A Self Study Report

Submitted to

National Assessment and Accreditation Council

NAAC

Bangalore

By

Mar Ephraem

College of Engineering and Technology
Malankara Hills, Marthandam, 629 171
Tamil Nadu, India.

Mar Ephraem

College of Engineering & Technology

Catholic Diocese of Marthandam

Malankara Hills, Elavuvilai - 629 171, Kanyakumari Dist. Tamil Nadu, S.India.

Prof. Dr. A. Lenin Fred, M.E., Ph.D.
Principal

Approved by AICTE - No : 07 / 08 / TN / E&T / 2009 / 11
Affiliated to Anna University, Chennai - No: AUTVL / Affliation: 2009-10 / 716

Ref.No;MarEphraem:NAAC-CY-1:01   27.04.2017

Covering Letter

The Director,
National Council and Accreditation Council
P.O. Box No:1075,
Nagarbhavi,
Bangalore – 560072,
Karnataka, India.

Subject : Upload of Self –Study Report for Re-Accreditation Cycle-I on College
Website www.marephraem.edu.in

Ref: Institutional Track ID TNCOGN27458

Respected sir,

With reference to your letter No: TNCOGN27458 dated 26.04.2017 regarding submission of Self- Study Report. I am pleased to inform your good self that the college has uploaded the Self Study Report (SSR) on its website www.marephraem.edu.in in PDF form.

It is a matter of great satisfaction for me to submit the Self- Study Report of Mar Ephraem College of Engineering and Technology, Marthandam (Tamilnadu), for Accreditation Cycle – I for your kind consideration. This Accreditation Report has been prepared as per the guidelines of the NAAC manual for Self-Study Report for Affiliated colleges. The preparation exercise has provided us an opportunity to review and analyze the instructional progress of the college.

The peer team is welcome to visit the college on any date after August 2017.

With warm greetings.

Place;Elavuvilai
Date:27.04.2017

Prof.Dr.A. Lenin Fred,
Principal PRINCIPAL
MAR EPHRAEM COLLEGE OF
ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAVUVILAI, MARTHANDAM-629 171
KANYAKUMARI DISTRICT, TAMILNADU, INDIA.

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.

Ph : 04651 - 271111, 272158, Fax : 04651 - 273111, web : www.marephraem.edu.in, E-mail : marephraem@gmail.com.

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Ref.No;MarEphraem:NAAC-CY-1:02

27.04.2017

Declaration by the Head of the Institution

I certify that the data included in this Self Study Report (SSR) is true to the best of my knowledge. This SSR has been prepared by the institution after internal discussions and no part thereof has been outsourced.

I am aware that the peer team will validate the information provided in this SSR during the peer team visit.

Place;Elavuvilai
Date:27.04.2017

Prof.Dr.A. Lenin Fred,
Principal.
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MAR EPHRAEM COLLEGE OF
ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAVUVILAI, MARTHANDAM-629 171
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Affiliated to Anna University, Chennai - No: AUTVL / Affliation: 2009-10 / 716

Certificate of Compliance

(Affiliated/ Constituent / Autonomous Colleges and Recognized Institution)

This is to certify that **Mar Ephraem College of Engineering and Technology** fulfils all norms.

1. Stipulated by the affiliating University and /or
2. Regulatory Council / Body [such as UGC, NCTE, AICTE, MCI, DCI, BCI etc] and
3. The affiliation and recognition [if applicable] is valid as on date.
   AICTE Recognition No: Southern/1-3324991023/2017/EOA dated:30.03.2017
   Anna University Affiliation No:02/AFFLN/CAI/TVL/AU/2016-17/9614
   dated:13.05.2016

In case the affiliation recognition is conditional, then a detailed with regard to compliance of conditions by the institution will be sent.

It is noted that NAAC 's accreditation , if granted , shall stand cancelled automatically, once the institution loses its University affiliation or Recognition by the Regulatory Council, as the case may be.

In case the undertaking submitted by the institution is found to be false then the accreditation given by NAAC is liable to be withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the college website.

Date :27.04.2017

Place:Elavuvilai,

Prof. Dr.A.Lenin Fred,
Principal.
PRINCIPAL
MAR EPHRAEM COLLEGE OF
ENGINEERING & TECHNOLOGY
MALANKARA HILLS, ELAVUVILAI, MARTHANDAM-629 171
KANYAKUMARI DISTRICT, TAMILNADU, INDIA.

