self Compacting Concrete on partial	Ponjesly College Of Engineering	Nil	2021	National

		replacement of Brick bats				
22	Mr.Bravin Ebanesh	Experimental Investigation On Flexural Behavior Of Steel Structures.	Sivaji College Of Engineering And Technology	Nil	2018	National
		Experimental Investigation On Conventional Concrete And Geopolymer	Lourd Mound College Of Engineering	Nil	2018	National
23	Mr. Justin Raj D R	Experimental Investigation On Geopolymer Concrete	Lourd Mound College Of Engineering	Nil	2018	National
		Experimental Study Of Capello As Fibre In Concrete	Ponjesly College Of Engineering	Nil	2019	National
		Study on the innovations used in road construction	Rohini College Of Engineering & Technology	Nil	2021	National
24	Mr.Jebaraj J	Experimental Study On Replacement Of Coarse Aggregate By Ceramic Waste	Lourd Mound College Of Engineering	Nil	2018	National
25	Ms.Ancy V S	Waste Water Treatment Using Land Scale Industries Reed And Plant Bed System	Ponjesly College Of Engineering And Technology	Nil	2018	International
26	Prof.Dr.V.Rajesh Kumar	Experimental Investigation On	Lourd Mound College Of	Nil	2018	National

		Conventional Concrete And Geopolymer	Engineering			
		Mechanical Performance Of Concrete With Partial Replacement Of Coarse Aggregate With Treated Plastic Waste.	St. Xaviers Catholic College Of Engineering	Nil	2019	Inter National
27	Prof.Dr.S.Charles Ruskin Kumar	Experimental Study On Light Weight Concrete Using Polystyrene	Karpagam College Of Engineering & Technology	Nil	2019	National

Ph.D details during the Assessment period

Table 5.7.1.c: List of Ph.D details during the Assessment period

Sl. No.	Name Of The Faculty	Date	Thesis Title	University
1.	Dr.Anand Rejilin	01.10.2018	Strength And Durability Properties Of Geopolymer Concrete	Anna University

Table 5.7.1.d: List of Faculty pursuing Ph.D.

Sl. No.	Name of the Faculty	Ph.D. pursuing University	Year of Registration	Details of Guide	Area of Research Work
1.	Mr.Bright brabin Winsely	Anna University	2016	Prof. Dr. Kumara Kannan	Concrete Technology
2.	Mr.Abishek	Anna University	2018	Prof. Dr. R Murugesan	Concrete Technology

3.	Mr. John Thangam	Annamalai University	2020	Dr. Ilango Siva Kumar	Structural and civil engineering
4	Mr. Bravin Ebanesh W	Anna University	2021	Prof. Dr. Murugeshen	Concrete Technology
5	Mr. Charles Dyson	Karpagam Accademy of Higher Education	2020	Dr. Vijay Shankar	Structural and civil engineering

Table 5.7.1.e: List of book chapters published

Sl. No.	Academic Year of Publication	Name of the Faculty	Name of the Book Chapters
1.	2019 - 2020	Charles Dyson	Multimedia Based Learning Tools and its Scope, Applications for Virtual Learning Environment

Table 5.7.1.f: List of patents registered

Sl. No.	Name of the Faculty	National/ International	Patent Name	Patent Filing date
1.	Mr. Bright Brabin Winsley J	National	An Alternative Aggregate Produced by Physical Treatment on Soil, Fly Ash and Chemical Admixtures mixed at Right Proportion capable of Replacing Course Aggregate in Concrete	12/01/2017

5.7.2 Sponsored Research (5)

2020-21 (CAY)

Project Title	Duration	Funding Agency	Amount
Self-Priming Automated Fodder System	1 year	DST- NSTEDB	2,50,000
			Total Amount(Y): 2,50,000

2019-20 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Automated Hydroponic Cattle Feeder System	1 year	DST- NSTEDB	2,50,000
			Total Amount(Y): 2,50,000

2018-19 (CAYm2)

Project Title	Duration	Funding Agency	Amount
IoT Based Smart Cattle Farm With Hydroponic Feeder System	2 years	DST	8300000.00
Experimental study of low cost water purification in rural areas	1 year	TNSCST	20000.00
			Total Amount(X): 8320000.00

2017-18 (CAYm3)

Project Title	Duration	Funding Agency	Amount
-	-	-	0.00
			Total Amount(Y): 0.00

Cumulative Amount(X + Y + Z) = 8320000.00

5.7.3 Development Activities (10)

A. Product development

Table B.5.7.3.a Product Developed by the Students

Sl. No.	Faculty Name	Student Name	Year	Title Of The Project
1	Dr.V.Rajesh Kumar	Benjamin P Mathew Benz Thomas Gokul Prasad Antony Francis	2018-2019	Polypropylene Reinforced Concrete
2.	Mr.Bright Brabin Winsley J	Kevin C Anil Kurian Cherian Libin Thomas Nithin Reji	2018-2019	Waste Tyre Rubber based Concrete
3.	Dr.S.Charles Ruskin Kumar	Ancy Vijayan Dona Renjith Geethu D S	2018-2019	Fiber Reinforced Composite Pavement
4.	Mr. Lin G	Ancy A S Neethu Raj R Praiselyn Fiana	2016-2017	Rubberised Pavement Enhance With Shredded Tyre
5.	Mr. John Thangam P	Aaromal Vijay Anson Abraham	2019-2020	Smart Cattle Farm With Hydroponic Feeder System
6.	Mr. G.L. Abishek	Jenish Y Rahul	2020-2021	High Strength Concrete
7.	Mr.Jeron R	Lincy	2020-2021	light Weight Concrete
8.	Mr. Babin T Praise	Prageesh	2017-2018	Waste Plastic based Bricks
9.	Ms. Manju Ram D.S	Ajisha Benish	2017-2018	Kalvalai Plant based Water Treatment Unit
10.	Mr. Riyo Jose	Jiju K Aniyen Job Geo Jacob	2018-2019	CFRP Strengthened Concrete
11.	Mr. G.L. Abishek	Megha Stella Prakash. Akhila Jerasha	2018-2019	BFRP Strengthened Concrete

12.	Ms. Pamela Jennifer J.P	Jeyasingh	2017 - 2018	Multi Way Valve
13.	Mr. Prabin R	Vinitha	2019-2020	Power Generation From Road Vibration
14.	Mr.Jeron R	Jenish Y	2018-2019	Concrete Using Coconut Shell
15.	Mr.Jeron R	Lizy V	2018-2019	Banana Stem Fibre based Low Cost Slab
16.	Mr. Jein Jenish	Pradeep Anto Libin	2016-2017	Encapsulated Phase Changing Material for Concrete
17	Mr. Jein Jenish	Nigin Murugesh	2018-2019	Ferrocement Aero Gel Concrete
18	Mr.Bravin Ebanesh	Feba Christeena Johncy	2017-2018	Waste Plastic Based Concrete Block

B.Research laboratories

Table 5.7.3.b: Research Lab details

Sl. No.	Software/Hardware	Description	Purpose
1.	Digital U T M	UTM of capacity 6000kN	It is used to perform many standard tensile and compression tests on materials, components, and structures
2.	Work Station	Computer System Connected to UTM	It is used for Computation and data analysis
3.	FEM Software	ANSYS- US based and developed full CAE software package	It is used for modelling, analysis and simulation of structural elements.

C.Instructional Materials

The faculty members brand use of modern multi-media teaching utilities like LCD projectors, high speed Internet enabled computers are deployed in classroom.

The college has also providing facilities with high speed internet connection across the campus which enables access of open e-resources, free journals, e-books to the students and faculty members. Black boards are provided in every class rooms for the smooth conduct of the class. The faculty members make use of NPTEL videos and lecture materials to improve the student quality in teaching-learning process.

Course Notes

Every faculty members prepare course wise lecture schedules, resource material and other related instruction material before commencement of semester. The students can login and access the content through internet.

PPT Slides

Content wise instruction material is developed including PPT presentations, for all the courses prior to the commencement of each semester.

Work book/Tutorial

Work books are provided for the students, to solve as many application level problems, so that the students can achieve our specific outcomes.

Laboratory manuals

Laboratory manuals are prepared by the faculty members and are maintained in each lab.

NPTEL

- Expert video subject lectures delivered by the various eminent resource persons are available in the digital library and it facilitates the faculty and students to utilize-Tutorials of NPTEL, E-Journals, etc. The following are the sample subjects and links for NPTEL video lectures

Table 5.7.3.c: NPTEL Details

S.No	NPTEL Course Name	NPTEL Link	Expert Name/ Institute	Related Courses	Referred by
1.	Municipal Solid Waste Management	https://nptel.ac.in/courses/106/105/106105159/	Prof. Anupam Basu IIT Kharagpur	Waste Processing Techniques	Mr. S.Charles Ruskin Kumar
2.	Structural Dynamics And Aseismic	https://nptel.ac.in/courses/106/108/106108054	Dr. L. Sunil Chandran IISc Bangalore/	Response harmonic Loading to	Dr.V.Rajesh Kumar
3.	Water Supply Engineering	https://nptel.ac.in/content/syllabus_pdf/105105201.pdf	PROF. Prof.Manoj Kumar IIT Kharagpur	Reservoir designing	Mr. D. S. Manjuram

4.	Soil Mechanics	https://nptel.ac.in/courses/106/102/106102064/	Prof. Naveen Garg IIT Delhi	Earth pressure theory	Mr. J.Bright Brabin Winsley
5.	Design Of Steel Structures	https://nptel.ac.in/courses/106/106/106106092/	Prof. N.J. Rao IISc Bangalore	Design of Lacing and Batten Systems	Mr. Abishek G. L
6.	Design Of Reinforced Concrete Structures	https://nptel.ac.in/courses/106/106/106106130/	Dr. N S. Narayanaswamy IIT Madras	Limit state of serviceability	Mr. Abishek G. L
7.	Structural Analysis	https://nptel.ac.in/courses/106/105/106105183/	Prof. Soumya Kanti Ghosh Prof. Sandip Chakrabort IIT Kharagpur	Plane truss: method of joints and method of sections	Mr. Prabin R.M
8.	Repair And Rehabilitation	https://nptel.ac.in/courses/106/106/106106131/	Prof. Madhavan Mukund IIT Madras	Maintenance and Repair of Concrete Structures	Dr. Anand Rejilin D.R
9.	Engineering Geology	https://nptel.ac.in/courses/106/108/106108100/	Prof. Krishna Kumar IISc Bangalore	Geologic Maps and Stratigraphic Sections.	Mr. Charles Dyson
10.	Concrete Technology	https://nptel.ac.in/courses/106/102/106102132/	Prof. Sorav Bansal IIT Delhi	Concrete mix design	Mr. Jein Jenish
11.	Irrigation Engineering	https://nptel.ac.in/courses/106/105/106105182/	Prof. Rajib Mall IIT Kharagpur	Surface and Ground water resources	Mr. Sonia Vini Parrot V
12.	Fluid Mechanics	https://nptel.ac.in/courses/106/103/106103224/	Prof. Samit Bhattacharya IIT Guwahati	Conservation of equations in Fluid flow	Mrs. Paulin Jini Manohar

13.	Applied Hydraulics	https://nptel.ac.in/courses/106/103/106103205/	Prof. Sajith Gopalan Prof. Benny George K IIT Guwahati	Hydraulic Jump	Mrs. Paulin Jini Manohar
14.	Construction Materials	https://nptel.ac.in/courses/106/105/106105153/	Prof. Partha Pratim Das IIT Kharagpur	Cement Aggregate and Water Selection	Mr. Riyo Jose
15.	Design Of Reinforced Concrete And Brick masonry	https://nptel.ac.in/courses/106/104/106104148/	Brick masonry	Limit state of Collapse Flexure	Mr.J. Praveen
16.	Foundation Engineering	https://nptel.ac.in/courses/105/101/105101083/	Prof. Anupam Basu Prof. S. Sarkar	Standard Penetration Test and Cone Penetration Test	Mr. Justin D.R
17.	Principles Of Management	https://nptel.ac.in/courses/106/104/106104123/	Prof. Sanjeev K Aggarwal IIT Kanpur	Evolution of Management	Mr. Jyotish J
18.	Estimation And Costing	https://nptel.ac.in/courses/106/106/106106168/	Dr. Rajiv Misra IIT Patna	Estimation and Rate Analysis	Mr. Justin D.R
19.	Water Resources Engineering	https://nptel.ac.in/courses/106/106/106106147/	Prof. Pushpendra Singh Prof.Sridhar Iyer IIT Madras	Design Flood Estimation	Mr. D.Neeraj
20.	Highway Engineering	https://nptel.ac.in/courses/106/105/106105167/	Prof. Soumya Kanti Ghosh IIT Kharagpur	Introduction to transportation systems engineering	Mr. Lin G

21.	Prestressed Concrete Structures	https://nptel.ac.in/courses/106/105/106105162/	Prof. Sourav Mukhopadhyay IIT Kharagpur	Pre-tensioning Systems and services	Mrs. Anne Chandra J
22.	Surveying	https://nptel.ac.in/courses/105/107/105107122/	Prof. Smruti R.Sarangi IIT Delhi	Digital Land Surveying and Mapping(DLS &M)	Mr. R.Jeron
23.	Strength Of Material	https://nptel.ac.in/courses/105/105/105105108/	Prof. V. Kamakoti IIT Madras	Stress Transformation s in beams and columns	Mr. P. John Thangam

Working models/charts/monograms etc

Models and charts developed by students under the guidance of faculty that help the students to understand the working of basics and recent technologies in a better manner.

Table 5.7.3.d: Usage of recent technologies

S.No	Details
1	Animations – Bending moment and shear force behavior of frames. Response of soil due to stress.
2	Lab Description Charts – Soil Permeability
3	Lab Manuals
4	PPT – Working process

- The various technical charts are available in the laboratories to give the perception knowledge about the lab experiments, pertaining to the lab experiment.

5.7.4 Consultancy (from Industry) (5)

2019-20 (CAYm1)

Project Title	Duration	Funding Agency	Amount
Material Testing	10 years	Southern Rail Way	45000.00
Material Testing	6 years	Ideal Construction Company, Nagercoil	35000.00

Material Testing	4 year	J.J. Paveres, Elavuvilai	28000.00
Material Testing	4 year	S.K Paveres, Elavuvilai	26500.00
Material Testing	4 year	Green Build Shelter Solutions	22000.00
Material Testing	4 year	Medical Research	1000.00
			Total Amount(X): 157500.00

2018-19 (CAYm2)

Project Title	Duration	Funding Agency	Amount
Material Testing	6 years	Southern Rail Way	80000.00
Material Testing	4 years	Ideal Construction Company, Nagercoil	125000.00
Material Testing	1 year	J.J. Paveres, Elavuvilai	73865.00
Material Testing	1 year	S.K Paveres, Elavuvilai	88950.00
Material Testing	1 year	Green Build Shelter Solutions	105000.00
Material Testing	1 year	Medical Research	1400.00
			Total Amount(Y): 474215.00

2017-18 (CAYm3)

Project Title	Duration	Funding Agency	Amount
Material Testing	6 years	Southern Rail Way	95000.00
Material Testing	4 years	Ideal Construction Company, Nagercoil	133000.00
Material Testing	1 year	J.J. Paveres, Elavuvilai	54000.00
Material Testing	1 year	S.K Paveres, Elavuvilai	74550.00
Material Testing	1 year	Green Build Shelter Solutions	60885.00
Material Testing	1 year	Medical Research	1400.00
Survey	1 year	Pwd	40000.00
			Total Amount(Z): 458835.00

Cumulative Amount(X + Y + Z) = 1343200.00

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)**A. A well-defined performance appraisal and development system instituted for all the assessment years**

- The performance of every staff is appraised in two tiers.
- Initially the staff will appraise their yearly outcomes and achievements as a self-appraisal.
- They themselves appraise their achievements, identify their strength and areas for improvement.
- The reporting authority of every position will appraise further and their strengths and areas for improvement are evaluated and quantified.
- The appraisal is done for every academic year.
- The score of faculty in the appraisal is appreciated by the top management and are awarded.

The components of the appraisal system are given below.

- Students Pass Percentage
- University Rank

- Course file
- FDP participation/ resource person Students Publications.
- Mentoring achievement
- Students projects
- Conduction of Co-curricular Events in School
- Research Outcomes
- Incubation units in hand
- Increasing the visibility of Institution
- Supporting Local Community by Technology
- MoU initiated
- Faculty Interaction with outside world
- The prime decisions are taken up by the management based on the performance appraisal report; they are regularly communicated to the stakeholders for their professional development.

Some of the outcomes of the performance appraisal reports are

- The strength and professional progress of the staff are clearly projected.
- The areas to be improved for their professional development are identified. These areas are considered for arranging training programs and skill development programs. The management finds a way to appreciate and honor the achieved staff thus motivating and formulating a detailed plan to hone up their skills

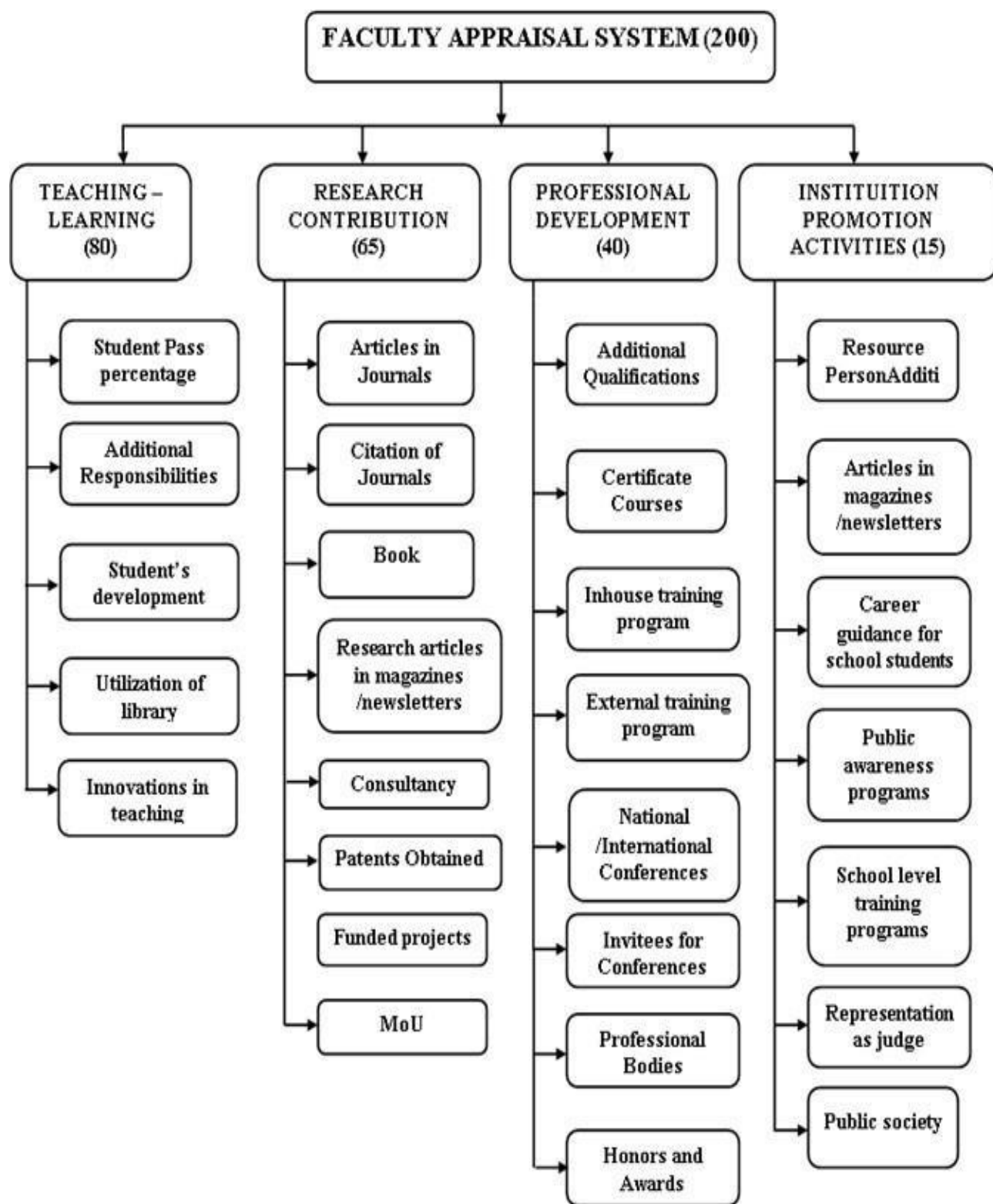


Fig 5.8.1: Components of faculty appraisal system.