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Ph : 04651 - 271111, 272158, Fax : 04651 - 273111, web : www.marephraem.edu.in, E-mail : marephraem@gmail.com.

Mar Ephraem

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela MargVasant Kunj, New Delhi-110067
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Southern/1-3324991023/2017/EOA

Date: 30-Mar-2017

To,

The Principal Secretary
(Higher Education) Govt. of Tamil Nadu,
N. K. M. Bld. 6th Floor Secretariat,
Chennai-600009

Sub: Extension of approval for the academic year 2017-18

Ref: Application of the Institution for Extension of approval for the academic year 2017-18

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2016 notified by the Council vide notification number F.No.AB/AICTE/REG/2016 dated 30/11/2016 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-6547531	Application Id	1-3324991023
Name of the Institute	MAR EPHRAEM COLLEGE OF ENGINEERING AND TECHNOLOGY	Institute Address	MALANKARA HILLS, ELAVUVILLAI, KANYAKUMARI, ELAVUVILAI, KANYAKUMARI, Tamil Nadu, 629171
Name of the Society/Trust	DIOCESE OF MARTHANDAM	Society/Trust Address	MALANKARA CATHOLIC COLLEGE CAMPUS, MARIAGIRI, KALIAKKAVILAI,KULAPPURAM,KANYAKUMARI,Tamil Nadu,629153
Institute Type	Unaided - Private	Region	Southern

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable
Opted for Conversion from degree to diploma	No	Opted for Conversion from diploma to degree	No	Conversion (degree to diploma or vice-a-versa) Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2017-18

Application Id: 1-3324991023			Course	Full/Part Time	Affiliating Body	Intake Approved for 2016-17	Intake Approved for 2017-18	NRI Approval status	PIO / FN / Gulf quota/ OCI/ Approval status	Foreign Collaborarion/Twining Program Approval status
Program	Shift	Level								
ENGINEERIN	1st Shift	POST	APPLIED ELECTRONICS	FULL TIME	Anna University,	18	18	NA	NA	NA

Application Number: 1-3324991023
Note: This is a Computer generated Report.No signature is required.

Printed By : AE4019161

Page **1** of 3
Letter Printed On:20 April 2017

Mar Ephraem

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela MargVasant Kunj, New Delhi-110067
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

G AND TECHNOLOGY		GRADUATE			Chennai					
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	COMPUTER SCIENCE & ENGINEERING	FULL TIME	Anna University, Chennai	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MANUFACTURING ENGINEERING	FULL TIME	Anna University, Chennai	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	Anna University, Chennai	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Anna University, Chennai	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Anna University, Chennai	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	Anna University, Chennai	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Anna University, Chennai	120	120	NA	NA	NA

The above mentioned approval is subject to the condition that
MAR EPHRAEM COLLEGE OF ENGINEERING AND TECHNOLOGY
shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Application Number: 1-3324991023
Note: This is a Computer generated Report.No signature is required.

Printed By : AE4019161

Mar Ephraem

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

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PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Prof. A.P Mittal
Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   Shastri Bhawan 26, Haddows Road
   Chennai - 600 006, Tamil Nadu

2. **The Director Of Technical Education**,**
   Tamil Nadu

3. **The Registrar**,**
   Anna University, Chennai

4. **The Principal / Director,**
   MAR EPHRAEM COLLEGE OF ENGINEERING AND TECHNOLOGY
   MALANKARA HILLS,
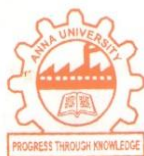
   ELAVUVILLAI,

   KANYAKUMARI,
   ELAVUVILAI,KANYAKUMARI,
   Tamil Nadu,629171

5. **The Secretary / Chairman,**
   DIOCESE OF MARTHANDAM
   MALANKARA CATHOLIC COLLEGE CAMPUS, MARIAGIRI, KALIAKKAVILAI,
   KULAPPURAM,KANYAKUMARI,
   Tamil Nadu,629153

6. **Guard File(AICTE)**

Note: ** - Approval letter copy will not be communicated through post/email. However, provision is made in the portal for downloading Approval letter through Authorized login credentials allotted to concerned DTE/Registrar.

Application Number: 1-3324991023
Note: This is a Computer generated Report.No signature is required.

Printed By : AE4019161

Page **3** of **3**
Letter Printed On:20 April 2017

Mar Ephraem

ANNA UNIVERSITY
CHENNAI - 600 025, INDIA

Phone : (O) 22352161, 22357004
Fax : 91-44-2235 1956
Gram : ANNATECH
E-mail : registrar@annauniv.edu

REGISTRAR

Lr No. 02 /AFFLN/CAI//TVL/AU/2016-17/9614   Date: 13-05-2016

To

The Principal,
Mar Ephraem College of Engineering and Technology,
Malankara Hills, Elavuvillai,
Kanyakumari District-629 171.

Sir,

Sub: AU - AFFILIATION - Provisional Affiliation for the existing course(s) / New course(s) / variation in intake - U.G. / P.G. for the academic year 2016-17 Granted - Reg.

Ref: 1. Your application for affiliation for the academic year 2016-17
2. AICTE Approval for the academic year 2016-17.

I am to inform that under the provisions of Section 7.6.1 of the Statutes for affiliation of Anna University, Chennai, **Provisional Affiliation** for the continuation of the existing course(s) / new course(s) / variation in intake in the existing course(s) is granted for the following U.G / P.G. courses with the sanctioned intake mentioned against each course for the academic year **2016-17** at **Mar Ephraem College of Engineering and Technology,Malankara Hills, Elavuvillai, Kanyakumari District-629171**.

Sl. No.	Degree	Course(s)	Sanctioned Intake	
			2015-16	2016-17
1	B.E.	Civil Engineering	120	120
2	B.E.	Computer Science and Engineering	60	60
3	B.E.	Electrical and Electronics Engineering	60	60
4	B.E.	Electronics and Communication Engineering	120	120
5	B.E.	Mechanical Engineering	120	120
6	M.E.	Applied Electronics	18	18
7	M.E.	Computer Science and Engineering	18	18
8	M.E.	Manufacturing Engineering	18	18

The above said Provisional Affiliation is being granted subject to the fulfillment of the conditions mentioned below:

- Production of Originals of AICTE / COA / DGS approval and all other related documents for verification, whenever demanded by the University.

- Verification by a Committee towards the fulfillment of the conditions mentioned above and the continued fulfillment of the requirements for the above-mentioned course(s) as per the norms and standards of AICTE / University and the laboratory requirements as per the curricula and syllabi of Anna University, Chennai for the above courses. In the event of any violation/infringement of the above said conditions and / or the provisions of Anna University, Chennai Act / Statutes / Regulations, AICTE Act, norms & standards / regulations / guidelines or any other law being in force, suitable action including suspension / withdrawal of affiliation of course(s) may be initiated against the college.

- Students should not be admitted for the above course(s) for the next academic year without obtaining the order of continuation of provisional affiliation for the next academic year from the University.

The Provisional Affiliation is granted without prejudice to the right of the University of requiring production of certificate required under Section 37-B of TAMILNADU Reforms (LC) Act 1961 subject to the decision of the Hon'ble High Court of Madras in W.A. No. 3454 / 2002 batch and W.A. No. 3482 / 2002 batch.

Yours sincerely,

REGISTRAR
REGISTRAR
ANNA UNIVERSITY
CHENNAI-600 025

Copy to:

1.   The Director of Technical Education, DOTE campus, Chennai - 600 025.

2.   The Regional Officer, Southern Regional Office, AICTE, 26,Haddows Road, Shastri Bhawan,Chennai 600 006.

3.   Master file.

Mar Ephraem

ABSTRACT

Technical Education - Self Financing Engineering Colleges – Mar Ephraem College of Engineering and Technology, Malankarahills, Elavuvilai, Kanyakumari District - Conferment of minority status for a period of five years from 2009-2010 to 2013-2014 - Orders - Issued.

Higher Education (J2) Department

G.O.(1D) No.184

Dated: 31.08.2010
திருவள்ளுவராண்டு 2041
ஆவணி 15

Read:

1. G.O.(Ms) No.270, Higher Education Department, dated.17.6.1998.
2. G.O.(Ms) No.386, Higher Education Department, dated.11.12.2006.
3. The Commissioner of Technical Education (i/c), letter No.53393/H1/2009-11, dated 21.04.2010.

ORDER:

In the G.O. first read above, orders were issued framing certain guidelines relating to the conferment of minority status to all Educational/Professional Institutions. In the G.O. second read above, orders were issued for conferment of minority status to self financing engineering colleges for five years instead of one year, given earlier.