Sample appraisal form

FACULTY PERFORMANCE APPRAISAL SYSTEM							
Faculty Name : P. John Thangam				Department : Civil Engineering			
Name	: P. John Thangam						
D.O.B	: 30-06-2011						
Email id	: johnthangam@marephraem.edu.in						
Present Designation and from which date: AP							
Department	: Civil Engineering						
Address and Phone No	: 9943650106						
D.O.B	: 07-06-1985						
I. TEACHING LEARNING – (Max 80 marks)							
(A) Students Pass Percentage (Max 50 Marks)							
Semester	Course Name	Percentage	R.C	Marks	S/O+ Grade	Mark	Total (Max 35)
ODD	Strength of materials I	49 %	84.3	10	-	-	10
EVEN	Irrigation Engineering	100%			-	-	
(B) Student Feedback (Max 5 Marks)							
Average Student Feed back				Mark			
9.6				5			
(C) Additional Responsibilities (Max 15 Marks)							
Sl. No	Additional Responsibility			Marks	Total		
1	Cells and Committee In-charge			-	8		
2	Seminar on COVID-19			3			
3	Certificate committee in gradation day			2			
4	Co-Ordinator for FDP on Prestressed concrete			2			
5	Symposium treasurer			1			


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FACULTY PERFORMANCE APPRAISAL SYSTEM						
Faculty Name : P. John Thangam				Department : Civil Engineering		
(D) Students Development (Max 30 marks)						
1. Contribution as guide to present paper in Conference (5 marks)						
Sl.No	Name of the student	Conference	Title of the paper presentation	Marks	Total	
-	-	-	-	-	-	
2. Extent of participation in establishing product development labs (10 marks)						
Sl.No	Name of the Lab	Established /Initiated	Funded By	Number of Students Attended	Marks	Total
-	-	-	-	-	-	-
3. Webinar / Video conferencing facility / ICT (3 Marks)						
Sl.No	Topic	Webinar / Video conferencing facility / ICT	Number of students participated	Date	Marks	Total
1	Strength of materials I	Video Lecture	60	19-2-2019	3	3
2	Irrigation Engineering	PPT	80	28-2-2019	3	
4. Institute Industry student linkage and relationship (5 Marks)						
Sl.No	Linkage details	Industry/ Institute	Validity period	Marks	Total	
-	-	-	-	-	-	
5. Contribution for Students Projects (5 Marks)						
Sl.No	Name of the student	Project Name	Funded By / Project Expo	Marks	Total	
1	Abin.T.Wilson	-	IEDC	5	5	


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FACULTY PERFORMANCE APPRAISAL SYSTEM					
Faculty Name : P. John Thangam			Department : Civil Engineering		
6. Contribution for molding the student to participate in Co-Curricular events (5 Marks)					
Sl.No	Name of the student	Event Name	Winner / Participation	Marks	Total
1	-	-	-	-	-
7. Contribution for molding the student to participate in Extra-Curricular events (5 Marks)					
Sl.No	Name of the student	Event Name	Winner / Participation	Marks	Total
-	-	-	-	-	-
-	-	-	-	-	-
8. Mentoring and guidance services (5 Marks)					
Sl.No	Number of the students	Average no. of time spent	Pass Percentage	Marks	Total
1	18	20 Hrs	53	1	1
9. Role as Class In-charges (10 Marks)					
Sl.No	Class	Marks	Pass Percentage	Marks	Total
1	II Civil	5	-	-	5
2	-	-	-	-	-
				Total	5
(D) Utilization of Library (Max 5 marks)					
Sl.No	Names of Journals	Names of Magazines	Journal / Magazine Subscription	e-journal facilities	Total
-	-	-	-	-	-
Mark	-	-	-	-	-
(E) Innovations / Contributions in Teaching / other related works (Max 5 marks)					
Sl.No	Subject	Marks	Total		
1	Strength of materials I	2	5		
2	Strength of materials I	2			
3	Irrigation Engineering	2			

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FACULTY PERFORMANCE APPRAISAL SYSTEM						
Faculty Name : P. John Thangam			Department : Civil Engineering			
II RESEARCH CONTRIBUTION (Maximum 65 Marks)						
(A) Articles in Journals National / International (Max 10 marks)						
Article Name	Index	Author	Marks	Total		
-	-	-	-	-		
(B) Citation of Journals (Max 5 marks)						
Article Name	Cited	Marks	Total			
-	-	-	-			
(C) Research Articles in Newspapers / Magazines* / Newsletters, etc., (Max 5 marks)						
Article Name	Published In	Marks	Total			
-	-	-	-			
(D) Details of consultancy activities (Max 10 marks)						
Area of Consultancy	Project title	Organization	Duration	Amount Received	Marks	Total
-	-	-	-	-	-	-
-	-	-	-	-	-	-
(E) Patents obtained (Product / Process / Technology transfer) (Max 5 marks)						
Patent Name	Marks	Total				
-	-	-				
(F) Funded Projects (Max 20 Marks)						
Project Name	Funded by	PI/Co-PI/Member	Marks	Total		
IoT BASED SMART CATTLE FARM WITH HYDROPONIC FEEDER SYSTEM	AGRO TECH-DST	Co-PI	15	15		
(G) MOU(Active) – (Max 5 Marks)						
Sl.No	Industry/ Institute	Validity period	Marks	Total		
-	-	-	-	-		

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FACULTY PERFORMANCE APPRAISAL SYSTEM						
Faculty Name : P. John Thangam			Department : Civil Engineering			
III PROFESSIONAL DEVELOPMENT (Maximum 40 Marks)						
(A) Additional Qualifications acquired (Max 10 Marks)						
SL.No	Additional Qualification	University	Marks	Total		
-	-	-	-	-		
(B) Certificate Courses/ Diploma courses (Max 5 Marks)						
SL.No	Course Name	University	Marks	Total		
-	-	-	-	-		
(C) Details of Inhouse training program (Max 5 Marks)						
Name of the training program	Date / Duration of the training program	Training Topics	Name of the Resource person	Marks	Total	
-	-	-	-	-	-	
(D) Details of External training program (Max 8 marks)						
Name of the training program	Nature of the training program	Date / Duration of the training program	Training Topics	Whether the training topics discussed among the other staff & give their names	Marks	Total
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

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FACULTY PERFORMANCE APPRAISAL SYSTEM							
Faculty Name : P. John Thangam				Department : Civil Engineering			
(E) National /International Conferences in India and abroad (Max 8 marks):							
S.No	Name of the Conference	National / International	Date / Duration	Venue	Mark	Total	
1	-	-	-	-	-	-	
(F) Invitations for Conferences/Seminars/Workshops/Symposia (Max 5marks)							
S.No	Name of the Conference	National / International	Date / Duration	Invited as	Mark	Total	
1	-	-	-	-	-	-	
(G) Professional Bodies/Chapter (Max 5marks)							
S.No	Name of the Professional Body/Chapter	Membership Details	Marks	Details of Program organized	Students' chapter In-charge (Yes/No)	Mark	Total
1	ISTE	Member	3	-	No	-	3
(H) Books (Max 5 marks)							
Book Name				ISBN/Without ISBN	Marks	Total	
-				-	-	-	
(I) Honors and Awards (Max 40 marks)							
S.No	Name of the Award	Internal / External Agencies	Marks	Total			
1	-	-	-	-			

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FACULTY PERFORMANCE APPRAISAL SYSTEM						
Faculty Name : P. John Thangam			Department : Civil Engineering			
IV Institutional Promotion Level Activities (Maximum 15 Marks)						
Resource person for Continuing education program / Off Campus Training program						
SLNo	Name of the program	Continuing education program / Off Campus Training program	Marks	Total		
-	-	-	-	-		
(A) Articles in Newspapers / Magazines						
SLNo	Article Name	Newspaper/Magazine	Issue No/Date	Marks	Total	
-	-	-	-	-	-	
(B) Student development / Career Guidance for School students in Radio, TV and Social media						
SLNo	Program Name	Radio/TV/Social Media	Date	Marks	Total	
-	-	-	-	-	-	
(C) Public Awareness program in Radio, TV and Social media						
SLNo	Program Name	Radio/TV/Social Media	Date	Marks	Total	
-	-	-	-	-	-	
(D) School level Training programs						
SLNo	Program Name	School	Technical program / Career Guidance program / Expos etc	Date	Marks	Total
-	-	-	-	-	-	-
(E) Representation as Judge						
SLNo	Event Name and venue	Sports/Arts/Technical Events	Role	Date	Marks	Total
-	-	-	-	-	-	-
(F) Public Society / Technical Societal Recognition						
SLNo	Recognition	Organization / Society Name	Marks	Total		
-	-	-	-	-		
How Mar Ephraem can utilize you: Funded Projects, Teaching and learning						
 Mar Ephraem College of Engineering and Technology						

FACULTY PERFORMANCE APPRAISAL SYSTEM					
Faculty Name : P. John Thangam			Department : Civil Engineering		
Summary of Performance Appraisal					
Teaching Learning (Max 80 Marks)	Research Contribution (Maximum 65 Marks)	Professional Development (Maximum 40 Marks)	Institutional Promotion Level Activities (Maximum 15 Marks)	Total (200 Marks)	
42	15	3	0	60	
Submitted By					
 (P. John Thangam)					
Summary of Performance Appraisal					
Teaching Learning (Max 80 Marks)	Research Contribution (Maximum 65 Marks)	Professional Development (Maximum 40 Marks)	Institutional Promotion Level Activities (Maximum 15 Marks)	Total (200 Marks)	
42	15	3	0	60	
Remarks by HoD					
Verified, Data provided are found to be Correct					
Remarks by Academic Director					
Teaching Learning is satisfactory and effort has to be initiated in Research, Publication, Professional Development and Institutional promotion activities.					
					
 Mar Ephraem College of Engineering and Technology					

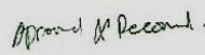
FACULTY PERFORMANCE APPRAISAL SYSTEM			
Faculty Name : P. John Thangam		Department : Civil Engineering	
Approval and Recommendation by Principal			
			
HOD	Academic Director	Principal	Correspondent
			
 Mar Ephraem College of Engineering and Technology			

Fig 5.8.2: Sample Appraisal Form

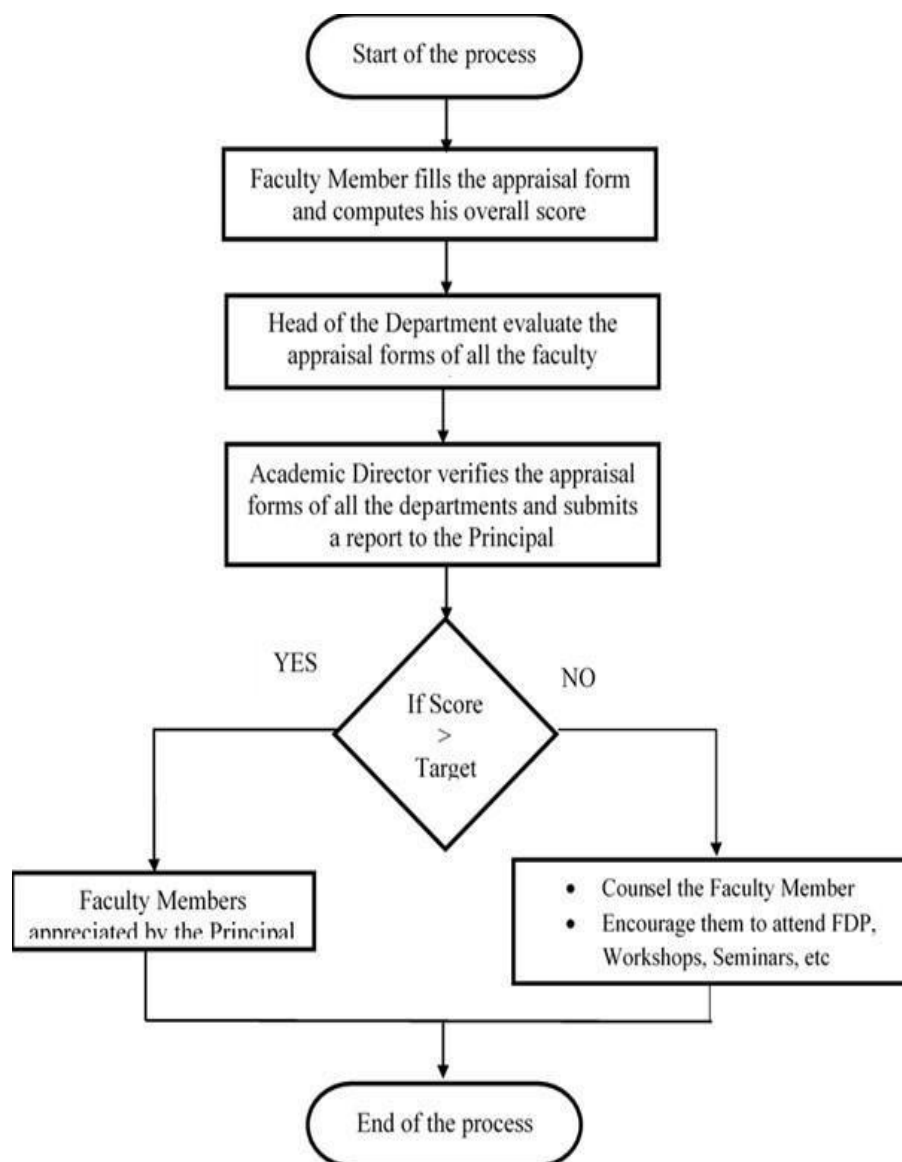


Fig 5.8.3: Self-Appraisal Process

B. Its implementation and effectiveness

- All faculty members are evaluated using self- appraisal system at the end of every academic year.
- HOD evaluates the score of the faculty and prepares a report based on the achieved score.
- The final report given by the HOD are analyzed by the principal and effective measures are instructed through HOD
- If Score greater than the target, the faculty members are appreciated in the annual day celebrations by certificate/cash awards.
- If Score less than the target, The faculty will be notified with the performance and encourage them to come out of the weakness if any.

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

CAY 2020-2021:

S.No	Name of the visiting faculty	Designation	Name of the Industry	Subject / Class	Number of Hours
1	Er. Anbu Thomas Samuel	Director	STUP Consultants, Bangalore	Prestressed Concrete Structures	20
2	Mr. Manavalan Joseph	Regional Head	Technical Services at UltraTech Cement Ltd.	Concrete technology	21

CAY m1 2019-2020:

S.No	Name of the visiting faculty	Designation	Name of the Industry	Subject / Class	Number of Hours
1	Er. Anbu Thomas Samuel	Director	STUP Consultants, Bangalore	Prestressed Concrete Structures	52
2	Mr. Manavalan Joseph	Regional Head	Technical Services at UltraTech Cement Ltd.	Concrete technology	50

CAY m2 2018 – 2019

S.No	Name of the visiting faculty	Designation	Name of the Industry	Subject / Class	Number of Hours
1	Er. Anbu Thomas Samuel	Director	STUP Consultants, Bangalore	Prestressed Concrete Structures	55
2	Shri. Satheesh Gopi	Deputy Chief Hydrographer	Kerala Port Department	Surveying	54

Criterion 6	Facilities and Technical Support	80
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6.1 Adequate and well-equipped laboratories, technical manpower

Table 6.1 Details of the technical manpower support and the list of major equipment.

S. N	Name of the Laboratory	No. of students per setup (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.	Surveying laboratory	5	Total Station Hand held GPS Theodolites Substance Bar Dumpy level Plane table Pocket stereoscope Ranging rods Leveling staff Cross staff Chains Tapes Arrows Prismatic Compass Surveyor Compass	12 hours per week	Mr.Subash .K	Lab Assistant	Diploma
2.	CADD laboratory	1	Work station Drafting Software Models of Structures	18 hours per week	Mrs.Sabitha.V	Lab Assistant	ITI (Draughtsmen Civil)

			Analysis and Design Software				
3.	Strength of Material laboratory	4	Universal Testing Machine-400kN Impact Test – Izod (168 J) Impact Test-Charpy (300 J) Compression Testing Machine Spring Testing Machine Torsion Testing Machine Brinell Hardness Test Rockwell Hardness Test Vicat Apparatus Le Chatelier's Apparatus	24hours per week & final semester students for project as per requirement	Mr.Edwin Paul	Lab Assistant	Diploma
4	Fluid Mechanics Laboratory	4	Bernoulli's theorem – Verification Apparatus Flow measurement open channel flow	24 hours per week	Mr.Edwin Paul	Lab Assistant	Diploma

			Flow measurement in pipes Losses in Pipes Major loss & Minor Loss Pumps Turbines				
5	Drawing laboratory	1	Drawing Table Drawing board	18 hours per week	Mr.Shabin S.N	Lab Assistant	Diploma
6.	Soil Mechanics Laboratory	4	Consolidation Apparatus (3 Gang) Direct Shear Apparatus Unconfined Compression Test Apparatus Triaxial Shear Test Apparatus Permeability Apparatus Electronic Weighing Balance Hot Air Oven Field density apparatus(sand pouring &Core cutter)	12 hours per week & final semester students for project as per requirement	Mrs.Jaya Raj.P	Lab Assistant	Diploma

			Motorized Sieve Shaker and sieve set Proctor Compaction Apparatus Soil Hydrometer Liquid Limit, Plastic limit and shrinkage limit Device Compaction Apparatus Vane Shear Apparatus				
7.	Environmental Engineering Laboratory	3	Hot Plate With Magnetic Stirrer Calorimeter Autoclave Oxygen Analyzer. Refrigerator Muffle Furnace pH Meter Digital Nephelometer Jar Test Apparatus C.O.D Assembly Apparatus Single Stage Distillation Unit Hot Air Oven	12 hours per week & final semester students for project as per requirement	Mrs.Sabitha.V	Lab Assistant	ITI (Draughtsman Civil)

			Electronic Weighing Balance B.O.D.Incubator Waterbath – Rectangular Digital turbidity Meter Digital Conductivity meter RAAGAA Digestion Chlorine comparator Spectro photo meter Iron elective electrode				
8	Concrete and Highway Engineering Laboratory	4	Concrete cube moulds Concrete cylinder moulds Concrete Prism moulds Concrete Flexural Testing Machine Motorized Sieve Shaker with Sieve Sets. Concrete Mixer Slump cone	12 hours per week & final semester students for project as per requirement	Mr.Shabin S.N	Lab Assistant	Diploma

			Flow table Cube Mould Vibrating Table Vee Bee Consisto meter Aggregate impact testing machine CBR Apparatus Blains Apparatus Marshall Stability Apparatus Compaction Factor Apparatus Ductility Apparatus.				
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6.2. Additional facilities created for improving the quality of learning experience in laboratories (25)

Table 6.2 Additional facilities created in laboratories.

S.No	Facility Name	Details	Reasons for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	Project management software	This lab caters students who are interested in project management.	To enhance the management skills of the students and help them placed in appropriate fields.	12 hours per semester	Managing projects with minimum time and cost.	PO1, PO2, PO3, PO4, PO5, PO11 / PSO2
2	BIM Software	3D visualization of buildings	To emphasis the relationship between drafting, analysis and design of structural systems.	12 hours per semester	To efficiently plan, design, create models of buildings and infrastructure towards more collaborative and automated way.	PO1, PO2, PO3, PO4, PO5, PO11, / PSO1, PSO2
3	Geology samples	This lab focuses on identification of geological properties of rocks.	Demonstration of Geology samples.	10 hours per semester	To Visualize and understand the formation and weathering stages of various rocks	PO1, PO2, / PSO2

4	Smart CADD Lab	The CADD lab is equipped with LCD projectors and online smart resources.	Effective learning of CADD Software	10 hours per semester	Effective visualization and understanding of modelling, analysis and design	PO1, PO2, PO3, PO4, PO5, / PSO1, PSO2
5	Pre-stressing components	Real time completed and usable pre-stressing components	Demonstration of Pre-stressing components	10 hours per semester	To get live understanding of pre stressing cable	PO1, PO2, PO3, PO4 / PSO1

6.3. Laboratories: Maintenance and overall ambience (10)

All the laboratories in the School of civil Engineering follow best maintenance practices to keep all the assets in good condition. The overall ambience of the laboratories is maintained at its best.

Table 6.3 Maintenance and overall ambience

SL. NO	Name of the Laboratory	Maintenance Details	Frequency
1	Strength of Materials Laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis. The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute.	Half yearly
2	Fluid Mechanics Laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis.	Half yearly

		The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	
3	Concrete and Highway Engineering Laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis. The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	Half yearly for general maintenance, and Yearly for Calibration and fire extinguisher
4	Soil Mechanics Laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis. The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	Half yearly for general maintenance, and Yearly for Calibration and fire extinguisher
5	Environmental Engineering Laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis.	Half yearly for general maintenance, and

		The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	Yearly for Calibration and fire extinguisher
6	Surveying laboratory	Preventive maintenance is practiced. The equipment is maintained periodically as per the manufacturer's recommendation and on need basis. The annual maintenance of the equipment in all labs will be done during the summer vacation every year. The technical and non-teaching staff will be engaged in this activity and they ensure that all equipment is functioning well and seek external expertise if needed during the period. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	Half yearly for general maintenance, and Yearly for Calibration and fire extinguisher
7	Drawing laboratory	Preventive maintenance is practiced. Maintenance register is maintained in the laboratories. As per the requirement minor repairs are carried out by the lab technical staff. Major repairs are outsourced by following the procedure of the institute..	Half yearly for general maintenance
8	CAD Laboratory	All computers are checked for suitability at start of semester Fire extinguishers are recharged before expiry date All mechanical & electrical machines are inspected at start & mid semester	Half yearly for general maintenance and fire extinguisher

Ambiance

1. All the laboratories have the well-experienced technicians to train the students.
2. Effective lighting systems are provided in all laboratories.
3. Proper ventilations are provided in all laboratories.
4. CAD Lab is equipped with air conditioner.
5. All the labs are equipped with green boards.
6. All the laboratories are equipped with proper furniture for seating.
7. Latest software is used in computing laboratories.
8. Sufficient time is given to the students to utilize the laboratories.
9. Instructions are displayed in the laboratories.
10. Uninterrupted power supply is provided to all laboratories.

6.4 Project laboratories (5)

Construction Engineering Project Laboratory

This laboratory is created to support our students to do in-house projects. This lab consists of material property testing equipment's, fresh and hardened concrete testers, soil property tester and molds for preparing concrete. Flexible working hours is provided based on need. Apart from curriculum projects, students can use this facility to conceive, design, and do researches.



Fig 6.4.1: Compaction of cubes



Fig 6.4.2: Removal of air voids



Fig 6.4.3: Flexural testing on prism



Fig 6.4.4: Testing stability of soil

6.5 Safety measures in laboratories (10)

Sr. No	Name of the Laboratory	Safety measures
1	Concrete and Highway Lab	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. ● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● Always enter the lab with lab coats, safety shoes, hand gloves. ● Place all the belongings out of the work area. ● Do not obstruct door ways. ● Report faulty equipment to the teaching assistant immediately. ● Do not operate electrical equipment that has frayed or damaged power cords or connectors.
2	Surveying Laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. ● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● Sharp tools should be used carefully in supervision of Lab attendant or faculty. ● Do not play with instruments or chain. ● Wear proper safety shoes. ● Wear face mask.
3	Fluid Mechanics Laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory.

		● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● The students are advised to always enter the lab with safety shoes, hand gloves and safety glasses. ● Disabling or removing safety devices is dangerous and should be avoided. ● Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. ● Carefully inspect all protective equipment prior to use. ● Do not use defective equipment.
4	Strength of Materials Laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. ● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● Always enter the lab with safety shoes, hand gloves and safety glasses. ● Wet cement is caustic, and can cause severe chemical burns to exposed skin and eyes. ● Hence it should be dealt with care. ● Cement comprises of particles lesser than 45 microns. ● Always wear mask while working with cement. ● Disabling or removing safety devices is dangerous and should be avoided.
5	Soil Mechanics Laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. ● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● Always enter the lab with safety shoes, hand gloves and safety glasses.

		● Wear proper safety shoes in concrete/materials labs. ● Do not tamper with safety devices. ● Do not attempt to repair/operate anything that you are not qualified to repair/operate. ● Any sharp tool or machine should be used carefully in supervision of Lab attendant or faculty. ● Carefully inspect all protective equipment prior to use. ● Do not use defective equipment.
6	Environmental Engineering Laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher & Hand gloves are kept in each laboratory. ● Well trained technical supporting staff. ● Periodical servicing of the lab equipment. ● Appropriate storage areas. ● Always enter the lab with Lab Coats, safety shoes, hand ● Gloves and safety glasses. ● Chemicals has to be handled very carefully and not to be touched with bare hands. ● Concentrated acids such as H_2SO_4, HCL are highly toxic and dangerous and inhaling of the same is to be avoided. ● The user's manual should be read and safety precautions to be understood before using the instruments such as spectrophotometer, turbidity meter etc.
7	Drawing laboratory	● General Rules in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box, Fire extinguisher are kept in the laboratory. ● Well trained technical supporting staff.
8	CAD Laboratory	● General Rules of Conduct in Laboratories are displayed. ● Specific Safety Rules for students displayed. ● First aid box and Fire extinguisher are kept updated. ● Well trained technical supporting staff. ● Do not bring any food or drinks inside the lab ● Do not plug in external devices without scanning them for computer

		viruses. • Try not to touch any of the circuit boards and power sockets when a device is connected to them and switched on. • Students should not attempt to repair, open, tamper or interfere with any of the computer, printing, cabling, air conditioning or other equipment in the laboratory.
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Criteria 7	Continuous Improvement	50
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7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

POs

PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development..