2. The Commissioner of Technical Education, Chennai in his letter third read above has sent proposal for consideration of conferring Minority Status to Mar Ephraem College of Engineering and Technology, Malankarahills, Elavuvilai, Kanyakumari District run by Diocese of Marthandam Trust, Bishops House, Vettuvenni, Marthandam-629 165 for a period of five years from 2009-2010 to 2013-2014.

3. The Government have carefully examined the proposal of the Commissioner of Technical Education, Chennai and decided to accept the same. Accordingly, the Government direct that Mar Ephraem College of Engineering and Technology, Malankarahills, Elavuvilai, Kanyakumari District run by Diocese of Marthandam Trust, Bishops House, Vettuvenni, Marthandam-629 165 be granted minority status for a period of five years from 2009-2010 to 2013-2014.

(Order of the Governor)

K.GANESAN
Principal Secretary to Government.

To
The Commissioner of Technical Education, Chennai-25.
The Managing Trustee, Diocese of Marthandam Trust, Bishops House, Vettuvenni, Marthandam - 629 165. (through the Commissioner of Technical Education, Chennai-25)
The Vice Chancellor, Anna University, Chennai-25 / Tirunelveli.
The Secretary, Tamil Nadu Engineering Admission, Anna University, Chennai -25.
The Special Personal Assistant to Minister (Higher Education), Chennai-9
SF/SC.

// Forwarded / By Order //

Section Officer.

Track ID-TNCOGN27458   College Name-Mar Ephraem   Page 1 of 4
college of engineering and
technology

IEQA SUBMISSION DATE-26/04/2017

INSTITUTIONAL ELIGIBILITY FOR QUALITY ASSESSMENT(IEQA) QUESTIONNAIRE

1 COLLEGE DETAILS			
Name of the college	Mar Ephraem college of engineering and technology	Year of establishment	2009
Location of the college	RURAL		
2 ADDRESS			
Address	malankara hills, elavuvilai, kanyakumari district	City	Other
State	Tamil Nadu	Pin Code	629171
Website	www.marephraem.edu.in	E-Mail	marephraem@gmail.com
Phone STD Code	04651	Phone No	271111
Fax STD Code	04651	Fax	273111
3 HEAD OF THE INSTITUTION			
Name	Dr. a.lenin fred	Designation	principal
Status of appointment	PERMANENT		
4 CONTACT DETAILS OF HEAD OF THE INSTITUTION			
Phone std code	04651	Phone number	272158
Fax std code	04651	Fax	273111
Mobile	+919443483072	E-Mail	leninfred.a@gmail.com

5 DOES THE COLLEGE FUNCTION FROM		
a. MAIN CAMPUS		
	AREA OF THE CAMPUS IN ACRES	TOTAL BUILT UP AREA IN sq.m.
OWN BUILDINGS	12.1	43818.658
RENTED BUILDINGS	0.0	0.0
b. SATELLITE CAMPUS		
	AREA OF THE CAMPUS IN ACRES	TOTAL BUILT UP AREA IN sq.m.
OWN BUILDINGS	0.0	0.0
RENTED BUILDINGS	0.0	0.0

6 NAME OF THE UNIVERSITIES TO WHICH THE COLLEGE IS AFFILIATED OR CONSTITUENT			
University1	Anna University, Chennai	Other	
Nature of relationship with the university	AFFILIATED	If affiliated, status of affiliation	TEMPORARY
University2		Other	
Nature of relationship with the university		If affiliated, status of affiliation	
University3		Other	
Nature of relationship with the university		If affiliated, status of affiliation	

7 STATUTORY PROFESSIONAL REGULATORY COUNCIL(S)	
Does the college offer any programme recognized by any Statutory Professional Regulatory Council(s)?	yes

Programmes offered	B.E - CIVIL ENGINEERING, B.E - COMPUTER SCIENCE AND ENGINEERING, B.E - ELECTRICAL & ELECTRONICS ENGINEERING, B.E - ELECTRONICS & COMMUNICATION ENGINEERING, B.E - MECHANICAL ENGINEERING, M.E - COMPUTER SCIENCE AND ENGINEERING, M.E - APPLIED ELECTRONICS, M.E - MANUFACTURING ENGINEERING	Name of the Regulatory Council(s)	AICTE

8 COLLEGE FUNCTIONING

Type of college	CO-EDUCATION	Time of functioning	DAY COLLEGE
Nature of funding	SELF-FINANCING	Management	MINORITY