PO8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSO 1 : Analyse and provide design solutions to Structural Engineering systems.

PSO 2: Develop optimal solutions in Construction Management to plan and coordinate civil engineering projects.

POs Attainment Levels and Actions for Improvement- (2019-20)

POs	Target Level	Attainment Level	Observations
PO 1: Engineering Knowledge			
PO 1	2	2.57	Most of the students were capable to apply their basic mathematics, science and Engineering knowledge in Civil Engineering applications. The bridge courses and Orientation programs provided for the students help them understand theoretical concepts from basic science. The tutorial hours help in shaping ability to solve the Engineering problems. To attain a new target, additional actions were taken.
Action 1: Bridge classes are conducted to improve the knowledge in basic subjects of Engineering. Action 1: Orientation programs are conducted with faculty from civil engineering to improve the application oriented technical knowledge. Action 1: To understand the application of mathematics/science in the core domain, the science and humanities faculty are encouraged to include examples from the core domain while handling the classes.			
PO 2: Problem Analysis			
PO 2	2	2.37	Students were up to the expected level to analyze and develop

			solutions to Civil Engineering problems. Students gain knowledge on solving real time engineering problems by attending seminars and workshops by industrial experts, industrial training through internship and industrial visits. Students identify and understand Engineering problems from case studies and literature review. To attain a new target, additional actions were taken.
Action 1: Students are encouraged to take up internship to get practical problem solving exposure. Action 2: Group project on problem identification using literature review are encouraged with appropriate rubrics.			
PO 3: Conduct Investigations of Complex Problems			
PO 3	2	1.97	Designing, implementation and evaluation skills of students are not up to the expected level. The Observations are Students design and develop solutions by considering health,

			safety and environment during their project. The students develop design solutions by participating in design contests. Improvement in designing by weak students are improved due to remedial classes. To attain the target, additional actions were taken.
Action 1: Students are motivated to design and develop solutions by considering health, safety and environment during their project. Action 1: Students are encouraged to take internship. Action 1: Weak students are identified and encouraged to participate in remedial classes.			
PO 4: Conduct investigations of complex problems			
PO 4	2	1.89	Students were not up to the expected level to use their research based knowledge to analyze societal challenges and to provide valuable conclusions. The Observations are Workshop on building analysis and design helped the Students gain knowledge on analysis and interpretation of

			design data, and synthesis of the information to provide valid conclusions. Students Analysed and interpreted data during Research based projects. Students are able to do consultancy works in the lab and provide valid conclusion. To attain the target, additional actions were taken.
Action 1:Workshop on building analysis and design is provided. Action 2: Analysis and interpretation of data included in project evaluation rubrics. Action 1:Students are encouraged to do consultancy works in the lab and provide valid conclusion. Action 1: Seminar on Research methods relevant to Civil Engineering is provided.			
PO5: Modern tool usage			
PO5	2	1.77	Students were not up to the expected level to use modern tools and techniques. The Observations are Students find it useful on the knowledge gained during the Value added courses on latest drafting software to improve the drafting skills of students. Students find it

			useful on the knowledge gained during the Seminars and workshops on various software and modern equipment used in construction industry. Students are able to utilize software tools for analysis design and drafting of their design projects. To attain the target, additional actions were taken.
Action 1: Students are encouraged to visit various construction sites and also to take up internships at design office to familiarize with the modern equipment / software tools. Action 2: Seminars and workshops are conducted to give hands on experience to various software and modern equipment used in construction industry. Action 1 :Students are encouraged to utilize software tools for analysis design and drafting of their design projects.			
PO 6: The Engineer and Society			
PO 6	2	2.40	Students were up to the expected level by gaining knowledge on societal, health, safety, legal and cultural issues. The Observations are Students were able to identify the societal challenges that can be addressed by them

			using their technical skills during projects. Final Year projects cater to societal needs, safety aspects and environmental impact Students are involved in social activities via Cells. To attain a new target, additional actions were taken.
Action 1: Seminar on Social responsibilities implied in professional practices is provided. Action 1: Students are motivated to identify the societal challenges that can be addressed by them using their technical skills through idea scouting competitions. Action 2: Students are motivated to carry out projects which caters to societal needs, safety aspects and environmental impact. Action 1: Students are involved in social activities via Cells like YRC and Extension activities Cell.			
PO 7: Environment and sustainability			
PO 7	2	2.42	Students were up to the expected level to understand that the current technological development cannot sustain without environmental concern. The Observations are The Seminar on “Role of Civil engineer in Sustainable development” and case studies created awareness on major environmental

			issues of infrastructure projects and innovative solutions for sustainable development To attain a new target, additional actions were taken.
Action 1: Students are encouraged to take up projects focusing sustainability of built environment. Action 1: Students are encouraged to take up projects focusing sustainability of built environment. Action 1: Seminar on Role of Civil engineer in Sustainable development is provided by expert.			
PO 8: Ethics			
PO 8	2	2.43	Students were up to the expected level of applying ethical principles and commit to professional ethics and norms. The Observations are The Seminar on code of ethics for Civil Engineers provide the insights about professional ethics for Civil Engineers. Students are motivated and mentored to undertake projects which will cater societal Needs. To attain the target, additional actions were taken. To attain a new target, additional actions were taken.
Action 1: More case studies will be given that meet the norms of engineering practices.			

Action 1: Seminar on code of ethics for Civil Engineers is provided by industry expert.			
Action 1: Students are motivated and mentored to undertake projects which will cater societal Needs.			
PO 9: Individual and team work			
PO 9	2	2.34	Students were up to the expected level of Functioning effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. The Observations are The students are able to organize and lead various technical and cultural events of the institute to groom their leadership, team work, coordination, and commitment. Students are effectively doing their projects as teams. Group activities such as peer learning (Tutorial class) improves the team work. To attain a new target, additional actions were taken.
Action 1: Students are encouraged to perform as a team during Lab sessions and Survey Camps.			
PO 10: Communication			
PO 10	2	2.67	Students were up to the expected level of Communicating effectively by constantly exposing them to technical

			communication during their course of study. The Observations are Activities like Technical report writing and individual presentation improved Communication skills. Communication skill and soft skill development training helps the students communicate better. Students presented their project work effectively in the reviews. Students communicate effectively during the Seminar presentation. To attain a new target, additional actions were taken.
Action 1: Communication skill and soft skill development training are conducted by the experts from inside as well as outside of the institutions. Action 2: Students are motivated to present their project in-line with project rubrics. Action 1: Seminar hours are incorporated in time table.			
PO 11: Project Management and finance			
PO 11	2	2.64	Students were up to the expected level of managing projects in multidisciplinary environments. The Observations are

			Students practice project management skills by planning systematically based on time constraint and budget. The Seminar on Project Management for Civil Engineers created awareness on project management for Civil Engineers. The students exhibit Leadership qualities which inculcated to students by allowing them to act as team leaders in their final year projects. Students improved the managerial skills by organizing and leading various technical and cultural events. To attain a new target, additional actions were taken.
Action 1: Students are encouraged to systematically plan their project based on time constraint and budget. Action 2: Seminar on Project Management for Civil Engineers is given. Action 1: Leadership qualities will be inculcated to students by allowing them to act as team leaders in the final year projects.			
PO 12: Project Management and finance			
PO 12	2	2.61	Students were up to the expected level of engaging in independent and life-long learning with

			respect to technological change. The Observations are Improvement in the use of library and its resources by Faculty and students are evident. Students had enrolled as members in professional societies like ASCE , ISTE,IET etc.. Students have enrolled and gained knowledge during the certificate courses to outside class room. To attain a new target, additional actions were taken.
Action 1:Improvement in the use of library and its resources by Faculty and students are encouraged by providing separate space and time. Action 2:Students are encouraged to be members in professional societies like ASCE , ISTE,IET etc.. Action 1:Students are encouraged to acquire knowledge through certificate courses. Action 1:Students are encouraged to go through various Civil Engineering Magazines and Journals&to be aware of the latest research based innovations.			

PSOs Attainment Levels and Actions for Improvement- (2019-20)

PSOs	Target Level	Attainment Level	Observations
PSO1: Analyse and provide design solutions to Structural Engineering systems			
PSO 1	2	2.41	Students were up to the expected level to Analyse and provide design solutions to Structural Engineering systems. The Observations are Design project ensured the knowledge in structural engineering was imparted to the students Seminar on career guidance provide the insights about structural engineering and its career perspectives. To attain a new target, additional actions were taken.
Action 1:Design projects ensures the knowledge in structural engineering is imparted to the students Action 2:Students are made aware of importance of structural engineering during the seminar on career guidance. Action 1:Students are encouraged to take internship in design office to get practical exposure. Action 1: Awareness program on Structural design software.			
PSO 2: Develop optimal solutions in Construction Management to plan and coordinate civil engineering projects.			
PSO 2	2	2.40	Students were up to the expected level and Developed optimal solutions in Construction Management to plan

			and coordinate civil engineering projects. The Observations are the students gained knowledge during the Industrial Institute Interaction Program conducted by experts from industry on Civil engineering practice. Workshop on Critical Path Analysis created awareness on project management among the Students The students complete their final year projects on time by applying the principles of project management. To attain a new target, additional actions were taken.
Action 1: Awareness program on Project Management Software. Action 1:The students are trained to apply the principles of project management for timely completion of their final year project works. Action 1: Awareness program on Project Management Software.			

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

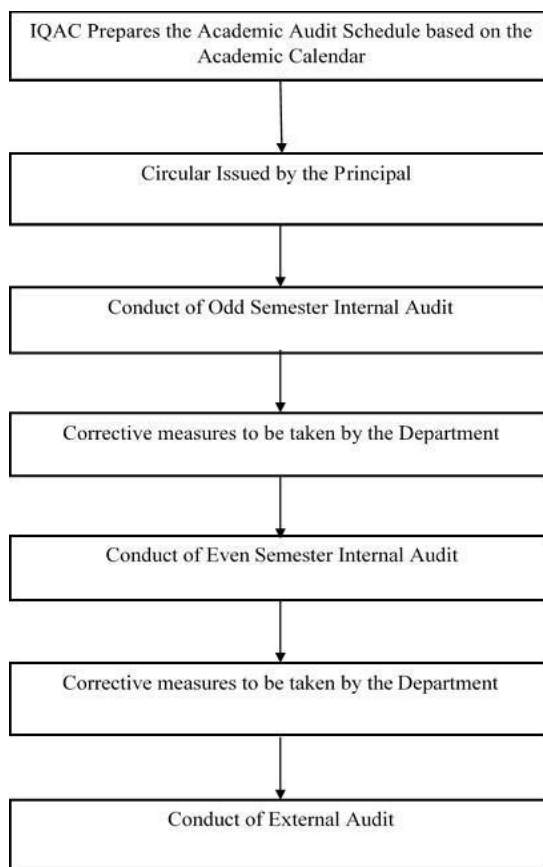


Fig: 7.2.1: Audit Prooess:

Audit - Committee Members:

i) Internal Audit Members:

Table 7.2.1 Internal Audit Members:

S.No	Name	Designation	Department	Institution
1.	Jackson Thanka Roy I	Assistant Professor	Mechanical Engineering	Mar Ephraem College of Engineering & Technology
2.	Herlin L T	Assistant Professor	Computer Science and Engineering	Mar Ephraem College of Engineering & Technology
3.	Adolus Huxley J R	Assistant Professor	Electrical & Electronics Engineering	Mar Ephraem College of Engineering & Technology

ii) External Audit Member

Table 7.2.1 External Audit Members:

S.No	Name	Designation	Department	Institution
1.	Dr. K. Akhil, M.E., Ph.D	Professor and Head	Civil Engineering	Hindusthan College of Engineering and Technology, Coimbatore

 **Mar Ephraem**
College of Engineering and Technology
DEPARTMENT OF CIVIL ENGINEERING

Academic Audit for Individual Courses

Date of Audit: 06/12/2018
Auditor Name: Mr. Jackson Thomas Roy
Designation: Mr. Akhil Huxley
Department/Institution: Mar Ephraem College of Engineering & Technology

S.No	Audit Description	Remarks
1.	Academic Year & Semester	2018-2019, 07
2.	Course Code & Name	CE 6701, Structural Dynamics & Vibration
3.	Course offered for (Year & Semester)	V A 07
4.	Course Co-ordinator	Mr. Tein Jenish
5.	Course In-charge	Mr. Tein Jenish
6.	Qualification & Specialization	M.E. Structural Engineering
7.	Designation	Assistant Professor
8.	Experience (Y&M)	3 YEARS 4 MONTHS
9.	How many times the same course is handled by the faculty members?	1
10.	Availability of Lecture Plan	Available
11.	Availability of Course Information	Available
12.	Quality of Internal Assessment Components	Excellent / Very Good / Adequate / Not Standard
13.	Availability of course materials / Laboratory manuals for audited course and the quality	Available / Not Available Excellent / Very Good / Adequate / Not Standard
14.	Whether the Cos are framed appropriately for measurable outcomes? (please rate)	Excellent / Very Good / Adequate / Not Standard
15.	Quality of Cos mapping with appropriate RBT level	Excellent / Very Good / Adequate / Not Standard
16.	Quality of question papers of CIA tests (1, 2 & Model Examination)	Excellent / Very Good / Adequate / Not Standard
17.	Quality of questions for assessment components	Excellent / Very Good / Adequate / Not Standard
18.	Quality of COs mapping with POs and PSOs	Excellent / Very Good / Adequate / Not Standard
19.	Whether attainment level of COs is justified?	Fully Justified / Partially Justified / Not Justified
20.	Whether attainment level of COs is calculated appropriately?	Properly Calculated / Calculated but need improvement / Not Calculated
21.	Target level and final attainment for each Cos (in %)	CO1: Target(2%) Attained (2%) CO2: Target(2%) Attained (2%) CO3: Target(2%) Attained (2%) CO4: Target(2%) Attained (2%) CO5: Target(2%) Attained (2%) CO6: Target(2%) Attained (2%)
22.	Whether the loop is closed by incorporating appropriate correction action? If yes, please specify the corrective actions carried out by the course in charge	—

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23.	Appropriateness of the corrective actions carried out for meeting the attainment level (please rate)	Excellent / Very Good / Adequate / Not Standard
24.	Whether the overall contribution of the course for each POs and PSOs is calculated appropriately?	Excellent / Very Good / Meeting the Expectations / Need Improvement



Mar Ephraem

College of Engineering and Technology

DEPARTMENT OF CIVIL ENGINEERING

EXTERNAL AUDIT - 2018 - 2019 (ODD SEM & EVEN SEM)		
S.No		Remarks
A. Department Profile		
1.	Vision, Mission, PEO, PO and PSO	available
2.	Faculty, Supporting Staff Members details	available
3.	Class Room/Lab/Seminar Hall/Faculty Room	available
4.	Learning Resources	available
B. Teaching and Learning Process		
1.	Innovations introduced in Teaching Learning Process	available
2.	Innovations introduced in the Lab Courses	available
3.	Teaching Methodology for Slow Learners	available
4.	NPTEL, MOOC Courses for fast learners	available
C. Content Delivering Process		
12.	Theory - Course Information, Course Materials & Delivery Methods	available
13.	Lab Experiments, Equipments, Manuals, Stock Registers, Maintenance and Development	available
14.	Projects	available
15.	Feedback from students	available
16.	Teaching Methodology for Slow Learners and Fast Learners	available
17.	NPTEL, MOOC Courses for Fast Learners	available
D. Assessments		
18.	Standard of Question Papers for Internal Examinations	available
19.	Standard Worksheets for Internal Marks	available
20.	Samples for Internal Components	available
21.	Sample Lab Assessment Sheets	available
22.	Details of Rubrics and Assessment	available
E. Department Achievements		
1.	Students - Result Analysis	available
2.	Details of Graduation	available
3.	Details of Placement	available
4.	Details of Higher Studies	available
5.	Details of Students Major Achievements	available
6.	Faculty - FDP, Seminars Attended and organized	available
7.	Proposals Submitted and Funds received	available
8.	Details of Patents Filed	available

Overall Remarks:

Name & Signature of the Auditor:

Dr. K. Akil, M.E, Ph.D.
Prof / Civil



Mar Ephraem

College of Engineering and Technology

DEPARTMENT OF CIVIL ENGINEERING

Internal Academic Audit - Action Plan

Sl. No	Activity	Date	Report (Y/N)	Responsible Person	Signature	Remarks
1.	Seminar on Advanced Surveying & Equipment - Micro Optic Theodolite	05.01.2019 & 06.01.2019	Y	Mr. Prabin R		-
2.	Industry Institute Interaction Program on Project Management	08.01.2019	Y	Mr. Bright Brabin Winsley. J		-
3.	Guest lecture on beam column connection	08.03.2019	Y	Mr. Abishek. G.L		-

Dr. ANAND RAJAN D.R.

Name & Signature of the HOD (Concerned department)

Names and Signatures of the verifying Internal Auditors

1. J. Jackson Thanga Raj
2. J. R Aldous Winsley
3.

Fig: 7.2.1: Audit Samples

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

Table 7.3: Placement, Higher Studies and Entrepreneurship details

Item	2016-2020	2015-2019	2014-2018
Total No.of final year students	118	128	127
Total Placement	65	112	112
Total placed in Core Company	65	112	112
Pay Package	Avg 1.5 Lakhs/Annum	Avg 1.8 Lakhs/Annum	Avg 1.5 Lakhs/Annum
No. of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level Test GRE etc)	Nil	5	7
No. of students turned entrepreneurs in engineering	Nil	1	3

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

Table 7.4: Quality of students admitted to the program

Item		2020-21	2019-20	2018-19
National Level Entrance Examination -	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others State	No of students admitted	32	65	62
	Opening Score/Rank	85	90	87
	Closing Score/Rank	44	43	45
Name of the Entrance Examination for Lateral Entry or lateral entry details State	No of students admitted	15	13	8
	Opening Score/Rank	89	89	89
	Closing Score/Rank	61	63	62
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		62	61	61

Criterion 8	First Year Academics	50
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8.1. First Year Student-Faculty Ratio (FYSFR) (5)

Name of the faculty member	Pan Number	qualification	Date receiving highest degree	Area of specialization	Designation	date of joining	Teaching load %			Currently Associated (Yes/No)	Relieved Date	(Regular/contract)
			Year				CAY	CAY m1	CAY m2			
Dr. Anila Rose M R	AEQP A210 5Q	Ph.D	16/07/2014	English	Professor	10.10.2018	100	100	50	No	10-05-2021	Regular
Dr.C. Nirmala Kumari	ADB PK18 52A	Ph.D	16/08 2015	Mathematics	Professor	01.03.2021	0	0	0	Yes		
Mrs. Jebapriya	AQH PJ625 3B	M.Sc., M.Phil, Ph.D	13/06/2007	Chemistry	Assistant Professor	14.09.2009	100	100	100	Yes		Regular
Dr. Seema A	DIQP S6213 G	M.Sc., M.Phil. , Ph.D	17/02/2020	Chemistry	Assistant Professor	15-09-2009	100	100	100	Yes		Regular

Mrs. Simmi T	DHW PS023 1M	M.Sc., M.Phil	14/01/2008	Chemistry	Assistant Professor	10.10.2010	100	100	100	Yes		Regular
Ms. Johnsy Sugitha	BCJP J2519 P	M.Sc., M.Phil	20/07/2009	Chemistry	Assistant Professor	05.01.2015	100	100	100	Yes		Regular
Ms. Shijula Lindry	CXM PS872 5B	M.Sc. Mphil,	16/07/2007	chemistry	Assistant Professor	12-01-2017	100	100	100	No	10-05-2021	Regular
Mr. Anish Kumar S	HFJP S7984 N	M.Sc., M.Phil.	10/11/2014	Physics	Assistant Professor	01-03-2019	100	100	0	Yes		Regular
Ms. E. Petdami	CWW PP308 1Q	M.Sc., M.Phil.	13/10/2008	Physics	Assistant Professor	23.09.2011	100	100	100	Yes		Regular
Mrs. Bindhu L.R	BCXP B988 6R	M.Sc; Mphil	10/12/2007	Mathematics	Assistant Professor	14-09-2009	100	100	100	Yes		Regular
Mrs. Asha Beulah B.P	BGRP A115 2M	M.Sc., M.Phil	20/07/2009	Mathematics	Assistant Professor	19-07-2010	100	100	100	Yes		Regular
Ms. Priya Viji T	BFHP P1289 P	M.Sc., M.Phil	14/07/2003	Mathematics	Assistant Professor	12-01-2017	100	100	100	Yes		Regular

Ms. R. Roselin Suhi	BWE PR38 15H	M.Sc., M.Phil	03/01/ 2011	Mathematics	Assistant Professor	29- 06- 2011	100	100	100	Yes		Regular
Ms. F. Giftlin	BSIP G312 4L	M.Sc., M.Phil	16/08/ 2010	Mathematics	Assistant Professor	06- 02- 2012	100	100	100	Yes		Regular
Ms. Johnwin Beaula N.E	AZSP J7082 Q	M.Sc., M.Phil	15/11/ 2010	Mathematics	Assistant Professor	23- 07 -2013	100	100	100	Yes		Regular
Ms. Fathima Mary	ABN PF448 2F	M.Sc. M.Phil	18/07/ 2005	mathematics	Assistant Professor	02- 07- 2016	100	100	100	Yes		Regular
Ms. Salini	CPTP S4517 L	M.sc,M .phill	09/09/ 2014	MATHEMA TICS	Assistant Professor	08- 01- 2018	100	100	100	Yes		Regular
Mrs. Sukku Joshi	AQH PJ800 8L	M.A.M phil	11/09/ 1978	English	Assistant Professor	14- 09- 2009	0	100	100	No	08-12- 2020	Regular
Mr. Vinod R.S	CA DPR 8168 R	MA., M.Phil.	15/07/ 2009	Assistant Professor	Assistant Professor	11- 03- 2013	100	100	100	Yes		Regular
Ms. Anuja Malar Y	BRLP A400 9E	MA., M.Phil.	08/07/ 2013	English	Assistant Professor	23- 07- 2013	100	100	100	Yes		Regular

Ms. Shanmugha Priya R. K.	CEGP S0763 G	M.E.	14/04/2013	CSE	Assistant Professor	16.06.2016	100	100	100	Yes		Regular
Dr. Melba Kani	FBIP M744 9K	P.hd.	31/08/2016	HRM Marketing	Assistant Professor	03.07.2014	100	100	100	Yes		Regular
Ms. Shobhana S	GHM PS102 7Q	M.E.	10/04/2013	CSE	Assistant Professor	01-07-2014	100	100	100	Yes		Regular
Ms. Ayana A	CREP A086 5L	M.E.	16/06/2014	DATA MINING	Assistant Professor	05.04.2016	100	100	100	Yes		Regular
Mr. Jino Singh	AYK PJ268 8R	M.E	16/04/2014	CSE	Assistant Professor	04-07-2016	100	100	100	Yes		Regular
Ms. N.R. Sherly	FUNP S0501 L	M.Sc., M.Phil	19/11/2014	Matematics	Assistant Professor	04.04.2016	100	100	100	Yes		Regular
Ms. Jelin Jangray J.S	AZIPJ 1311 N	M.A., M.Phil	25/11/2015	English	Assistant Professor	02.04.2016	100	100	100	Yes		Regular
Mr. Ajay Kumar H	AYV PA62 99E	M.E.	22/04/2015	Applied Electronics	Assistant Professor	06.04.2016	100	100	100	Yes		Regular

Ms. Juliet Rose D B	FBCP B956 5D	M.E	16/06/2015	VLSI DESIGN	Assistant Professor	30.11.2016	100	100	100	Yes		Regular
Ms. Analin Remena	EEM PD20 00H	M.E	23/06/2015	VLSI DESIGN	Assistant Professor	06.02.2017	100	100	100	Yes		Regular
Abhiram M Nair	BHG PN41 41R	M.E	14/06/2017	Manufacutrin g	Assistant Professor	7.3.2018	100	100	100	Yes		Regular
Justin Vijay	BGW PJ359 3G	M.E	14/07/2017	Manufacutrin g	Assistant Professor	7.3.2018	100	100	100	Yes		Regular
Bensha Davi C	APIP B793 5G	M.A, M.Phil	14/11/2014	Assistant Professor	Assistant Professor	5.3.2020	100	0	0	Yes		Regular
Nixala Jacob	AZAP N009 1P	M.Sc, Mphil	16/12/2016	English	Assistant Professor	5.3.2020	100	0	0	Yes		Regular
Mrs. Mary Prabha D	BCNP M846 1R	M.Sc., M.Phil	11/06/2008	Physics	Asst.Prof essor	10.08.2010	0	0	100	No	07-08-2019	Regular
Dr. Praveena G L	CPRP P9851 C	Ph.D	07/02/2018	Physics	Asst.Prof essor	01-03-2017	0	0	100	No	18-06-2019	Regular

Table 8.1: Data for first year courses to calculate the FYSFR:

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSFR	*Assessment = $(5 \times 20) / \text{FYSFR}$ (Limited to Max. 5)
2018-2019	480	32	15	5
2019-2020	480	31	15.48	5
2020-2021	420	32	13.23	5
Average		31.67	15	5

8.2. Qualification of Faculty Teaching First Year Common Courses (5)**Table 8.2: Assessment of faculty qualification for first year**

Year	X	Y	RF	Assessment of faculty qualification $(5x + 3y) / \text{RF}$
2018-2019	3	29	32	3.18
2019-2020	2	29	32	3.03
2020-2021	3	29	28	3.64
Average				3.287

Average assessment: 3.287

8.3. First Year Academic Performance (10)**Table 8.3: Data for first year courses to calculate the academic performance:**

Academic Performance	2020-2021	2019-2020	2018-2019
Mean of CGPA or mean percentage of all successful students(X)	8.10	6.55	6.88
Total Number of successful students(Y)	33	64	96
Total Number of students appeared in the examination(Z)	33	64	96
Academic Performance $AP = X \times (Y/Z)$ CIVIL	8.10	6.55	7.612

Average API [$(AP1 + AP2 + AP3) / 3$] : 7.42Assessment [$1.5 \times \text{Average API}$] : 11.13

8.4. Attainment of Course Outcomes of first year courses (10)

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)

LIST OF ASSESSMENT TOOLS

- **DIRECT ASSESSMENT METHODS**
 - Continuous Internal Assessment(CIA)
 - Semester End Examination(SEE)
 - Assignments
- **INDIRECT ASSESSMENT METHODS**
 - Course Exit survey

CO ASSESSMENT PROCESS

The CO assessment processes followed in Mar Ephraem college of Engineering and Technology is given in fig 8.4.1.a

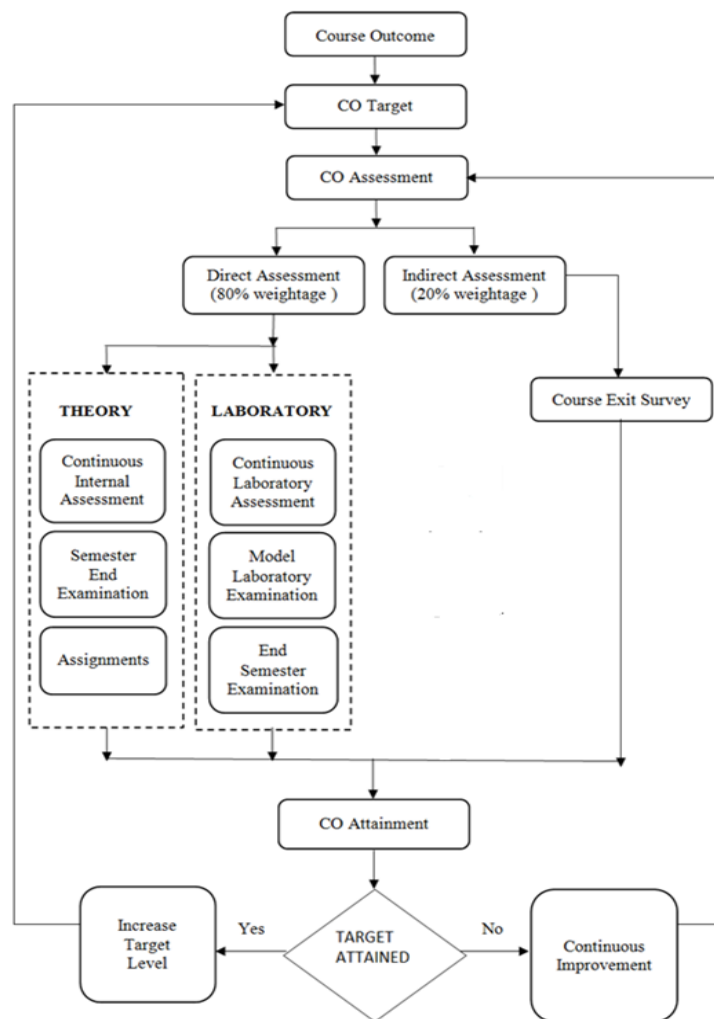


Figure 8.4.1.a. CO Assessment Process

CO ASSESSMENT METHODOLOGY AND TOOLS

Table. 8.4.1.a: CO Assessment Methodology And Tools

Assessing Year	Assessment methods		Assessment tools	Time interval	Responsible person
2019-2020	Direct Assessment (80%)				
	Theory courses	Continuous Internal Assessment	Examination	Thrice in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	University
		Assignments	Rubrics	Thrice in a semester	Faculty
	Lab Courses	Continuous Laboratory Assessment	Regular Lab work assessment	Once in a week	Faculty
		Model Laboratory Examination	Examination	Once in a semester	Faculty
		Semester End Examination	Examination	Once in a semester	Faculty
	Indirect Assessment (20%)				
	Course Exit Survey	Survey	CO based	Once in a semester	Faculty

THE QUALITY /RELEVANCE OF ASSESSMENT PROCESSES & TOOLS USED

Table 8.4.1.b: Quality /Relevance of assessment process

Assessment Tool	Description/Relevance	Evaluated By
DIRECT ASSESSMENT		
Continuous Internal Assessment (CIA)	- Continuous Internal Assessments a metric to continuously assess the attainment of course outcomes, student's learning domains and thus improve the teaching –learning process. - The questions in Continuous Assessment Examination (CAE) and Model Examination	Course faculty

	(ME) are mapped against COs of respective courses. • The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department. • Question Paper scrutiny committee of the department ensures the quality of question papers and coverage of COs. • The Question Paper scrutiny committee can either accept or reject or recommend for modification of the framed question paper to ensure the quality of internal question papers. • Two Continuous Assessment Examinations and One Model Examination will be conducted for each Course. • CAE – I :50 marks(CO1 & CO2) • CAE – II: 50 marks (CO3 & CO4) • ME : 100 marks (CO1, CO2,CO3,CO4,CO5,C06) • Students secured less than 50% of marks in CAE 1and having more than 3 arrears in the past University Examinations will be considered as weak students and given remedial classes using simple and smart study material.	
Semester End Examination (SEE)	• The Semester End Examination is of 3-hour duration which covers the entire Syllabus of the course. • It would generally satisfy all course outcomes for the respective courses.	University Evaluators
Assignments	• Assignments are given to students to provide practice exposure and knowledge enhancement of the course by the Faculty members concerned. • Three assignments will be given during the course optionally based on the student's performance analysis for the course by the concerned faculty and evaluated on the basis of rubrics.	Course faculty

Laboratory Assessment	• Lab courses provide hands-on experience with course concepts and an opportunity to explore the technologies used in the domain. • Continuous Lab Assessment is based on the lab assessment rubrics which include ability of the students to conduct the prescribed practical work, interpret the result and conclusion, Record Preparation and Submission. • Laboratory model examination is conducted similar to the university Practical Examination to assess whether the course outcomes are attained	Course Faculty
University Practical Examination	• The university practical examinations are of 3-hours. The evaluation is done by the External Examiner appointed by the university. • University Practical Examination assessment is to assess whether the lab course outcomes are attained.	University Evaluators
INDIRECT ASSESSMENT		
Course exit survey	On completion of every semester, a feedback is Obtained from the students to assess the learning outcomes of the course.	Course Faculty

ATTAINMENT OF COURSE OUTCOME

CO Attainment calculation:

- In the CO attainment calculation for a course, 80% weightage is given to direct assessment and 20% weightage is given to Indirect assessment.

Table 8.4.1.c: Weightage for CO Attainment calculation

Assessment type	Percentage
Direct Assessment 1 and 2	80
Indirect assessment (Course Exit Survey)	20

- 60% of the direct assessment is contributed by Semester End Examination and 40% from Continuous Internal Assessment (CIA) for theory courses.

- The 40% contribution from CIA includes Continuous Assessment Examination I Continuous Assessment Examination II ,Model Examination and Assignments
- Assignments will be provided optionally based on the student's performance analysis for the course by the concerned faculty.

Table 8.4.1.d: Weightage distribution of Direct Assessment for CO Attainment calculation.

Assessment type	Weightage Percentage
Direct Assessment 1 (CAE1,CAE 2, ME & Assignments)	40
Direct Assessment 2 (University Examination)	60

- For Lab courses, 60% of the direct assessment is contributed by Semester End Examination (SEE) and 40% by continuous assessment process.
- The 40% contribution in lab courses by continuous assessment process include continues assessment of every experiment based on rubrics and model lab examination.
- The percentage of students in the class who scored more than threshold percentage of marks in the respective CO is the attainment.
- The threshold percentage of marks is fixed based on considering the university results for the past 3 years + 5%.
- Indirect Assessment of CO attainment is based on Course Exit Survey.

Direct Attainment

Table 8.4.1.e: Direct Attainment Calculation

$\text{Direct Attainment} = \frac{\text{No of students scored more than threshold percentage of marks}}{\text{Total no of students}} \times 100$
--

Direct Attainment Levels:

Level 1: If less than 50% of students attained the threshold percentage of marks

Level 2: If 50% to 60% of students attained the threshold percentage of marks

Level 3: If more than 60% of students attained the threshold percentage of marks

Indirect Attainment (Course Exit Survey)

Table 8.4.1.f: Indirect Attainment Calculation

$\text{Attainment} = \frac{\sum_{i=1}^5 i * \text{no. of students gave } i \text{ option}}{5 * \text{no. of responses}}$
--

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

Academic Year (2019-2020)

Course Code	Course Name	CO		CO Attainment																	
				CO1			CO2			CO3			CO4			CO5			CO6		
		Target (%)	Level	Direct Method	Indirect Method	Overall	Direct Method	Indirect Method	Overall	Direct Method	Indirect Method	Overall	Direct Method	Indirect Method	Overall	Direct Method	Indirect Method	Overall	Direct Method	Indirect Method	Overall
C101	Communicative English-1	60%	2	3	3	3	2.6	3	2.68	2.6	3	2.68	2.6	3	2.68	3	3	3	2.6	3	2.68
C102	Mathematics – I	60%	2	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52
C103	Engineering Physics	60%	2	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2	3	2.2	2.4	3	2.52
C104	Engineering Chemistry	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C105	Problem solving and Python programming	60%	2	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52	2.4	3	2.52

C106	Engineering Graphics	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C107	Problem solving and Python programming laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C108	Physics and Chemistry Laboratory -I	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C109	Technical English – II	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C110	Mathematics – II	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C111	Material Science	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C112	Basic Electric, Electronics Instrumentation Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C113	Environmental Science and Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C114	Engineering Mechanics	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C115	Engineering Practices Laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C116	Basic Electric, Electronoc Instrumentation Engineering Laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C117	Physics for Civil Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C118	Basic Electrical and Instrumentation Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C119	Computer Aided Drawing Lab	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C120	Physics for Information Science	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C121	Baisic Electrical, Electronics and Measurement Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

C122	Programming in C	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C123	C Programming Laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C124	Physics for Electronics Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C125	Circuit Analysis	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C126	Electronic devices	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C127	Circuit and Devices Laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C128	Basic Civil and Mechanical Engineering	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C129	Circuit theory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C130	Electric circuits laboratory	60%	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

8.5. Attainment of Program Outcomes from first year courses

8.5.1. Indicate results of evaluation of each relevant PO and/or PSO, if applicable

POs Attainment

Course code	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	HS8151	0	0	0	0	0	0	0	0	0	2.62	0	0
C102	A8151	2.52	1.68	0.84	0	0	0	0	0	0	0	0	0
C103	PH8151	2.05	1.5	0	0	0	0	0	0	0	0	0	0
C104	CY8151	2	1.83	1.67	1.33	0	0	0	0	0	0	0	0
C105	GE8151	2.24	1.82	1.12	2.19	0	0	0	0	0	0	0	0
C106	GE8152	2.53	1.64	0.89	0	0	0	0	0	0	1.99	0	0
C107	GE8161	3	2.2	1.4	0	2.08	0	0	0	0	0	0	0
C108	BS8161	2.8	1.8	1.33	0	0	0	0	0	0	0	0	0
C109	HS8251	0	0	0	0	0	0	0	0	0	2.41	0	0
C110	A8251	3	2	1	0	0	0	0	0	0	0	0	0
C111	PH8251	2.95	2.3	2.75	0	0	0	0	0	0	0	0	0
C112	BE8253	2.36	2.4	2.8	2.05	1.97	0	0	0	0	0	0	0
C113	GE8291	2.46	2.4	1.57	1.93	0	0	1.8	0	0	0	0	0
C114	GE8292	3	2.5	1.9	0	0	0	0	0	0	0	0	0
C115	GE8261	2.2	0	0	0	0	0	0	0	2	0	0	0
C116	BE8261	3	2	1	2.01	0	0	0	0	1	0	0	0
C117	PH8201	2.7	1.72	0	0	0	0	0	0	0	0	0	0
C118	BE8254	2.5	1.67	0	0	0	0	0	0	0	0	0	0
C119	CE 8211	2	0	0	0	1.85	0	0	0	0	0	0	0
C120	PH8252	2	2	0	0	0	0	0	0	0	0	0	0
C121	BE8255	3	2	1.75	2	0	0	0	0	0	0	0	0
C122	CS8251	2.67	2.17	2.76	2.01	0	0	0	0	0	0	0	0
C123	CS8261	3	1.9	1.6	2.1	1.97	1.5	1.755	0	1.93 3	1	0	0
C124	PH8253	1.68	2	0	0	0	0	0	0	0	0	0	0
C125	EC8251	3	2.17	1.17	2.05	0	0	0	0	0	0	0	0
C126	EC8252	2.3	2	1.8	2	0	0	0	0	0	0	0	0
C127	EC8261	3	3	1.67 4	2	0	0	0	0	0	0	0	0
C128	BE8252	2.83 3	2.3	2.7	0	0	0	0	0	0	0	0	0
C129	EE8251	3	2.2	1.4	2	0	0	0	0	0	0	0	0
C130	EE8261	3	1.92	2.8	2.16	2.07	0	1	0	2	1	0	0
		2.60	2.04	1.71	1.99	1.99	1.50	1.52	0	1.73	1.80	0	0

PO Attainment Level

Course	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
Direct Attainment	2.60	2.04	1.71	1.99	1.99	1.50	1.52	0.00	1.73	1.80	0.00	0.00
CO Attainment	2.60	2.04	1.71	1.99	1.99	1.50	1.52	0.00	1.73	1.80	0.00	0.00

8.5.2. Actions taken based on the results of evaluation of relevant POs (5)

POs & PSOs Attainment Levels and Actions for improvement – CAY (2019-2020)

POs	Target level	Attainment level	Observations
PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO1	2	2.60	Students are up to the expected level to apply their basic mathematics, science and Engineering knowledge in various Mechanical Engineering courses. The Observations are Students were able to solve basic engineering problems using basic science and mathematics principles through the experiments given.
The above actions are continued.			
PO2. Identify, formulate, review research literature, and analyze complex engineering problems researching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	2.00	2.04	Students were not up to the expected level to analyze and develop solutions to complex Engineering problems. The Observations are Students were not able to effectively analyze the complex problems in some courses through the tutorials given.
The above actions are continued, in order to achieve the target the following action is taken Action 1: Seminar on analysis of engineering problems are conducted.			
PO3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO3	2	1.71	Designing, implementation and evaluation skills of students with realistic constraints are not up to the expected level. The Observations are Students were not able to design effectively solutions for complex engineering problems through the workshop given.

The above actions are continued, in order to achieve the target the following action is taken Action 1: Seminar given on e-waste management is given.			
PO4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	2	1.99	Students are able use their research based knowledge to analyze societal challenges and to provide valuable conclusions. The Observations are • The interpretation and analysis software introduced in the lab classes was useful. • The idea scouting competitions conducted for students were useful. .
The above actions are continued, in order to achieve target the following action is taken Action 1: Workshop on data analysis using excel is to be conducted			
PO5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO5	2.00	1.99	Students are up to the expected level to use modern tools and techniques. The Observations are • Workshops on software tools for engineers are conducted by experts are useful. • The appreciable involvement in learning modern tools.
The above actions are continued, in order to achieve the enhanced target the following actions are taken Action 1: Seminar on limitations of software tools in Engineering Applications is to be conducted.			
PO6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO6	2	1.5	Students are not up to the expected level by gaining knowledge on societal, health, safety, legal and cultural issues. The Observations are • Special technical session arranged.by resource persons from industry was not up to the level.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Seminars on social responsibilities of engineers is to be conducted.			
PO7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			

PO7	2	1.52	Students are not up to the expected level to understand that the current technological development and its impact on sustainability. The Observations are Seminars conducted on conservation of environment are were not up to the level.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Students are exposed to the working principles of the biogas plant.			
PO8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	-	-	
-			
PO9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	2	1.73	Students are not up to the expected level to perform effectively as an individual and also as a member of a team in order to have a good career and to participate in societal events. The Observations are Project discussions conducted was not up to the level.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Students are encouraged to work in teams for project expo.			
PO10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO10	2	1.804	Group discussions conducted are not up to level.
The above actions are continued, in order to achieve the enhanced target the following action is taken Action 1: Seminar hours are included in the timetable.			
PO11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO11	2	-	-
-			
PO12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO12	2	-	-
-			

Criterion - 9	Student Support Systems	50
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9.1 Mentoring system to help at individual level (5)

A. Details of the mentoring system that has been developed for the students for various purpose and also state the efficacy of such system

Mentoring is provided for total development of the students. Faculty members will be the tutors and mentors for the students, who will help them to overcome their academic and personal difficulties. A balanced and effective mentoring is in place, maintaining a healthy relationship between faculty members and students. Around 18 students are assigned to a mentor. Mentoring is planned based on the concept “**Know about Mentee**” which emphasizes the following aspects:

- Students will be provided with an opportunity to disclose themselves
- Mentor will assess the mentee individually
- Behavioral study will be made by the mentor
- Desirable characteristics of the mentee are highly appreciated.
- Negatives were pointed out in a better way individually without hurting his ego
- Make him responsible for all his behavior.
- Maintain mentor-mentee cordial relationship.

After knowing the mentee, mentoring is planned by the mentor for the following aspects:

- Improve Academic performance.
- Develop a Research Orientation
- Guidance for Professional Career, Higher Studies & Skill Development
- Resolve Personal Issues: Behavioral; psychological
- Encourage Spirit of Innovation by motivating and training students to participate in Contests, Conferences, Projects and Internships
- Motivate to pursue Extra-curricular and Social activities
- Encourage students to participate in Cultural activities, Arts and Sports.
- Develop Personality and Character
- Foster Good Values, Healthy living and Discipline

Table 9.1.a:Types of Mentoring System

Sl. No.	Types of mentoring system	Functions
1	Professional Guidance	Skill Enhancement for better employability - Students are encouraged to enroll themselves as members of various professional bodies and also to attend various inter-institute, state, national and international competitions to increase their exposure to the current professional practices in the engineering sector. Nurturing innovative Ideas: - The college also offers an incubation hub in IEDC for the startups, where they can set up a startup company with their idea.
2	Academic Guidance	Academic Counseling - Identify students with low attendance and ensure that they improve their attendance. Support to the poor performers - Remedial classes are conducted for each subject after the CAE1&2 for weak students.
3	Career Advancement	Training programs: - Students are encouraged to attend specialized training programs through career guidance cell to enhance their career opportunities. Training & Placement Cell guidance: - Students are directed to attend specialized training by experts from different area prior to their placement.
4	Laboratory Specific	Experiment support: Mentor in consultation with faculty, arrange extra classes in laboratories for weak students.
5	Holistic Development	Holistic Development of the student Encourage and support students towards all round development through participation in literary, cultural and sports activities.

Table 9.1.b: Summary of mentoring system developed

Parameters	Description
Type of mentoring system	Professional guidance / career advancement / course work specific / laboratory specific / total development /personal Development
Number of faculty Mentors	80
Average number of students per mentor/	18
Frequency of meeting	Thrice in a semester, <i>in some cases, as and when needed</i>
Professional Counselor	One dedicated counselor for the college.