9 MANAGEMENT/TRUST DETAILS

Name of the Management	DIOCESE OF MARTHANDAM TRUST	Recognition under Ugc Act.1956	2f

10 MANAGEMENT/TRUST OF THE COLLEGE IS REGISTERED UNDER

Society's registration Act of 1960	yes	Relevant Act of the respective state Govt.	
Any other(please specify)			

11 NUMBER OF DEGREES OFFERED BY THE COLLEGE

UG	5	PG	3
Research	0	Others	0
Total	8		

12 DETAILS OF DEGREES OFFERED(B.A., M.A., B.Com., M.Com., B.Sc., M.Sc., M.Phil., Ph.D., etc.,)

Arts		Commerce	
Science		Education	
Health Science		Engineering & Technology	B.E, M.E
Management		Others	
Is the college opting for Assesment & Accreditation of Teacher Education department separately?			no
Is the college opting for Assesment & Accreditation of Physical Education department separately?			no
Number of departments			6

13 TOTAL NUMBER OF STUDENTS(EXCLUDING THOSE IN SELF-FINANCING PROGRAMMES)

	UG		PG		M.Phil/Ph.D		Value Added Courses(Certificate/Diploma)	
	Male	Female	Male	Female	Male	Female	Male	Female
General	0	0	0	0	0	0	0	0
SC/ST	0	0	0	0	0	0	0	0
OBC	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Grand Total	0							

14 TOTAL NUMBER OF STUDENTS IN SELF-FINANCING PROGRAMMES

	UG		PG		M.Phil/Ph.D		Value Added Courses(Certificate/Diploma)	
	Male	Female	Male	Female	Male	Female	Male	Female
General	691	164	23	10	0	0	0	0
SC/ST	5	0	0	1	0	0	0	0
OBC	452	134	4	30	0	0	0	0
Total	1148	298	27	41	0	0	0	0
Grand Total	1514							
Total number of students in the college		1514						

15 NUMBER OF TEACHING,TECHNICAL AND ADMINISTRATIVE STAFF

	Permanent		Temporary		Total	
	Male	Female	Male	Female	Male	Female
Teachers with PG	65	48	0	0	65	48

Teachers with M.Phil.	1	20	0	0	1	20
Teachers with Ph.D	9	2	0	0	9	2
Teachers with NET/SLET	0	0	0	0	0	0
Technical staff	11	5	0	0	11	5
Administrative staff	4	6	0	0	4	6
Support staff	26	18	6	0	32	18
Total no. of teachers	75	70	0	0	75	70

16 SUPPORT SERVICES

Number of titles of books	3700
Number of journals	50
Number of e-resources	105
Does the college have a registered Alumni Association?	yes
Does the college have a functional Placement Cell?	yes

17 UNIT COST OF EDUCATION

Unit Cost=Total annual expenditure divided by no. of students enrolled	55248.86
Unit cost calculated excluding salary component	34603.88

18 MENTION FIVE ACADEMIC MILESTONES OF THE COLLEGE

First	EXCELLENCE IN TEACHING AND LEARNING
Second	PROMOTING RESEARCH CULTURE AND ATTRACTING FUNDED PROJECTS
Third	INCUBATING STARTUPS
Fourth	COLLOBORATION WITH REPUTED INTERNATIONAL INSTITUTES
Fifth	CONDUCTION OF INDUSTRIAL RESEARCH AND DEVELOPEMENT ACTIVITES

Section 2: Institutional Data Questionnaire	
1. The college has in place a structured internal quality assurance system for ensuring continuous quality monitoring or improvement	YES
2. Library has reading room facilities for students and faculty separately	YES
3. The college uses the students feedback for analysis and improvement purposes	YES
4. Basic computer literacy is ensured for all students in a structured way such as add on courses	YES
5. The college provides financial aid to at least 10% of the general category students	YES
6. The college has a mechanism for counselling students	YES
7. An annual in-house academic calendar is prepared and implemented by the college	YES
8. The college has a mechanism for addressing grievances of students and staff	YES
9. The college promotes scholarly activities of the faculty beyond the syllabus	YES
10. Internet facility is available in the college for faculty and students	YES
11. The college campus is differently-abled friendly	YES
12. The college has a formal mechanism to promote research activities of its students and faculty.	YES
13. The college has adequate sports facility	YES
14. The college has developed a short term and a long term plan for its development and growth	YES
15. Percentage of classrooms equipped with LCD projector	>50%
16. Percentage of teachers using audio-visual aids including computer-aided teaching	<20%
17. The average number of extension activities organised by the college during the last four years	>6
18. Average percentage utilization of annual allocated funds for the last four years	>75%
19. Maintenance expenditure on infrastructure as percentage of the total annual budget	<2%
20. Average pass percentage of graduating students	50-70%
21. Computer students ratio	<1:30
22. Percentage of faculty benefitted from UGC and other staff development programmes (average of last four years)	<5%
23. Percentage of permanent teachers with Ph.D. qualification	<20%
24. Percentage of classes taught by guest faculty or temporary teachers	<20%
25. Students teacher ratio	<30:1
26. Percentage of faculty positions filled against sanctioned posts	>80%
27. Number of add-on courses conducted by the college	<3
28. Awards received by the students in sports and cultural activities in the last four years	None
29. Percentage of teachers having on-going or completed research projects in the last four years	<10%
30. Number of academic seminars or conferences or workshops that the college has organized (average of last four years)	>4