B. Efficacy of mentoring/counseling system:

The mentoring/counseling system developed by the college has proved to be effective as defined by different parameters:

- Students who were at the risk of dropout, have been saved by the mentoring and counseling system, in the last three years.
- Slow learners at the entry level are elevated to moderate and fast learners by the continuous monitoring of the mentors.
- Participation of students in technical and non technical events are improved by the motivation of mentors

Table 9.1.c: Efficiency of mentoring

Sl. No.	Types of mentoring system	Number of beneficiaries		
		2017-18	2018-19	2019-20
1	Professional Guidance	340	404	366
2	Academic Guidance	196	203	232
3	Career Advancement	65	74	13
4	Laboratory Specific	21	16	15

5	Holistic Development	102	112	102
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9.2 Feedback analysis and reward / corrective measures taken, if any (10)

A. Methodology of feedback process

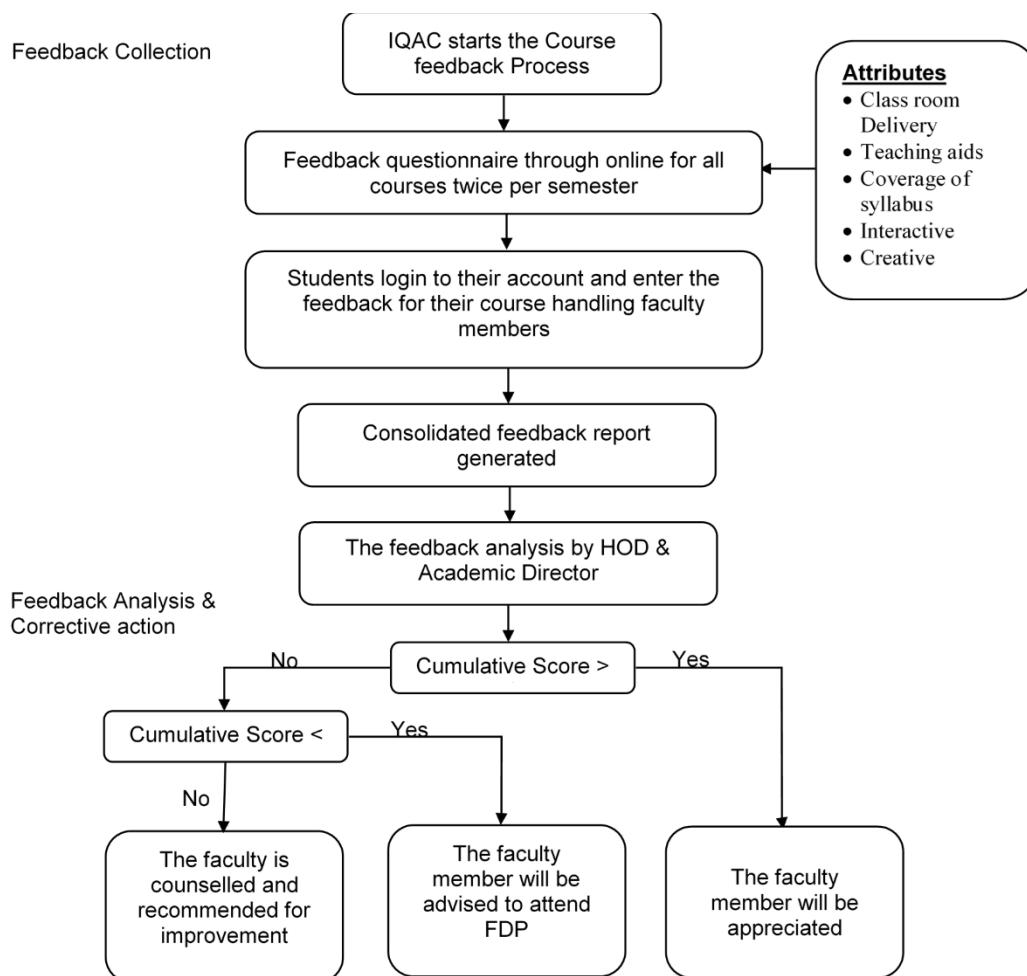


Fig.9.2.a: Flowchart representing course feedback process

Feedback collected for all courses (Yes/No)	Yes
Average Percentage of students participating	90%

Feedback Collection Process

- A feedback questionnaire is prepared by IQAC. The students give feedback for their subject handling faculty members through online mode.
- The frequency of feedback is twice per semester (After CAE I & CAE II).
- The feedback is based on an average scale of 10 for the attributes like classroom delivery, teaching aids, coverage of syllabus, Interactive and creative.

- After the recommendations of IQAC, threshold value will be finalized. The normal value setup at present is 10- Excellent, 8- Very Good, 6-Good, 5- Satisfactory, 3- Below average.
- The consolidated feedback is generated by the Head of the Department and submitted to IQAC.
- A consolidated department report is forwarded to Academic Director.

Feedback Analysis Process

- The report is analyzed by the Academic Director along with the HOD.
- The faculty members who score 9 & 10 are appreciated.
- The faculty members will be counseled for the feedback attributes for which their feedback value is from 6 to 8. An opportunity is given to these teachers to rectify their weakness if any.
- The faculty members who score less than 6 are advised to attend FDP and incorporate other corrective measures.
- All the consolidated feedback after being analyzed by the Academic Director and HoD, the corrective measures are proposed by the HoD and approved by the Academic Director.
- The report will be forwarded to the Principal for his kind perusal.
- The feedback analysis will have an impact on their performance appraisal and promotions.

B. Record of the corrective measures taken

Based on report, the areas where the teacher is good is appreciated. The areas in which a teacher needs improvement and attention is informed and proper counseling is given to overcome the deficiency and to improve his/her performance. The faculties lacking in specific area are addressed and directed to attend faculty development programs in order to improve their skill set in teaching methodology.

Course Feedback Report - CIVIL - CE6603 - Design of Steel Structures

Name of the Course Instructor	: Mr. Abishek G L	Course Code/Title	: CE6603 / Design of steel Structures
Name of the Department	: Civil Engineering	Programme	: UG
Year	: 2018	Academic Year	: 2017 - 2018
Semester	: 6	Section	: B
Total Students	: 65	Total Students Participated	: 62
Students % (Participated)	: 95	Feedback	: Feedback 1

S.No	Parameters	Score 10 Max
1	Availability of faculty 2 minutes prior to the commencement of each class	8.05
2	Audibility of faculty's Voice and Teachers control over class	7.75
3	Capability of communicating in English	7.79
4	Initiatives taken for slow learners through remedial classes and advanced learners through training of competitive examination/ placement questions.	7.61
5	Coverage of syllabus and additional contents within given time.	7.92
6	Providing inspiration and positive energy to students.	7.85
7	Applicability/relevance to real life situations and integration of content with other courses.	8.93
8	Reference of other books, journals, magazines and NPTEL videos in class.	7.67
9	Clarifying doubts inside and outside classroom.	8.05
10	Ability to use digital technology devices in classroom.	7.62
11	Involving students during lecture through interactions.	7.61
12	Addition of relevant topics required for Industries (Content Beyond Syllabus) and sharing current technologies and updates in class.	7.93
13	Ability to design quiz/test/mini project/assignments/self learning content /industrial visits to evaluate students understanding.	7.97
Average Marks		7.90

Corrective action planned

- Instructed to use more PPT's & other digital technology
-
-

Approved By 

Date 24/8/19 **Proposed by : HOD** **Academic Director**

Verification of Corrective action

- Verified his PPT usage in classroom
-
-

Verified By 

Date 5/9/19 **HOD**

Fig.9.2.b: Sample course feedback report

Course Feedback Consolidated Report – Civil – Third Year –

Department : Civil Programme : UG
Year : Third Year Academic Year : 2017 - 2018

S.No	Name	Section	Course	Feedback	Marks
1	Mr. Praveen	B	Concrete Technology	Feedback I	7.12
2	Mrs.M.V.Sonia Vini Parrot	B	Environmental Engineering Laboratory	Feedback I	7.43
3	Mrs. Anne Chandra	A	Environmental Engineering II	Feedback I	7.45
4	Mr. John Thangam P	A	Structural Analysis II	Feedback I	7.55
5	Mr.Lin G	A	Railways, Airports and Harbor Engineering	Feedback II	7.62
6	Mrs.M.V.Sonia Vini Parrot	A	Concrete Technology	Feedback I	7.82
7	Mrs. Manjaram D S	B	Concrete and Highway Engineering Laboratory	Feedback II	7.89
8	Mr. Riyo Jose	B	Design of Steel Structures	Feedback II	7.89
9	Mr. Neeraj	B	Railways, Airports and Harbor Engineering	Feedback I	7.89
10	Mr.Lin G	A	Railways, Airports and Harbor Engineering	Feedback I	7.90
11	Mr. Abishek G L	A	Design of Steel Structures	Feedback I	7.90
12	Mrs. Manjaram D S	B	Concrete and Highway Engineering Laboratory	Feedback I	8.12
13	Mr. John Thangam P	A	Structural Analysis II	Feedback II	8.20
14	Mr.Lin G	A	Concrete and Highway Engineering Laboratory	Feedback II	8.56
15	Ms. Pameela Jennifer	A	Environmental Engineering Laboratory	Feedback II	8.72
16	Mrs.M.V.Sonia Vini Parrot	A	Concrete Technology	Feedback II	8.75
17	Mr. Riyo Jose	B	Design of Steel Structures	Feedback I	8.75
18	Mr.Lin G	A	Concrete and Highway Engineering Laboratory	Feedback I	8.90
19	Mrs. Manjaram D S	A	Design of Reinforced Concrete & Brick Masonry Structures	Feedback I	8.90
20	Mr. Jothis	B	Structural Analysis II	Feedback I	8.92
21	Mr. Neeraj	B	Railways, Airports and Harbor Engineering	Feedback II	8.97
22	Ms. Ancy	B	Environmental Engineering II	Feedback II	8.99

23	Ms. Pameela Jennifer	A	Environmental Engineering Laboratory	Feedback I	9.01
24	Mr. Jothis	B	Structural Analysis II	Feedback II	9.09
25	Mr. Job Geo Jacob	B	Design of Reinforced Concrete & Brick Masonry Structures	Feedback I	9.11
26	Ms. Ancy	B	Environmental Engineering II	Feedback I	9.20
27	Mr. Abishek G L	A	Design of Steel Structures	Feedback II	9.21
28	Mrs. Anne Chandra	A	Environmental Engineering II	Feedback II	9.22
29	Mr. Praveen	B	Concrete Technology	Feedback II	9.23
30	Mr. Job Geo Jacob	B	Design of Reinforced Concrete & Brick Masonry Structures	Feedback II	9.32
31	Mrs.M.V.Sonia Vini Parrot	B	Environmental Engineering Laboratory	Feedback II	9.41
32	Mrs. Manjaram D S	A	Design of Reinforced Concrete & Brick Masonry Structures	Feedback II	9.71

Director's Comment

1. Faculties in the list from 1-8 are scored below 8 and are asked to undergo some corrective measures through course feedback report

2. Faculties in the list from 9-32 are appreciated and maintain the score continuously.



Fig.9.3 Sample consolidated feedback report

Other modes of feedback system

- Feedback discussion in the class committee meeting, which comprises of Chairperson, course instructors and students of different categories in the class. Students are invited to express their view on courses and other grievances to improve teaching learning process.
- Oral feedback obtained from students by mentors, course instructors, HoDs, Academic Director, Head of the Institution and management are given due importance.
- Feedback from alumni is collected during the alumni meet conducted every year.
- Feedback reports from parents are collected during Parent Teacher
- Feedback collected from suggestion box are given due importance

9.3 Feedback on facilities (5)

A standard procedure for feedback on facilities is taken up in the department. Feedback is collected from the students on the facilities available in the college such as class room infrastructure, canteen, library, sports, medical facility, etc. The feedback is analyzed and the necessary corrective measures are implemented after discussions with the management.

Following is the process of feedback on facilities.

- 1) Feedback collection process
- 2) Feedback analysis
- 3) Corrective measures

1. Feedback collection process:

Table 9.3.a: Details of feedback collection process

Items	Description
Feedback collected on all facilities provided by the college.	YES
Feedback collection process	Online
Feedback receiver	Head of the Department
Frequency of feedback collection	Once in an academic year
Metrics used for calculation	Excellent Satisfied Not Satisfied

2. Feedback analysis

The feedback given by the students is generated by the HoD and consolidated by the IQAC. The consolidated report is handed over to the Principal. The Principal discuss about the consolidated report with the management and come out with necessary actions.

3. Corrective Measures

Based on the feedback from students the old water filter has been replaced by a new water filter. Canteen has been renovated with more space, seating facility and updated food menu. Parking area has been extended Sports facility has been improved. Equipments have been purchased for gym.



Mar Ephraem

College of Engineering and Technology

Facility Feedback

Student Name :

Semester/Year:

Department. :

- 1 Are you satisfied with the size, Lighting and Ventilation size of the class room?
- 2 Are you satisfied with the ambience, quality of food and food menu provided in the canteen?
- 3 Are you satisfied with the cleanliness of washroom all the time?
- 4 Are you satisfied with the quality of drinking water?
- 5 Are you satisfied with the support and assistance provided in the office?
- 6 Are you satisfied with the convenience provided in the exam cell?
- 7 Are you satisfied with the reprographic facilities in the campus?
- 8 Are you satisfied with the facilities available in the library?
- 9 Are you satisfied with the power back up facilities available in the campus?
- 10 Are you satisfied with the facilities available in the store?
- 11 Are you satisfied with the Medical facilities available in the campus?
- 12 Are you satisfied with the facilities available for Sports?
- 13 Are you satisfied with the parking facility provided inside the campus?
- 14 Are you satisfied with the facility available in the college gym?



Mar Ephraem

College of Engineering and Technology

Facility Feedback Summary

Department:	Civil Engineering
Semester/Year:	6th Sem/ III Year
Total Students:	130
Participated Students:	121

Facility Feedback



HOD Remarks

Submitted for kind perusal & consideration

[Signature]

Fig.9.3 Sample feedback on Facilities

9.4 Self-Learning(5)

The academic system in the Institution facilitates students to learn beyond the syllabus and curriculum. Our institution offers courses like project based laboratory, industry field training, project work, value added course, technical presentation etc. The components of self-learning are evaluated in these areas.

A. Scope for Self Learning.

Self-learning makes the students highly motivated, persistent, independent, self-disciplined, self-confident, goal oriented. They gain practical knowledge and update the recent technology development to do their innovative project work by doing a state of art literature survey. The Institution provides many self-learning facilities like digital library, technical magazines, E books, NPTEL, Wi-Fi connectivity etc.

- Students are encouraged to attend seminars and workshops to learn about recent trends and Technologies.
- Students are encouraged to exhibit their talents by participating in paper presentation and other technical events conducted by various reputed Institutions.
- During projects, students are encouraged to identify problems based on literature review which develop their self-learning capabilities.
- Students are encouraged to take MOOC courses from platforms such as NPTEL.

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

Table 9.4.a: Detailed list of self learning facilities

Sl. No.	Self Learning Process	Description
1	Central Library	• The college library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. • College library equips students with learning skills and develop the knowledge. • The library is equipped with sufficient journals and reference books

2	Digital Library	• Availability of NPTEL videos • Sufficient systems with multimedia facilities. • Institutional membership of DELNET, a library networking database. • Internet facility
3	Department Library	• The department is facilitated with books and different sample project report models
4	Web based learning	• The internet is an open information system in which various sources of information, media and materials such as texts, images, video sequences can be linked together in diverse ways to form so-called self-learning environment. • The college is equipped with centralized Wi-Fi system. so that the students can access internet by registering the laptop or mobile by registering to the network administrator • Internet offers new possibilities to structure, represent, adopt and integrate various learning content and materials. • E-material links are provided in the website for easy access to students

Utilization and its effectiveness:

Table 9.4.b: Library Utilization Report for the Academic year 2019-2020

Reading (Regular/Library Hour)

Sl. No.	Description	Library Hour Per Week Per Student (9 AM to 4 PM)	Beneficiary	No. of Beneficiaries	Beneficiaries in %
1.	Text Book	2	Students and Staff	1052	76
2.	Reference Book	2	Students and Staff	391	28
3.	Journals (Printed Version)	2	Students and Staff	943	68
4.	E-Journals	2	Students and Staff	57	4
5.	Magazines and Newspapers	1	Students and Staff	1057	77

6.	Competitive Exam Books	2	Students and Staff	110	8
7.	GATE Books	2	Students and Staff	126	9
8.	NPTEL Videos	2	Students and Staff	97	7
9.	Question Bank	1	Students and Staff	70	5
10.	DELNET Database	1	Students and Staff	57	4

Reading (Evening Hour)

Sl. No.	Description	Utilization Hours Per day (4 PM to 7 PM)	Beneficiary	No. of Beneficiaries	Beneficiaries in %
1.	Text Book	2	Students	235	42
2.	Reference Book	2	Students	52	9
3.	Journals (Printed Version)	2	Students and Staff	50	9
4.	E-Journals	2	Students and Staff	18	3
5.	Magazines and Newspapers	3	Students	287	52
6.	Competitive Exam Books	2	Students	35	6
7.	GATE Books	2	Students	15	2
8.	NPTEL Videos	1	Students and Staff	18	3
9.	Question Bank	1	Students	13	2
10.	DELNET Database	1	Students	18	3

9.5 Career guidance, Training, Placement(10)

A. Availability of career guidance facilities:

The **Career Guidance Cell** aims at providing the best opportunities enabling every student to realize his/her dream. This team is committed to the task of securing final placements and summer internships for every student on campus. It helps the students as mentioned below:

- Trainings and counseling were provided for the students to acquire knowledge and skills necessary to make lifelong career decisions.
- **Provides latest information on training & employment opportunities**, bringing students and potential employers together and arranging for placement
- To conduct Seminar, Special lectures on Career Guidance and for pursuing higher studies.
- To get placed in national and multinational companies through ON/OFF campus recruitment.
- Alumni are made to engage the students to teach various skills.

Various types and levels of placement training programs are organized like

- Group Discussions,
- Mock Interviews,
- Personality Development,
- Resume Preparation,
- Model Campus Interview Tests,
- Training for Communication,
- Training for Group Works,
- Awareness about Competitive Exams,
- Leadership Qualities,
- Team Effectiveness
- Sharing of Experience By Eminent Personalities and
- Aptitude Test

B. Counseling for higher studies

Awareness on higher studies in India and abroad is provided by eminent personalities through seminars. Training programs and workshops are given to students regarding CAT, MAT, TANCET, GATE, IELTS and TOEFL

C. Pre placement Training

- Aptitude Development training sessions are conducted for all program by experts.
- Soft skills for all students are conducted by the seasoned trainers experienced in corporate orientation.
- Technical and domain related sessions are conducted for all the students by subject experts from industries.

Table 9.5.a: Detailed list of pre placement trainings

Sl. No.	Type of Training	Trainer/Company
1.	Company Specific Training	Mr.D.Vignesh
2.	Training on Staad Pro	CADD centre team
3.	Pre placement Training	SMEC team
4.	Workshop on CNC	Internal Trainers
5.	Training on CATIA	CADD Centre Team

D. Placement process and support for students

The students are provided with necessary support to attain placement.

- The database of the students on their academic performance is collected.
- Placement Officer orients the students on placement opportunities and preparations required

for placements.

- The companies are invited for placement by the placement Cell.
- The database is screened depending upon the eligibility criteria specified by the companies
- The students are given the special training in accordance with the company by external expert and alumni if they are working in the same company which is invited for recruitment.
- The eligible students are permitted to attend the interview and the company will carry over the placement process with the support of Placement Cell.

Table 9.5.b: List of recruiters

Sl. No.	Company
1.	ESSEL PROPACK, Poland
2.	Environ Construction , Singapore
3.	TCS
4.	CTS
5.	Infosys
6.	UST Global
7.	HCL Technologies
8.	TATA ELXSI
9.	Quest
10.	STUP CONSULTANTS
11.	Renault Nissan
12.	INNOVATE Designers & Builders
13.	SAFA Constructions
14.	SMEC
15.	PARASCADD
16.	ONEGENE
17.	CADD Centre
18.	CADOpt Technologies
19.	SS TECHNOVATION
20.	Neel Auto Private Limited
21.	Build – Tech Engineers
22.	TVS Sundram Fasteners Limited

Efficacy of career Guidance, Training, Placement

Table 9.5.c: Impact of career guidance, training, placement and certification

Sl. No.	Academic year	Total no. of students	No. of students placed	No. of students admitted to higher studies	No. of students as entrepreneur
1	2020-21	328	167	14	2
2	2019-20	361	279	14	3
3	2018-19	361	279	14	3
4	2017-18	377	292	23	3

9.5 Entrepreneurship Cell

Entrepreneurship development cell is formed in the institution to build a world class entrepreneurship hub to cater the needs of students with innovative ideas of social relevance and thereby introducing an entrepreneurship culture in the campus.

Mission

To develop an entrepreneurial ecosystem that enables the students and the members of the faculty to bring out their innovative and potential ideas and develop those creative ideas into innovative products to uplift the economic status of the society.

Objectives:

- To design and develop innovative products of social relevance.
- To create entrepreneurial culture among faculty members, students and alumni.
- To support other neighboring institutions to mould and effectively carry out entrepreneurial activities in their campuses.
- To focus more on innovation driven entrepreneurship from student projects.
- To encourage more women to become entrepreneurs.
- To promote start-up initiatives from faculty members and students.

Facilities

- Mentors from different industries to support new business idea
- Meeting with successful Entrepreneurs
- Pre incubation center with advanced facilities for product development.

NewGen IEDC Marephraem

- NewGen IEDC aims to inculcate the spirit of innovation and entrepreneurship amongst the young students, encourage and support start-up creation through guidance, mentorship& support. NewGen IEDCs is established in 2019 where students are encouraged to take up innovative projects with the possibility of commercialization.

Sl. No	Name of the Project	Sponsoring Agency	Amount	Year of grant	Status
1	NewGen IEDC	DST/NSTEDB	2.87 corers	2019	Ongoing

A. Entrepreneurship initiatives

2018-2019

Sl.No	Name of the Event	Date	No.of Beneficiaries
1	Entrepreneurship Awareness camp (EAC)	9.11.2018-10.11.2018	81
2	Entrepreneurship Awareness Camp (EAC)	6.09.2018-08.09.2018	87
3.	Entrepreneurship Awareness camp (EAC)	5.12.2018-07.12.2018	76
4	Challenge identification Competition	February 2018	224
5	Idea scouting	March 2018	48

2019-2020

Sl. No	Name of the Event	Date	No.of Beneficiaries
1	Orientation Program on Entrepreneurship	09.02.2019	63
2	One day workshop on Communication and Leadership Training	09.03.2019	58
3.	Industry Institutional Interactive Program	29.12.2018	Members of the faculty
4.	Challenge Identification Competition	22.01.2019	224
5.	Seminar on How to Identify a Great Business Idea	19.12.2018	72
6.	Robotics Automation Competition	19.04.2019	23
7.	Idea Pitching Contest	26.04.2019	71
8.	Science and Technical Exhibition	16.03.2019 & 17.03.2019	All Students
9.	Entrepreneurship Awareness camp (EAC)	6.09.2018-08.09.2018	87
10.	Entrepreneurship Awareness Camp (EAC)	9 ^h , 10 th and 12 th 11. 2018	81
11.	Entrepreneurship Awareness camp (EAC)	5.12.2018-07.12.2018	76
12	Start up visit to villages	08.10.2019	63
13	minar on Technology commercialization and business opportunities in different sectors	04.04.2019	55

14	Seminar on IPR - Group 2	11 .02. 2019	52
15	Business plan competitions	11.08.2019	13 team Members (Each team 6 students)

2020-2021

Sl.No	Name of the Event	Date	No.of Beneficiaries
1	A Seminar on Entrepreneurial Ecosystem	11/01/2020	48
2	Entrepreneurship Awareness camp (EAC) -2	10/02/2020 to 12/10/2020	76
3	Entrepreneurship Awareness camp (EAC) -3	17/02/2020 to 12/10/2020	88
4	Seminar on Technology Commercialization and Business Opportunities in different Sectors	04/02/2020	53
5	Workshop on Effective Market Research	25/02/2020	59
6	Challenge Identification Competition	3/03/2020	96
7	Idea Pitching	12/03/2020	62
8	Workshop on how to prepare the Business Plan	17/03/2020	73
9	Start-up visit in villages -1	11/08/2020	11
10	Start-up visit in villages -1	02/09/2020	6
11	Webinar on Rethink Research	08/06/2020	67
12	Outreach Webinar series on Entrepreneurship	10/08/21 to 14/08/21	456
13	Webinar on identifying intellectual property in projects & provisional patent filing.	25/09/2020	36

B. Data on students benefitted

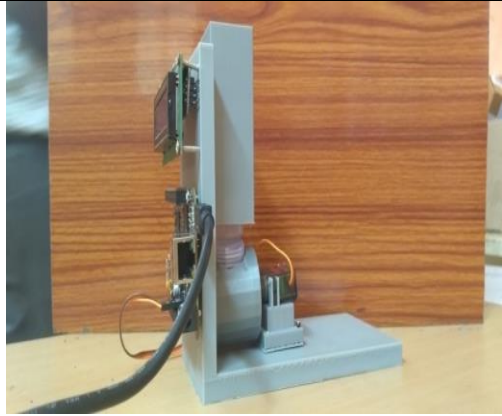
Winners Challenge Identification Competition 2019-2020

Sl. No	Name of the student	Title of the Challenge	Department	Prize
1	Nikhil John	Recycling of paper wastes in the college.	II Mech	1 st prize Rs. 10000
2	Jose Vivek Wilfred	Bionic arm for handless people.	IV Mech	2 nd Prize Rs. 5000

NewGen IEDC Student Projects 2019-2020

Sr. No	Team/Project Description	Interventions made	Current status
1	Student Team: Ms. Jeba. J Ms. Julia Bergio. K Mr. Abinesh. E Mr. Alphin. A Mentor Name: Mr. Jackson Thanga Roy Assistant Professor / Mech Project Name: Portable Smart RubberHarvesting Machine	*Weight Reduction *Portable Setup *User Friendly *Sensor for detecting the latex layer of the tree *Rack and Pinion mechanism	Prototype completed 
2	Student Team: Mr.AshickNewbin. A.C Mr.Rahul.R.G Mr.Rithick.R.Gopal Mentor Name: Mr. John Thangam Assistant Professor / Civil Project Name: Self-Priming Automated Fodder System	*Self Priming hydroponics manufacturing for cattle feed	*Product Completed *Patent filed 
3	StudentsName : Ms. Jenila Jacob Ms. Reshma Ms. Blessiya Mentor Name: Mr. LalinL.Laudis Assist Professor / ECE Project Name : Textacles	*Developed a module to recognize text and convert it into audio	Engineering (Paper Communicated) 
4	Students Team Mr.DeukerDikkinson Mr.Abish Raj .A Mr.Rino. M Mr.Simiyon.I Mentor Name:	*Semi automatic type *Roller operating system is used to dehusk the coconut.	Prototype completed 

	Mr. Manu Assistant Professor / Mech Project name Semi Automatic Coconut dehusker		
5	Team Members Mr.Jaireesh J.S Aswinth Mr.Ajith B Mr.Ajay R B Mr.Ajesh R M Mentor Name: Dr. John Iruthaya Raj Assistant Professor / Mech Project Name Coin Operated Rubber Rollers	1. Coin Acceptor setup 2.Locking system with Modified Gear arrangement 3.Timer with Electromagnetic Push and Pull Solenoid setup	Prototype completed 
6	Student Team: Mr. Alex Sasi Mr. Dani Jaison Prakash. J.U Mr. Tom Saji Ms. Ancilin. H Mentor Name: Mr. Arthur Vasanth Assistant Professor / EEE Project Name: Solar Ultrasonic Wild Boar Repeller	Developed a prototype to support Farmers to distract the wild Boar from the farming Land.	*Prototype Completed *International Journal of engineering research and technology” (Paper Communicated) 
7	Student Team: Mr.AjinKilbert Mr.Vinish Mr.Adarsh Mr.VelbinJijo Mentor Name: Mr. John Pradeep Assistant Professor / EEE	*Developed a prototype to support elderly persons who need care.	Prototype completed

	Project Name: A Smart IOT Pill Dispenser		
8	Student Team: Karthisuyan Sarath joe Rahul. M Sajan r Mentor Name: Dr. Rajeev HOD/Mech Project Name: Coconut Deshelling and Grating Machine.	*Semi automatic type Cutting wheel operating system. *Speed controllable coconut grating setup	Prototype completed 
9	Student Team Mr. Joein.J Mr. R. Relton Mr. Paul Richard. D.P Ms. Sherly.B Mentor Name: Mr. Dani Assistant Professor / Mech Project title: Telescopic Semi-Automatic Fruit Plucker	*The system has a plucking arm positioned at the top of the telescopic pole with the rack and pinion gear assembly. *The rack has teeth cut into it and they mesh with the teeth of the pinion gear. The motor is coupled with the pinion. *The controlled rotary motion of the pinion is converted into corresponding linear movement of the rack. *The to and fro motion of the plunger will actuate the fingers to	*Prototype completed *Design Patent filed 

		open and close. *The free end of the finger provides sniping action. *The collected fruit flows through the hollow plunger into the cloth which can be collected from the bottom.	
10	Student Team: Mr.SibinReji Mathew Mr.AntroAkash A Mr.Aneesh John Zachariah Mr.Anto J C Mentor Name: Mr. Manjusha Assistant Professor / EEE Project Name: An Add-On device to detect trapped human in fire accidents	Developed a prototype to support fire rescue care in Buildings.	Prototype completed 
11	Student Team: Mr.K.S.Ajith Mr.B.Ajil Mon Mr.C.Vinoth Mr.K.Sajin Mentor Name: Mr. Jude Felix Assistant Professor / Mech Project name: Portable coconut oil cooker	*Steam operated VCO cooker *Steam was generated in a boiler and transferred through hose *Stir is controlled by a motor	Prototype completed (MSMEUDYAM Registration is done) 
12	Student Team: Ms.Anuja M.L Ms.Jincy P,	* A vision based motion detection	Prototype completed

	Ms.Anisha V. Mentor Name: Dr. Benschwartz Assistant Professor / EEC Project Name : VISAD: A Vision based System for patient Abnormality Detection	algorithm was developed that would activate the safe system to prevent the patient falling from the bed.	VISAD: A “Vision based System for patient Abnormality Detection”, International journal of Engineering Research & Technology (Paper Communicated) 
13	Student Team Ms.ArpthaRenjan Mr.BintuBinu Thomas Ms.Jebin G. Mentor Name: Mrs. Ashy V Daniel Assistant Professor / CSE Project Name : IoT based abnormality and health monitoring system for cattle.	Abnormality monitoring system is a hardware/software cloudbased technology is used to remotely monitor the health status of cattle.	Prototype completed 
14	Student Team: Mr.Yesudhasxavier Mr.Shivakumar R Mr.Lijin V Mr.Gokulkrishna V S Mentor Name: Mr. Babin Assistant Professor / EEE Project Name: Instinctive fertilizer feeder for cultivation in agronomy.	A dedicated GUI was developed that would monitor a given multi crop farm and irrigate with nutrition based on demand	Prototype completed 
15	Student Team: Mr.Nijin.S.T Mr.Pratheesh .S.D	*Semi automatic type *Roller operating	Prototype completed

Mr.Jayan.J.J Mr.Jijo.J Mentor Name: Mr. Leo Bright Singh Assistant Professor / Mech Project Name Coconut scrubber and milk extractor	system is used for scrubbing the coconut.	
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Startups Registered

Startups Registered

Name of the Startup : ASK Enterprises

 भारत सरकार Government of India सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय Ministry of Micro, Small and Medium Enterprises																																					
UDYAM REGISTRATION CERTIFICATE																																					
																																					
UDYAM REGISTRATION NUMBER		UDYAM-TN-09-0011896																																			
NAME OF ENTERPRISE		ASK ENTERPRISE																																			
TYPE OF ENTERPRISE *		MICRO																																			
MAJOR ACTIVITY		MANUFACTURING																																			
SOCIAL CATEGORY OF ENTREPRENEUR		SC																																			
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Mobile	9566560168	Email:	sudhaachar5@gmail.com																																		
DATE OF INCORPORATION / REGISTRATION OF ENTERPRISE		07/05/2021																																			
DATE OF COMMENCEMENT OF PRODUCTION/BUSINESS																																					
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DATE OF UDYAM REGISTRATION		05/07/2021																																			
* In case of graduation (upward/reverse) of status of an enterprise, the benefit of the Government Schemes will be availed as per the provisions of Notification No. S.O. 2119(E) dated 26.06.2020 issued by the M/o MSME. Disclaimer: This is computer generated statement, no signature required. Printed from https://udyamregistration.gov.in & Date of printing:- 21/09/2021																																					
For any assistance, you may contact: 1. District Industries Centre: KANNIYAKUMARI (TAMIL NADU) 2. MSME-DI: CHENNAI (TAMIL NADU)																																					
Visit : www.msme.gov.in ; www.dcmse.gov.in ; www.champions.gov.in Follow us : @minmsme & @msmchampions																																					
				BE A CHAMPION with the Ministry of MSME																																	

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

Students are engaged in co-curricular, extra-curricular activities and field trips through student chapters and forums, which provide opportunities for students to explore new fields of interest, cultivate leadership skills, and learn teamwork. In this regard, institution has formed various committees for participating and organizing the cultural and sports activities. Every department has its own association through which department symposiums, project expo and other technical and non-technical events are being organized. These association activities benefit in developing leadership skills and make them work in teams.

A. Availability of sports and cultural facilities

Sports Facilities

The Institution has a sports ground, well equipped gym and sports kits. Students are encouraged to participate in various zonal, interzonal, inter and intra collegiate and University tournaments. Annual Sports day is celebrated with various sports events like Athletics, Long Jump, Volleyball, Table Tennis, Cricket, Chess, and Carom, both for staff and students, as part of recreation.

Table 9.7.a: List of indoor games available in the campus

Sl. No.	Name of the sport Facility
1	Badmindon
2	Chess
3	Caroms
4	Table tennis
5	Gym

Table 9.7.b: List of outdoor games available in the campus

Sl. No.	Name of the sportfacility	Whether available beyond college regular timings
1	Basket ball	Yes, 4.30 pm-6.30 pm
2	Volley Ball	
3	Food ball	
4	Cricket	
5	Throw Ball	
6	Long Jump	
7	Cricket	
8	Shotput	
9	Javelin Throw	
10	Discus Throw	



Fig.9.7.a Photo gallery of Sports Activities

Achievements in sport activities:

The student achievements in sports activities in the academic year 2019- 2020 there were four awards in 4 x 400 mts running, and in Javelin Throw, Triple jump and 100 mts running there was one award. Moreover, there was first, second and third award in football, kho-kho and badminton respectively. In the academic year 2018-2019, there was one award each in triple jump, high jump and 1500 mts running. In addition, there was a third place in basket ball. In the preceding academic year (2017-2018), we are the runner in football in zonal tournament. Mar Ephraem is the Anna university Zonal sports coordinating center for Zone 19 during the academic year 2019-2020.

Table 9.7.c: Summary of achievements Students in sport activities

Sl. No	Name of the sport	No. of students won in tournaments (Zonal/State level)		
		2020-21	2019-20	2018-19
1.	Javelin Throw		1	-
2.	Triple Jump		1	1
3.	High Jump		-	1
4.	100 mts running		1	-
5.	4*400 mts Running		4	-
6.	1500 mts Running		-	1
7.	Basket Ball	First	-	Third
8.	Foot Ball		First	-
9.	Kho-kho	First	Second	-
10.	Badminton		Third	-
11	Ball Badminton	Third		
12	Hockey	Second		

Cultural Activities

The fine arts club at Mar Ephraem aims to bring out talent in the student community in all the possible forms such as music, dance, literary skills, sketching or other fine art styles. Annual Cultural Event MAR FESTA , FESTINO BEATS and TALENTO are organized in the college to give opportunity for all the students and get involved in cultural enriching activities. Students are given chance to extend themselves and to grow in their area of interest.

Cultural Facilities Available In Our Institution

S.No	Details of the facility
1.	Fine Arts Club
2.	Choir
3.	Musical instruments
4.	Clay Modeling
5.	Art from Waste
6.	Art and painting materials
7.	Auditorium

Achievements of academic Year (2019-2020)

S.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	29-02-2020	NAVAvRddhh 2020 Art from waste	S.Abina	Arunachala College of Engineering for Women	I Prize
2	29-02-2020	NAVAvRddhh 2020 Art from waste	J.D.BEAUTLIN	Arunachala College of Engineering for Women	I Prize
3	29-02-2020	NAVAvRddhh 2020 Collage work	D.Laffni	Arunachala College of Engineering for Women	I I Prize
4	29-02-2020	NAVAvRddhh 2020 Collage work	S.Seleena	Arunachala College of Engineering for Women	II Prize
5	29-02-2020	NAVAvRddhh 2020 Art from waste	S.Seleena	Arunachala College of Engineering for Women	Participated
6	29-02-2020	NAVAvRddhh 2020	S.Abina	Arunachala College of Engineering for Women	Participated

		Collage work			
7	29-02-2020	NAVAvRddhh 2020 Art from waste	D.Laffni	Arunachala College of Engineering for Women	Participated
8	29-02-2020	NAVAvRddhh 2020 Collage work	J.D.Beautlin	Arunachala College of Engineering for Women	Participated
9	24-02-2020	Drawing competition	R.K.Vijisha	Rohini College of Engineering and Technology	I Prize
10	14&15 February 2020	NEMIC FEST 2020 Elocution Competition	Bharath Krishnan	Nesamony Memorial Christian College, Marthandam.	I prize
11	14 & 15 February 2020	NEMIC FEST 2020 Solo Song Competition	Blessing Jemil.P.J	Nesamony Memorial Christian College, Marthandam	Participated
12	14 & 15 February 2020	NEMIC FEST 2020 Elocution Competition	Kebiya .G	Nesamony Memorial Christian College, Marthandam.	Participated
13	14 & 15 February 2020	NEMIC FEST 2020 Pencil Sketch Competition	R.K.Vijisha	Nesamony Memorial Christian College, Marthandam.	I Prize
14	14 & 15 February 2020	NEMIC FEST 2020 Spot Photography	Nihal	Nesamony Memorial Christian College, Marthandam.	Participated
15	14 & 15 February 2020	NEMIC FEST 2020 Solo Dance Competition	Stebin	Nesamony Memorial Christian College, Marthandam.	II prize
16	14.08.2019	Dance	Anto J C	Bethlahem Institute of Engineering	II Prize
17	14.08.2019	Dance	AntroAkash	Bethlahem Institute of Engineering	II Prize
18	14.08.2019	Dance	Abin S	Bethlahem Institute of Engineering	II Prize

19	14.08.2019	Song	Deril Jacob Robin	Bethlahem Institute of Engineering	II Prize
20	12-10-2019	Semi classical	BeautlinSumith P	Ponjesly College of Engineering	2 nd Prize
21	23-01-2020	clay modelling	M L Anuja	Bethlahem institute of Engineering	2 nd Prize
22	08-02-2020	Quiz	JerlinPriya V M	Arunachala College of engineering for women	1 st Prize
23	15-02-2020	Jam Sketch	Jincy P	Udhaya school of Engineering	2 nd Prize
24	12-10-2019	SoloDance	Jenila J L	Mar Baselios College of Engineering & Technology	2 nd

Acheivements of academic Year (2018-2019)

S.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	19-12-2018	Jingle bells' 18 Group Song	BodlinLekha, Benil Jacob Robin, Deril Jacob Robin, Adlin, Ritchu, Ben singh	St. Joseph College of Education	Participated
2	08/03/2019	Group Song	Jesty James	Rohini College of Engineering and technology Tamil Nadu	II Prize
3	08/03/2019	Group Song	Sojo P Saju	Rohini College of Engineering and technology Tamil Nadu	II Prize
4	08/03/2019	Group Song	JomyElizebath	Rohini College of Engineering and technology Tamil Nadu Within State	II Prize
5	08/03/2019	Group Song	ShanyAleyamma	Rohini College of Engineering and technology Tamil Nadu	II Prize
6	03/05/2019	Paper Presentation	Merin S John	Mohandas College of Engineering & Technology Kerala	Participation
7	22/02/2019	Group Dance	JomyElizabeth	Nesamony Memorial Christian College Tamil Nadu	I Prize

8	22/02/2019	Group Dance	Sarannya	Nesamony Memorial Christian College	I Prize
9	22/02/2019	Group Dance	Merlin thankam	Tamil Nadu	I Prize
10	22/02/2019	Group Dance	Karthika P	Nesamony Memorial Christian College	I Prize
11	29/03/2019	Group Song	Dona Sabu	Musaliar College Of Engineering & Technology Kerala	I Prize
12	29/03/2019	Group Song	AshanaBobachan	Musaliar College Of Engineering & Technology Kerala	I Prize
13	29/03/2019	Group Song	Jeffy Grace	Musaliar College Of Engineering & Technology Kerala	I Prize
14	29/03/2019	Group Song	Divya P	Musaliar College Of Engineering & Technology Kerala	I Prize
15	29/03/2019	Group Song	Jithin James	Musaliar College Of Engineering & Technology Kerala	I Prize
16	29/03/2019	Group Song	Adone Y Babu	Musaliar College Of Engineering & Technology Kerala	I Prize
17	29/03/2019	Group Song	Alwin David	Musaliar College Of Engineering & Technology Kerala	I Prize
18	29/03/2019	Best Actor	Alex Mathew	Musaliar College Of Engineering & Technology Kerala	II Prize
19	28/02/2019	Group Dance	JomyElizabeth	Rohini College of Engineering and technology, Tamil nadu	II Prize
20	28/02/2019	Group Dance	Sarannya	Rohini College of Engineering and technology	II Prize
21	28/02/2019	Group Dance	Merlin thankam	Rohini College of Engineering and technology	II Prize
22	28/02/2019	Group Dance	Karthika P	Rohini College of Engineering and technology	II Prize
23	26/04/2019	Music Band	Ben Singh Joshua	Mar Baselious College of Engineering & Technology Kerala	II Prize
24	26/04/2019	Music Band	Adone Y Babu	Mar Baselious College of Engineering & Technology Kerala	II Prize

25	26/04/2019	Music Band	Alwin David	Mar Baselious College of Engineering & Technology Kerala	II Prize
26	26/04/2019	Music Band	Dona Sabu	Mar Baselious College of Engineering & Technology Kerala	II Prize
27	26/04/2019	Music Band	AshnaBobachan	Mar Baselious College of Engineering & Technology Kerala	II Prize
28	26/04/2019	Music Band	AlwinRaju	Mar Baselious College of Engineering & Technology Kerala	II Prize
29	26/04/2019	Photo Contest	Karthika	Aspire 2019,IET Kanyakumari Local Network	Participation
30	26/04/2019	Photo Contest	Biljila	Aspire 2019,IET Kanyakumari Local Network	Participation
31	19-12-2018	Singing	Benil Jacob Robin	St.Josaeph College of Education	II Prize
32	19-12-2018	Singing	Deril Jacob Robin	St.Josaeph College of Education	Participated
33	11-08-2018	Folk Dance	AbiMol A N	Mar BaseliosCollegeofEngineering&Technology	1 st prize
34	18-08-2018	Quiz	SnehaBabuji	Bethlahem institute ofEngineering	1 st Prize
35	11-08-2018	Clay modelling	Stephy R Jose	Arunachala College of engineering for women	2 nd Prize
36	02-02-2019	Word hunt	Ahisha R K	Udhaya school of Engineering	1 st Prize
37	16--02-2019	Solo song	Merlin Preetha	Ponjesly College ofEngineering	2 nd Prize

Acheivements of academic Year (2017-2018)

Sl.No	Date	Name Of Event	Name of the students	Venue	Recognition Received
1	20/10/2017	Face Painting	Akhil Mon(CSE)	Trinity College of Engineering,Kerala	I prize
2	16-12-2017	Light music Competition	Benil Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
3	16-12-2017	Light music Competition	Smith Jisho	Nesamony Memorial Christian College, Marthandam	III Prize

4	16-12-2017	Light music Competition	Deril Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
5	16-12-2017	Light music Competition	AdlinShiji	Nesamony Memorial Christian College, Marthandam	III Prize
6	16-12-2017	Light music Competition	Beautlin Femi	Nesamony Memorial Christian College, Marthandam	III Prize
7	16-12-2017	Light music Competition	Recslin	Nesamony Memorial Christian College, Marthandam	III Prize
8	16-12-2017	Light music Competition	Richu Rajesh Singh	Nesamony Memorial Christian College, Marthandam	III Prize
9	16-12-2017	Light music Competition	Bensingh	Nesamony Memorial Christian College, Marthandam	III Prize
10	16-12-2017	Western music Competition	Benil Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
11	16-12-2017	Western music Competition	Smith Jisho	Nesamony Memorial Christian College, Marthandam	III Prize
12	16-12-2017	Western music Competition	Deril Jacob Robin	Nesamony Memorial Christian College, Marthandam	III Prize
13	16-12-2017	Western Song Competition	AdlinShiji	Nesamony Memorial Christian College, Marthandam	III Prize
14	16-12-2017	Western Song Competition	Beautlin Femi	Nesamony Memorial Christian College, Marthandam	III Prize
15	16-12-2017	Western Song Competition	Recslin	Nesamony Memorial Christian College, Marthandam	III Prize
16	16-12-2017	Western Song Competition	Richu Rajesh Singh	Nesamony Memorial Christian College, Marthandam	III Prize
17	16-12-2017	Western Song Competition	Ben Singh	Nesamony Memorial Christian College, Marthandam	III Prize

18	22&23 February 2018	Nemic Fest '18 Pencil Sketch	Arun	Nesamony Memorial Christian College, Marthandam	I prize
19	23/02/2018	Face Painting	Akhil Mon(CSE)	Sahrdya College of Engineering & Technology Trinity College of Engineering Kerala	I prize
20	23/02/2018	Face Painting	Ajin S A(CSE)	Sahrdya College of Engineering & Technology Kerala	Participation
21	15-03-2018	Mobile Photography	GibinKuruvila	Bethlahem I nstitute of Engineering	Participation
22	15-03-2018	Mobile Photography	Ajin P.	Bethlahem I nstitute of Engineering	Participation
23	15-03-2018	Mobile Photography	Alen Chris Biju	Bethlahem I nstitute of Engineering	Participation
24	15-03-2018	Mobile Photography	Abhijith K	Bethlahem Institute of Engineering	I prize
25	15-03-2018	Mobile Photography	AravindGopal	Bethlahem I nstitute of Engineering	II prize
26	05.01.2018	Song	Ranju Varghese	Malankara Catholic College	II prize
27	05.01.2018	Song	Derick J Robin	Malankara Catholic College	II prize
28	05.01.2018	Song	PrincyKoshy	Malankara Catholic College	II prize
29	18-02-2018	Folk Dance	Vijithra P	St.Xaviers catholic College of Engineering	1 st prize
30	01-03-2018	Poster Designing	Sruthi Sunil Mathews	Arunachala College of engineering for women	1 st prize
31	27-01-2018	Solo Dance	BodlinLakha	Udhaya school of Engineering	2 nd Prize
32	27-01-2018	Clay Modelling	Prabin S	Mar Baselios College of Engineering &Technology	1 st Prize
33	24/03/018	Quiz	RijilRaju	Bethlahem institute ofEngineering	2 nd Prize

A. NCC, NSS and other clubs

NSS UNIT in Mar Ephraem is organizing several useful programs for the society. The Motto of NSS "Not Me But You", reflects the essence of democratic living and upholds the need for self-less service. NSS helps the student's development & appreciation to other person's point of view and also show consideration towards other living beings. The programs like pond cleaning, helping towards flood affected people, Health education programs, tree plantation and village adoption are successfully conducted.

List of NSS Activities:

Table 9.7.d: Summary of NSS activities

S.No	Date	Events
1	17/12/2021	Legal aid awareness programme
2	07/04/2021	World Health
3	04/03/2021	Road safety Programme
4	10-02-2020	Novel corona virus Awareness Program
5	03-03-2020	Nilavembukudineer issuing
6	16-07-2019	Awareness program on climatic change and human rights
7	13-07-2018	Awareness program on Organic farming and green campus
8	30-07-2018	Charity work to flood affected peoples in kerala
9	15-09-2018	Nilavembukudineer issuing
10	22-02-2017	Pond cleaning
11	09-02-2017	Village adopting programme



Fig.9.7.b Photo gallery of NSS Activities

YRC (Youth Red Cross)

The Red Cross is an international organization meant for humanitarian services. It is a non-religious, nonpolitical and a non-sectarian international body. YRC is a part of the Indian Red Cross Society; it was inaugurated at Mar Ephraem in 2010 with well-defined objectives such as: Protection of Health and Life Service to the sick and the suffering by organizing various health camps, awareness program such as eye camps, vaccination camps, health awareness, AIDS Eradication. The students of Mar Ephraem are donating the blood frequently on request by the public/Hospitals through YRC coordinator.

List of YRC Activities:

Table 9.7.e: Summary of YRC activities

S.No	Date	Events
1	2/03/2020	Drug Awareness Programme
2	1/12/2020	Aids Awareness Programme
3	1-10-2019	World Heart Day Celebration
4	6-08-2018	Blood Donation Camp
5	18-09-2018	AIDS Awareness Program
6	9-09-2018	YRC ICTC visit
7	28-01-2017	AIDS Awareness programme
8	10-10-2017	Blood Donation Camp



Fig.9.7.c Photo gallery of YRC Activities

NCC

Mar Ephraem has initiated the process of establishing the NCC unit in the premises. We have submitted the application to the 11th battalion NCC office at Nagercoil and in waiting list. Also, we have applied for the same under FSFS (Fully Self-Financing Scheme) so that the unit will be started within a short span of time.

Other Clubs:

- International, national and internal professional Bodies for Co-Curricularactivities
 - IET
 - ISTE
 - SAE
 - IEEE
 - IPR
 - Robotics Club
 - Research and developmentCell
- Non-professional Bodies for Co-Curricular and Extracurricularactivities
 - NSS
 - Youth RedCross
 - Sports Club
 - EcoClub
 - Green EnergyCell
 - Women's Cell
 - Fine ArtsClub

B. Annual Students Activities:

- Institution organizes Mar Festa, Sports Day, Festino Beats and College Day every year for the technical, sports and cultural activity enhancement of the students.
- Every school associations organizes symposium, conference, technical competitions, interaction with alumni, industrial experts and academicians, workshop, industrial visit, seminars, guest lectures, educational tour etc.
- International and national professional bodies' student chapters help students in developing technical, personal skills by conducting technical seminars, workshop, industrial visit, charity visits, providing scholarships and presenting awards.
- Robotic club train the students with the hardware kit sponsored by MHRD and shape them to participate and win robotic competitions.
- Research Committee motivates and coordinates all the research activities of the college.
- NSS organizes NSS camp, visit to orphanages, conduct of disease awareness programs.
- YRC organizes blood donation awareness program, blood donation camp, deworming day.
- Sports division conducts university zonal level sports competitions and college annual sports day. Train and make students participate and win in zonal and state level sports competitions.
- Women cell works for the empowerment of the female students and conduct many awareness and empowerment programs. It celebrates Women's Day every year.
- Fine Arts Club organizes and coordinates all the cultural activities in the college and participation outside the college and organizes inter college cultural competition Mar Festa inter college cultural and Festino Beats every year



Fig.9.7.c Photo Gallery of the Cocurricular& Extra-Curricular Activities

10	Governance, Institutional Support and Financial Resources	120
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10.1. Organization, Governance And Transparency (40)

10.1.1. State the Vision and Mission of the Institution (5)

Vision

A world class Malankara institution of higher learning renowned for its excellence in Science and Technology and for its commitment to the holistic development of the individual and Society.

Mission

To provide quality and Value Based Education for the industrial and socio-economic development of the nation with its diverse cultures through relevant programs in teaching and learning, research, extension and community involvement.

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

Mar Ephraem College of Engineering and Technology is established, owned and administered by the Catholic Diocese of Marthandam. His Excellency Dr. Vincent Mar Paulos, Bishop of the Catholic Diocese of Marthandam is the Chairman of the College, wielding all the executive and ownership authorities.

The Bishop of Malankara Diocese of Marthandam constitutes a Governing Council in order to help the management in the administration of the college by making suitable policies and guidelines. Correspondent is the secretary of the Governing Council.

The major policy decisions of the College are taken by the Governing Council. These policy decisions are made operational by the Academic Planning Council. The College activities are primarily managed by Academic Planning Council, IQAC and other academic Committees.

Governing Council

Governing Council meets once in every six months and on need bases when ever required. The tenure of the council is three years and will be elected by the local society. The members of the Governing Council and their roles were as follows

Table 10.1.2.a: Governing Council in CAY (2019-20)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor, Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Table 10.1.2.b: Governing Council in CAYm1 (2018-19)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor, Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Table 10.1.2.c: Governing Council in CAYm2 (2017-18)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor,Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Table 10.1.2.d: Governing Council in CAYm3 (2016-17)

Sl No	Name of the Member	Designation	Role in Governing Body
1	Most Rev.Dr.Vincent Mar Paulos	Bishop of Marthandam	Chairman
2	Rt. Rev. Msgr. S. Varghese	Vicar General, Diocese of Marthandam	Convener
3	Rev.Fr.Josephin Raj	Correspondent, Mar Ephraem College of Engineering and Technology	Secretary
4	Rev. Fr. Sunny Mathew	Chancellor, Diocese of Marthandam	Member
5	Rev. Fr. Satheesh Kumar	Procurator, Diocese of Marthandam	Member
6	Rev.Fr. Jose Bright	Correspondent, MCC	Member
7	Rev. Fr. John Kumar	Priest Representative	Member
8	Sr. Anila Christy D. M	Religious Representative	Member
9	Mr. Paul Raj	Industrial Representative	Member
10	Dr. Vinu	Laity Representative	Member

Functions and responsibilities of the Governing Council

- To control the financial affairs of the college and to approve the annual and supplementary budgets.
- To formulate the general plan and policies of the college.
- To approve the infrastructure development of the institution.
- To make, amend or revoke bye-laws and regulations for the management of the college and its affairs.

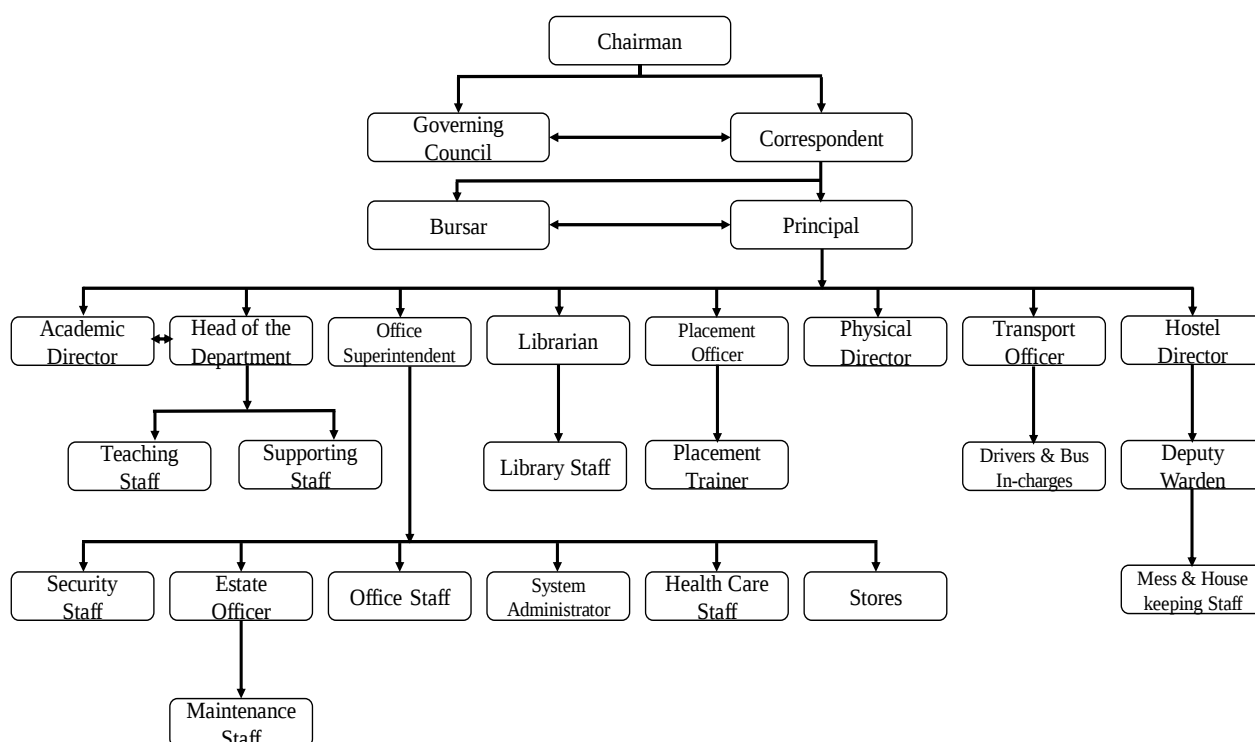


Figure 10.1.2.a: Governing Council Organization Chart

Academic Planning Council

Academic Planning council meets once in every two months and on need basis whenever requires. All the academic matters were discussed in the council and necessary actions will be taken in this regard.

The Academic Planning council has the following responsibilities:

- To finalize all academic related matters including the preparation of academic calendar, result analysis of internal and university examinations etc.
- Making Policies and sub committees on all matters related to teaching, research and development programs.
- Responsible for assuring quality including academic integrity, assessment and research output.
- All disciplinary actions will be executed by the council.

Members of Academic Planning council

Table 10.1.2.e: Academic Planning Council in CAY (2019-20)

SI No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs. T. PriyaViji	HOD/S&H	Member Recording Secretary
4	Dr.V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech./ IQAC coordinator	Member
6	Dr.D.R. Anand Rejilin	HOD/Civil	Member
7	Mr. P.Anish John Paul	HOD/EEE	Member
8	Mrs. Dr.D.Dhanya	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mr.S.Arun	Staff Secretary	Member

Table 10.1.2.f: Academic Planning Council in CAYm1 (2018-19)

SI No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs. T. PriyaViji	HOD/S&H	Member Recording Secretary
4	Dr.V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech./ IQAC coordinator	Member
6	Dr.D.R. Anand Rejilin	HOD/Civil	Member
7	Mr. P.Anish John Paul	HOD/EEE	Member
8	Mrs. Dr.D.Dhanya	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mr.S.Arun	Staff Secretary	Member

Table 10.1.2.g: Academic Planning Council in CAYm2 (2017-18)

Sl No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs. M.Jeba Priya	HOD/S&H	Member Recording Secretary
4	Dr. V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech / IQAC coordinator	Member
6	Dr. D.R.Anand Rejilin	HOD/Civil	Member
7	Mr. M.Anish John Paul	HOD/EEE	Member
8	Mr. Ashwin G.Singerji	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mrs. M.V.Sonia Vinni Parrot	Staff Secretary	Member

Table 10.1.2.h: Academic Planning Council in CAYm3 (2016-17)

Sl No	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chair Person
2	Dr.N.Austin	Academic Director	Member
3	Mrs.M.Jeba Priya	HOD/S&H	Member Recording Secretary
4	Dr. V.Suresh	HOD/ECE	Member
5	Dr.D.Rajeev	HOD Mech. / IQAC coordinator	Member
6	Dr.D.R. Anand Rejilin	HOD/Civil	Member
7	Mr. M.Anish John Paul	HOD/EEE	Member
8	Mr. Ashwin G.Singerji	HOD/CSE	Member
9	Sr. Ancy Mathew	OS	Member
10	Dr.G.Prince	Librarian	Member
11	Mr.R.Leo Bright Singh	PRO	Member
12	Mrs. M.V.Sonia Vinni Parrot	Staff Secretary	Member

IQAC

Internal Quality Assurance Cell (IQAC) meets once in every three months and on need basis when ever required.

Responsibilities:

- Development and execution of quality benchmarks/parameters for the various academic and administrative programs of the College.

- Facilitating the creation of a learner-centric environment for quality education and faculty improvement to adopt the required knowledge and technology for participatory teaching and learning process.
- Arrangement of feedback responses from students, parents and other stakeholders on quality-related institutional programs.
- Dissemination of information on the various quality parameters of higher education and to conduct periodic auditing in the departments.
- Documentation of the various programmes /activities of the institution, leading to quality improvement.

Members

Table 10.1.2.i: IQAC in CAY (2019-20)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R.Anand Rejilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mrs.Dr.D.Dhanya	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP, ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor, Annai Builders, Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr.Prince F M	Student, III year CSE	Member-Student
21	Dr.D.Rajeev	HOD,Mech	Co-ordinator, IQAC

Table 10.1.2.j: IQAC in CAYm1 (2018-19)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R.Anand Rejilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mrs.Dr.D.Dhanya	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP, ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor, Annai Builders, Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr.Amruthya S. Nair	Student, II year Mech.	Member-Student
21	Dr.D.Rajeev	HOD,Mech	Co-ordinator, IQAC

Table 10.1.2.k: IQAC in CAYm2 (2017-18)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R. Anand Regilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mr.Ashwin G Singergi	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech / PRO	Member
10	Mrs.P.S.Jeba	AP,ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor, Annai Builders, Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr.Sobin Solomon	Student, III year Civil	Member-Student
21	Mr. J. Bright Brabin Winsley	AP/ Civil	Co-ordinator, IQAC

Table 10.1.2.I: IQAC in CAYm3 (2016-17)

Sl.No.	Name	Designation	Role
1	Dr.A.Lenin Fred	Principal	Chairperson
2	Fr.Alex Kumar	Bursar	Management Representative
3	Dr.N.Austin	Academic Director	Member
4	Dr.V.Suresh	HOD,ECE	Member
5	Dr.D.R.Anand Rejilin	HOD,Civil	Member
6	Mr.M.Anish John Paul	HOD,EEE	Member
7	Mr.Ashwin G Singergi	HOD,CSE	Member
8	Mrs.M.Jeba Priya	HOD,S&H	Member
9	Mr.R. Leo Bright Singh	AP,Mech /PRO	Member
10	Mrs.P.S.Jeba	AP,ECE	Member
11	Mr.I.Jackson Thanga Roy	AP,Mech	Member
12	Mrs.L.T.Herlin	AP,CSE	Member
13	Mr.G.L.Abishek	AP,Civil	Member
14	Mr.J.R.Aldous Huxley	AP,EEE	Member
15	Mrs.R.K.Shanmuga Priya	AP,S&H	Member
16	Mrs.L.R.Bindu	AP,S&H	Member
17	Mr.P.Rajendra Babu	Chief Administrator, Fathima Public School,Parassala	Member-Local Society
18	Mr.A.Raj	Proprietor, Annai Builders,Azhiyamandapam	Member- Industry
19	Mr.Jaison Johnson	MD., TISAT, Cochin	Member- Alumni
20	Mr. Fredin A S Givo	Student, III year CSE	Member-Student
21	Mr. J. Bright Brabin Winsley	AP/ Civil	Co-ordinator, IQAC

Anti Ragging Committee

- The college has an Anti-Ragging committee; the members from different departments are selected to monitor any ragging activities in the campus. The students facing any such circumstances/ any source of ragging were requested to immediately report to any of the committee members. The Committee meets twice in a year.
- All the squad members are made as conveners of a particular day in a week with around 10-12 teaching/non-teaching members assisting them.

- Critical points are identified in the campus and during the lunch break time (12:30 PM to 1:15 PM) according to their allotted duty on a particular day, faculties go to monitor the area in which they were allotted.
- Another committee monitors the first year block, canteen, college bus, store, etc.

Members

Table 10.1.2.m: Anti Ragging Committee Members

Sl.No	Name	School	Designation	Role
1	Mr.R.S.Vinoth	S&H	A/P	Coordinator
2	Dr.N.Austin	Mech	Academic Director	Member
3	Mr.Sam J.Palson	Physical Director	PD	Member
4	Mr.S.Stanly Jino	Men's Hostel	Deputy Warden	Member
5	Mr.R.Rajesh	Men's Hostel	Deputy Warden	Member
6	Sr.Leena Mathew	Women's Hostel	Deputy Warden	Member
7	Sr.Navin	Women's Hostel	Deputy Warden	Member
8	Sr.Annamal	Counsellor	Counsellor	Member
9	Dr.D. Rajeev	Mech	HOD/Mech	Member
10	Dr. D.R.AnandRejilin	Civil	HOD/Civil	Member
11	Dr.V.Suresh	ECE	HOD/ECE	Member
12	Dr.D.Dhanya	CSE	HOD/CSE	Member
13	Mr. M.Anish John Paul	EEE	HOD/EEE	Member
14	Mrs.M.Jeba Priya	H&S	HOD/S&H	Member
15	Mr.Ajesh V.S	Mech	Student	Member
16	Ms.Nitha Mohan	CSE	Student	Member

Committee against Sexual Harassment of Women

Roles and Responsibilities of the Committee

- To safeguard the rights of female students, to give proper guidance to the students in need, to provide a platform for listening to complaints regarding sexual harassment.
- To take initiative to conduct classes, awareness program for boys and girls to ensure a rapport among students in the campus and for the overall development as a successful person.
- The Committee meets once in every Semester.

Table 10.1.2 .n: Members of Committee against Sexual Harassment of Women

Sl.No	Members Name	School	Designation	Role
1	Dr.A.Seema	S&H	A/P	Convenor
2	Mrs.P.S.Jeba	ECE	A/P	Member
3	Mrs. L R Bindhu	H&S	A/P	Member
4	Mrs. D.S.Manjoram	Civil	A/P	Member
5	Mrs. Shobana	CSE	A/P	Member
6	Mrs. T.C.Belicita Charles	EEE	A/P	Member
7	Mrs. C.S.Sudha	Office	Receptionist	Member
8	Mrs. Prema	CSE	Lab assistant	Member
9	Mrs. S. Vnitha	MIDS	Social Worker	Member

Discipline Committee

As per the instruction of the Academic planning council it is the responsibility of the committee to maintain the overall discipline of the Campus. Discipline Committee is constituted to assist the principal to enquire about the complaint and submit the report to the Principal. The committee meets once in every month.

Table 10.1.2.o: Discipline Committee Members

Sl.No	Name	School	Designation	Role
1	Mr.Sam J.Palson	Physical Director	PD	Coordinator
2	Mr.P.Anto Paulin Merinto	Mech	A/P	Member
3	Mr.J.M.Aravind	ECE	A/P	Member
4	Mr.G.Jein Jenish	Civil	A/P	Member
5	Mr.R.S. Vinoth	H&S	A/P	Member
6	Mr.S.Stalin	EEE	A/P	Member

10.1.2. B Service Rules Procedures and Policies

The service rules are published by the management and it will be revised from time to time as and when required. The Recruiting and promotion procedure of faculty members is as per AICTE Norms. The details of the Service Rules and Policy Manual are available in our institute website.

Published service rules web link:marephraem.edu.in/service-rule.pdf/

10.1.2.C Minutes of meeting and action taken report

Table 10.1.2.p: Details of committees meeting

Name of the Committee	Number of Members	Functions and Responsibilities	Frequency of meeting	Attendance of the latest meeting (2020-2021)
Governing Council	14	The highest level of decision maker with the authority to form the policy and govern the institution.	Twice in a year	14
Academic Planning Council	12	• Monitors and coordinates all the academic related activities of the institution and to promote quality research. • Encourage extension and community services to install community social responsibilities among students.	Once in every two months	11
IQAC	21	• Develop and execute the quality benchmarks for the various academic and administrative programs of the College and documentation of the same. • Facilitating the creation of a learner-centric environment for quality education and faculty improvement. • Arrangement of feedback responses on quality-related institutional programs. • Dissemination of information on the quality parameters of higher education and to conduct periodic auditing in the departments.	Once in every three months	19
Anti Ragging committee	16	• To ensure compliance with the directions of the honorable supreme court of India at institute level. • To prohibit any conduction by any student/ students whether by words spoken / written / by an act which has the effect of teaching, treating or handling.	Twice in a year	15
Disciplinary Committee	8	• To help maintain discipline in the college campus. • To enforce dress code among the students. • To monitor the movement of the students	Once in a month	7

		in order to prevent indiscipline and misbehaviors in the campus. • To assist the anti-ragging committee in preventing ragging of any form in the campus.		
Committee against Sexual Harassment of Women	9	• To safeguard the rights of female students, to give proper guidance to the students in need and to provide a platform for listening the complaints regarding sexual harassment.	Once in a semester.	8

Table 10.1.2.q: Sample minutes and action taken

Name of the Committee	Sample minutes	Action taken
Governing council	1. Fr. Josephin Raj, Correspondent and Ex officio secretary of the Council presented the previous meeting report and financial report. The same was approved by the council. He also briefed the action taken based on the report. 2. Members are requested to offer their valuable comments and suggestions for improvement of the institution in all spheres 3. The following points are discussed Members appreciated the Efforts of the Principal and Team for taking the efforts for establishing ACIC Mar Ephraem incubation forum in the College Premises and granted permission to go ahead with the activities related to the same. 4. Members reviewed the budget utilization for the year 2019-2020 5. Members appreciated the principal and the academic team for their consistent efforts. 6. Staff should be motivated to register for online courses as a part of continuous improvement. 7. Members expressed their happiness on the research activities happening in the college	i. Financial Statement for the year 2019-20 is approved ii. NewGen IEDC building is Opened iii. Staff were encouraged to register for online FDP iv. The staff has not registered for PhD. were motivated to apply for the same.

Academic Planning Council	Preparation of Academic Calendar for the year 2020-21 was discussed. Staff were encouraged to register for online FDP The staff has not registered for PhD. Should be encouraged to register for the same. Decision is made to conduct the Technical symposium at the department level	Academic Calendar is prepared Informed to all the teaching staff to do online FDP conducted by reputed organizations. The staff have not registered for PhD. were motivated to apply through the respective Head of the departments. Departments were informed and the same was executed.
IQAC	The meeting began with the opening remarks of the IQAC coordinator. Discussed about the question paper pattern. All departments were directed to submit their question paper format to IQAC Discussed about the online feedback submitted by the students. Departments are requested to motivate their students to publish papers in indexed journals	All departments are directed to submit their question paper format to IQAC Students are informed to Submit the online feedback Students were motivated to publish papers in indexed journals
Disciplinary committee	It was found that some of the students had angry arguments among themselves near to the library for a simple issue between John Prabhakar of third year Mechanical Engineering and R.Rexcily Rijo of second year Electronics and communication Engineering .	The committee members conducted an inquiry and the students were severely warned.
Anti Ragging committee	Anti-ragging Committee meeting conducted at Principal office by the Anti-ragging committee members. It is decided to prepare the Anti ragging committee Affidavit for the first year students	Anti ragging committee Affidavit is prepared for first year students and their parents.

10.1.3. Decentralization in working and grievance redressal system (10)

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

Administrative Setup within the college

For the smooth functioning of the institute the following powers have been delegated among the following members. Their responsibilities and administrative powers are listed below.

Correspondent

- The Ex officio Secretary of the governing body
- Responsible for framing general policy matters of the institute in consultation with Governing Body (GB).
- Responsible for the implementation of decision taken in the GB.
- Appointing authority of all staff in the institute.
- Have the power to take disciplinary action against any staff in the institute on the basis of the recommendation of the discipline committee.
- Co-ordinate the preparation of annual plan and budget with the help of the Principal, Bursar, Office Superintendent and present it to the Governing Council for approval.
- Responsible for the infrastructure development of the Institute.

Bursar

- Assist the Correspondent for the finance management of the Institute.
- Custodian of liquid cash of the institute and verify the cash on a daily basis.
- Render all necessary help to the Correspondent for the management of the Institute.
- Assist the Correspondent to prepare annual plan and budget of the institute.

Principal

- Responsible for managing the faculty and technical staff in day to day work .
- Head of the college and responsible for maintaining high academic standards
- Maintain discipline among staff and students with help of Academic Director and HOD's.
- Liaison with AICTE/University/Government.
- President of the Parents Teachers Association.
- Coordinate the student admissions and all programmes conducted within the college.
- Responsible for conducting Internal/University examinations and forwarding the required academic data to the university.
- Prepare Human resource requirement of faculty and technical staff in various departments in consultation with concerned HOD's and place the same before the Governing Council through the Correspondent.

Academic Director

- Responsible for the smooth conduct of the Teaching Learning Process
- Responsible for the faculty development activities
- Maintaining the discipline among the staff and students

Head of the Department

- Responsible for the smooth conduct of the department
- Ensure the discipline of staff and students within the department
- Submit the budget proposal and take initiative for the all the purchase activities.

Office Superintendent

- Managing office, supply stocks and placing orders preparing regular administrative report
- Responsible for management of all non teaching staffs (office staff, gardeners, security etc).
- will be in charge of sending and receiving all official correspondence
- Has to establish the work priorities, delegate work to the office support staff and ensure deadlines are met and procedures are followed.
- To look after the maintenance of services

Placement Officer

- Responsible for entire placement activities of the Institute.
- Mediator between Institute and companies.
- Responsible for conducting various placement training for the students in the Institute.

Table 10.1.3.a: Faculty assigned for taking the Additional/ Administrative responsibilities

S.No	Name of the member of faculty	Basic academic designation	Additional / Administrative responsibility
1.	Dr.N.Austin	Professor of Mechanical Engineering	Academic Director
2.	Dr.D.Rajeev	Professor of Mechanical Engineering	HOD, Mech. Engg.
3.	Dr.V.Suresh	Professor of ECE	HOD, ECE
4.	Dr.D.R.Anand Rejilin	Associate Professor of Civil Engineering	HOD, Civil
5.	Dr.D.Dhanya	Associate Professor of CSE	HOD, CSE
6.	Mr.M. Anish John Paul	Assistant Professor of EEE	HOD, EEE
7.	Mrs.M.Jeba Priya	Assistant Professor of S&H	HOD, S & H
8.	Mr.Sam J. Palson	Physical Director	Physical Director
9.	Mr.Charles Dyson	Assistant Professor of Civil Engineering	Placement Officer
10.	Mr.Beschi Selvan S.L.	Assistant Professor of Mechanical Engineering	Transport Officer

B. The Mechanism and Composition of Grievance Redressal Cell

Grievance redressal mechanism

- If a complaint is received from a student, it will be handed over to the Principal immediately.
- Principal in consultation with Academic Planning council will hand over the complaint to the grievance redressal committee.
- The committee will enquire about the complaints within the stipulated time and the report will be handed over to the Principal.
- The committee report will be discussed in the college council and the council will decide the disciplinary action.
- The action will be informed to the parents also.

- The parents along with the accused students have to meet the Principal before the student is permitted to attend the class.
- If there is issue of serious manhandling the matter will be reported to the police.
- In the case of academic grievances the matter will be handed over to the Head of Department for enquiry and report.
- Principal will suggest suitable measures based on the report.

Table 10.1.3.b: Composition of Grievance Redressal Cell

Members Name	Department	Designation	Role
Dr.A.Seema	S&H	A/P	Convenor
Mr. S.Vijayakumar	Mech	A/P	Member
Mrs.D.S. Manju Ram	Civil	A/P	Member
Mr. S.Stanly Jino	Hostel	Deputy Warden	Member
Mrs. Suja	Chemistry	Lab Assistant	Member

C. Action taken report of grievance redressal cell

Table 10.1.3.c: Details of Action taken report of grievance cell

Nature of grievance	Description of grievance reported	Action taken
Academic/ infrastructure	• Few girl students expressed their discomfort and they feel insecure while using social networking websites. • Some girl students are found disturbed by peer Pressure.	1. Awareness were given to female students about the usage of social networking websites 2. Special Counseling is arranged.

10.1.4. Delegation of Financial Powers(10)

In order to improve and reform financial administration in the college, powers have been delegated to Principal , Heads of the Departments and placement officer for facilitating expeditious decision making and for speedy implementation of schemes.

A. Financial Power Delegated

Table 10.1.4: Financial Power Delegated

Sl.No	Designation	Financial Power
1	Principal	RS.1,00,000/-
2	HOD	RS.20,000/-
3	Placement Officer	RS.20,000/-
4	Cells and Committee	RS.5000/-

B. Utilization of Financial Power

All the financial matters were dealt by the management. In order to face the urgent unavoidable needs financial power are delegated to the Principal, HOD, Placement Officer and the in charges of various cells and committees. For unexpected urgent needs the money within the financial power will be utilized by the respective in charges and the same will be submitted later to the management with necessary details for approval.

10.1.5 Transparency and availability of correct / unambiguous information in public domain(5)

A. Information on the policies, rules, processes to be made available on website

Available on the college website.

Transparency

The college takes the following measures to render transparency.

Academic and Administrative Transparency:

- The decisions taken and the issues discussed in academic planning council are informed to the faculty in the meetings of the various departments by Heads of Departments.
- All the decisions taken by the statutory bodies pertaining to particular items are informed to the staff.
- Attendance of students has to be posted every month by the class advisor and the consolidated attendance is further displayed on the notice boards for the information to the students. Student's attendance is also sent to the respective parents periodically.
- The Mandates are presented on the website including the academic regulations and syllabus.
- All the information about the college is available on the college website.
- Making all the relevant documents available at the time of inspection to several bodies Including Social welfare departments, university committees, AICTE & NBA.

B. Dissemination of the information about student, faculty and staff

- Information on policies, rules, and processes are disseminated to the stakeholders through the college website.
- All the issues are discussed in the meetings of the Heads of Departments, which are held periodically and the minutes of which are circulated to all the departments.
- All the important informations are sent to the faculty, staff and students.
- There are Notice Boards in all the blocks through which information is disseminated to the staff and students and most significant circulars are sent to the classrooms.

10.2. Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Summary of Current financial 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 & CFYm4

Table 1- CFY 2020-21

Total Income				Actual Expenditure (till 31-3-2021)			Total No.of Students 1143
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
385.51	134.2	91.75	42.09	602.94	91.56	264.93	0.84

Table 2- CFYm1 2019-20

Total Income				Actual Expenditure (till 31-3-2020)			Total No.of Students 1302
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
440.22	262.99	70.60	58.54	837.95	24.87	87.08	0.73

Table 3- CFYm2 2018-19

Total Income				Actual Expenditure (till 31.3.2019)			Total No.of Students 1383
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
786.37	54.87	66.10	16.42	732.44	100.75	48.45	0.64

Table 4- CFYm3 2017-18

Total Income				Actual Expenditure (till 31.3.2018)			Total No.of Students 1511
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
659.46	64.77	53.47	12.45	730.03	238.79	42.75	0.67

Table 5- CFYm4 2016-17

Total Income				Actual Expenditure (till 31.3.2017)			Total No.of Students
							1566
Fee	Govt.	Grants	Other Sources (Specify)	Recurring Including Salaries	Non Recurring	Special Projects/Any other Specify	Expenditure per student
805.78	77.37	59.1	11.92	672.12	203.53	43.04	0.59

Items	Budgeted in 2020-2021	Actual Expenses in 2020-2021	Budgeted in 2019-2020	Actual Expenses in 2019-2020	Budgeted in 2018-2019	Actual Expenses in 2018-2019	Budgeted in 2017-2018	Actual Expenses in 2017-2018	Budgeted in 2016-2017	Actual Expenses in 2016-2017
Infrastructure Built-Up	100.00	86.97	20.00	18.14	100.00	98.96	200.00	196.79	180.00	195.56
Library	5.00	1.38	2.50	0.42	1.00	1.00	5.00	5.09	0.20	0.58
Laboratory Equipment	3.45	3.21	6.00	6.31	2.00	1.80	37.00	36.91	5.62	6.17
Laboratory consumables	0.15	0.11	0.88	0.86	2.00	2.11	2.25	1.58	1.18	1.22
Teaching and non-teaching staff salary	364.62	269.75	354.00	336.43	380.36	460.71	330.75	384.95	315.00	335.48
Maintenance and Spares	14.74	14.32	6.00	7.89	10.00	11.20	20.00	22.99	10.00	9.05
R&D	270.30	265.70	84.43	87.71	50.00	49.45	47.00	47.47	2.50	3.45
Training and Travel	13.50	7.69	8.00	7.69	10.00	8.15	10.00	8.58	8.00	7.04
Miscellaneous Expenses*	0	0	0	0	0	0	0	0.10	0	0.61
Administrative Expenses	74.68	71.77	105.00	106.44	130.00	126.38	180.00	185.33	200.00	191.36
Financial Charges	128.50	121.78	120.00	123.17	120.00	121.78	120.00	121.78	120.00	116.90
Total	974.94	842.68	706.81	695.05	805.36	881.54	952.00	1,011.56	842.50	867.42

10.2.1 Adequacy of budget allocation (10)

The budget is progressively increased every year to meet the purchase and servicing of equipment, replacement of condemned and creation of new labs to cope up with the upgraded syllabus

A. Quantum of budget allocation for three years

S. No.	2020-2021 (Lakhs)	2019-2020 (Lakhs)	2018-2019 (Lakhs)	2017- 2018 (Lakhs)	2016-2017 (Lakhs)
1	974.94	706.81	805.36	952.00	842.50

B. Justification of budget allocated for three years

The yearly budget is prepared based on the needs & requirements of the College and Various Departments by taking into consideration of purchase of laboratory & infrastructure developments, Students, faculty & staff requirements and promotions. Budget estimates will be prepared by each department and will be reviewed in HODs meeting with the Principal. After having deliberations, prepared budget made altered in the departments and forwarded to the Principal for preparing final budget at college level. The final budget is sent to Management for approval and sanction. The Management will approve after passing the same in the Governing council meeting. The allocation of budget and utilization for the last three years is adequate.

10.2.2. Utilization of allocation funds (15)

A. Budget utilization for three years

Years	Budgeted in (Lakhs)	Expenses in (Lakhs)	Utilization of funds %
Budget in CFY (2020 - 2021)	974.94	842.68	86.43
Budget in CFY m1(2019 - 2020)	706.81	695.05	98.37
Budget in CFYm2 (2018 - 2019)	805.36	881.54	100
Budget in CFY m3(2017 - 2018)	952.00	1,011.56	100
Budget in CFY m4 (2016 - 2017)	842.50	867.42	100

10.2.3. Availability of the audited statements on the institute's websites (5)

A. Availability of Audited statements on website: Available

10.3. Program Specific budget Allocation, Utilization(30)

Table 1- CFY 2020-21

Total Budget:		Actual Expenditure (Till.....)		Total No of Students -229
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
68,000	99,62,500	64,312	96,44,246	42,395

Table 2- CFY m1 2019-20

Total Budget:		Actual Expenditure (Till.....)		Total No of Students -336
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
1,50,000	78,51,000	1,62,839	86,13,080	26118.81

Table 3- CFY m2 2018-19

Total Budget:		Actual Expenditure (Till.....)		Total No of Students-388
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
56,100	90,33,250	50,477	89,51,555	23201.11

Table 4- CFY m3 2017-18

Total Budget:		Actual Expenditure (Till.....)		Total No of Students-455
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
11,14,000	1,14,20,000	11,11,363	1,16,75,341	28102.65

Table 5- CFY m4 2016-17

Total Budget:		Actual Expenditure (Till.....)		Total No of Students 457
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per Student
1,64,000	99,69,250	1,80,057	96,01,800	21404.5

Items	in Budgeted 2020-2021	Actual Expenses in 2020-21	in Budgeted 2019-2020	Actual Expenses in 2019-2020	in Budgeted 2018-2019	Actual Expenses in 2018-2019	in Budgeted 2017-2018	Actual Expenses in 2017-2018	in Budgeted 2016-2017	Actual Expenses in 2016-2017
Laboratory Equipment	68,000	64,312	150000	162839	56100	50477	1114000	1111363	164000	180057
Software	0	0	0	0	0	0	0	0	0	0
Laboratory Consumable	2,500	2,204	23000	22194	56000	59164	67750	47531	34450	35603
Maintenance and Spare	3,00,000	2,86,901	150000	203613	280500	314321	602250	692206	291800	264103
R & D	55,00,000	53,23,298	207800	226343	402700	1387228	1415300	1429461	73000	100680
Training and Travel	1,60,000	1,54,069	200000	198452	280550	228648	301200	258284	233500	205446
Administrative Expenses	15,00,000	14,37,912	540000	592538	701350	696219	9033500	9247858	9336500	8995969
Financial Charges	25,00,000	24,39,862		9	0	4				
Total	1,00,30,500	97,08,558	800100	877592	908935	900203	1253400	1278670	1013325	978185

10.3.1 Adequacy of budget allocation(10)

A. Quantum of budget allocation for three years

Table10.3.1 : Quantum of budget allocation

S.No	2020- 2021	2019- 2020	2018- 2019	2017- 2018	2016 - 2017
1	1,00,30,500	80,01,000	90,89,350	1,25,34,000	1,01,33,250

B. Justification of budget allocation for three years

The yearly budget is prepared based on the needs & requirements of the Department by taking into consideration of purchase of laboratory & infrastructure developments, Students, faculty & staff requirements and promotions. Budget estimates will be prepared by the department and will be reviewed in HODs meeting with the Principal. After having deliberations, prepared budget made altered in the departments and forwarded to the Principal for preparing final budget at college level. The final budget is sent to Management for approval and sanction. The Management will approve after passing the same in the Governing council meeting. The allocation of budget and utilization for the last three years is adequate.

10.3.2 Utilization of allocation funds (20)

Table 10.3.2 Budget Utilization Summary

Years	Budgeted	Expenses	Utilization of funds %
Budget in CFY (2020 - 2021)	1,00,30,500	97,08,558	96.79
Budget in CFY m1(2019 - 2020)	8001000	8775920	100
Budget in CFYm2 (2018 - 2019)	9089350	9002032	100
Budget in CFY m3(2017 - 2018)	12534000	12786703	100
Budget in CFY m4 (2016 - 2017)	10133250	9781858	96.53

10.4. Library and Internet (20)

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

Mar Ephraem library is one of the kind spacious buildings with all the modern amenities that plays a pivotal role in all the aspects of academics and other related sources of enrichment in the quantity and quality of knowledge of all the stake holders related to it, comprises of a wide range of academic resources such as books, periodicals, online databases, e-journals, back volumes, CDs/DVDs, project reports, question bank etc. periodicals, online databases, e-journals, back volumes, CDs/DVDs, project reports, question bank etc.

Table 10.4.1.a: Library Details

Features	Description
Physical Area of Library	Total area of library : 1004 Sq. M
	Periodicals, E-Library and Reading area : 576 Sq M
	Reference and Stack Room : 428 Sq M
	Number of seats in reading space : 125
	Number of seats in E-Library : 25
Library Holdings	Total No. of volume of Books : 13342
	Total No. of Title of Books : 4625
	Total No. of Journals & Magazines : 43
	Total No. of E-Journals (Delnet) : 400
	Total No. of CDs/DVDs : 552
	Total No. of News Papers : 8
	E-Books : 310
Library Facilities	OPAC facility
	E-library facility (NPTEL Videos & CD/DVD database)
	Back Volumes
	Project Reports
	Question Bank (Hard/Soft Copies)
	Inter Library Loan facility (through DELNET)
	Reprographic facility
	Scanning and Printing facility
	Wi-Fi facility
Library Automation	Library is fully automated with Info Library Software with Barcode facility
	Users can be accessed to library resources and circulation status through OPAC
Library Membership	DELNET - New Delhi
	National Digital Library of India
Library Timings	On Working Days : 8.30 AM to 7.00 PM
	Weekend : 8.30 AM to 6.00 PM
	On Holidays : Library remains Closed
Library Staff Details	1. Dr. G.PRINCE, Ph.D. , Librarian
	2. V. SANTHI, M.L.I.Sc., Library Assistant
	3. R. Raja Bright Singh, Attender

Table 10.4.1.b: Book Details

Year	Number of new Titles added	Number of new editions added	Number of new Volumes added
CAYm4 (2016-2017)	1014	71	1610
CAYm3 (2017-2018)	427	95	786
CAYm2 (2018-2019)	204	44	341
CAYm1 (2019-2020)	205	31	273
CAY (2020-2021)	62	23	68

Table 10.4.1 c: Subscribed Journal Details

Year	Print Journals	E- Journals
CAYm4 (2016-2017)	28	-
CAYm3 (2017-2018)	50	105 (Proquest e-Journals)
CAYm2 (2018-2019)	36	400 (DELNET Journals)
CAYm1 (2019-2020)	43	400 (DELNET Journals)
CAY (2020-2021)	47	400 (DELNET Journals)

Table 10.4.1 (d) Library expenditure on books, magazines/journals, and miscellaneous contents

Year	Expenditures (Rs.)				
	Books	Journal/Magazine Subscription (Print Version)	E- Journal Subscription	News papers	Misc. Contents
CAYm4 (2016-2017)	82570	56975	-	14238	-
CAYm3 (2017-2018)	751697	117255	83000	15730	163910
CAYm2 (2018-2019)	130687	80650	13570	15780	778
CAYm1 (2019-2020)	117232	116400	13570	17300	170
CAY (2020-2021)	29696	95833	13570	1985	-

10.4.2 Internet

Name of the Internet Providers: BSNL & Shine Plus

A. Available bandwidth

- BSNL – 40 Mbps (NMEICT leased line) for LAN connections
- Shine plus – 40 Mbps (Private leased line) for Wi-Fi connections

Total Bandwidth: **80 Mbps**

B. Wi-Fi Availability

- Fully Wi-Fi campus

Wi-Fi connections for all the staff and students is provided after registering the MAC address.

C. Internet access in Labs, classrooms, library and offices of all Departments

- Office, library and all Labs as well as offices of all departments are provided with internet connection through LAN
- All class rooms are connected with internet through Wi-Fi

D. Security Mechanism

- Fort iGATE 200 D firewall is used as the security mechanism for all the LAN and Wi-Fi connections.

PART C

DECLARATION BY THE INSTITUTION

Declaration

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

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

Head of the Institute

Name : Dr.A.Lenin Fred

Designation : Principal

Signature :

Prof. Dr. A. Lenin Fred, M.E., Ph.D.
PRINCIPAL

MAR EPHRAIM COLLEGE
OF ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAYUVILAI, MARTHANDAM - 629 171,
KANYAKUMARI DISTRICT, TAMILNADU, INDIA.

Seal of The Institution :



Place : Marthandam

Date : 28-01-2022