31. Number of Journals subscribed in the library National or International	>20
32. Percentage of students admitted against the reservation category as per Government of India norms	50-75%

Certificate
This is to certify that the information given in the IEQA application is true to the best of my knowledge and ability and if the same is found to be false or misleading, I authorize NAAC to initiate any action which it deems fit including withholding the outcome of the Peer Team Visit.

INDEX

Abbreviations

AE	-	Applied Electronics
AICTE	-	All India Council for Technical Education
ASIC	-	Application Specific Integrated Circuit
B.E	-	Bachelor of Engineering
B.Tech	-	Bachelor of Technology
BOE	-	Board of Examiners
BOS	-	Board of Studies
C.E	-	Civil Engineering
CAE	-	Continuous Assessment Exam
CAM	-	Computer Aided Manufacturing
CAS	-	Career Advancement Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CBS	-	Content beyond Syllabus
CD/DVD	-	Compact Diskette, Digital Video Disk
CGPA	-	Cumulative Grade Point Average
CSE	-	Computer Science Engineering
CSIR	-	Council of Scientific and Industrial Research
D.Litt	-	Doctor of Letters
D.Sc	-	Doctor of Science
DA	-	Dearness Allowance
DBT	-	Department of Biotechnology
DSIR	-	Department of Scientific and Industrial Research
DST	-	Department of Science and Technology
ECE	-	Electronics and Communication Engineering
EEE	-	Electrical and Electronic Engineering
EPF	-	Employees Provident Fund
FDP	-	Faculty Development Programme
FPGA	-	Field Programmable Gate Array
GATE	-	Graduate Aptitude Test in Engineering
GD	-	Group Discussion
GMAT	-	Graduate Management Admission Test
GUI	-	Graphical User Interface
HEI	-	Higher Education Institution
HoS	-	Head of the School
HRD	-	Human Resource Development
ICSSR	-	Indian Council of Social Science Research
ICT	-	Information and Communications Technology
IEDC	-	Innovation and Entrepreneurship Development Center
IELTS	-	International English Language Testing System
IEQA	-	Institutional Eligibility for Quality Assessment
IISC	-	Indian Institute of Science
INFLIBNET	-	Information and Library Network
IPR	-	Intellectual Property Rights
IQAC	-	Internal Quality Assurance Cell
IQAS	-	Internal Quality Assurance System
ISO	-	International Organization for Standardization
ISR	-	Institutional Social Responsibility

ISRO	-	Indian Space Research Organization
IT	-	Information Technology
LAN	-	Local Area Network
LCD	-	Liquid crystal Display
LoI	-	Letter of Intent
M.E	-	Master of Engineering
M.Phil	-	Master of Philosophy
MCQ	-	Multiple Choice Questions
MHRD	-	Ministry of Human Resource and Development
MIS	-	Management Information system
MNC	-	Multinational Corporation
MOOC	-	Massive Open Online Course
MOU	-	Memorandum of Understanding
NA	-	Not Applicable
NABL	-	National Accreditation Board for Testing and Calibration Laboratories
NBA	-	National Board of Accreditation
NGO	-	Non Governmental Organization
NKN	-	National Knowledge Network
NME-ICT	-	National Mission on Education through Information and Comn Tech
NPTEL	-	National Programme on Technology Enhanced Learning
NRI	-	Non Resident Indian
NSS	-	National Service Scheme
OBC	-	Other Backward Caste
OER	-	Open Educational Resources
OMR	-	Optical Mark Recognition
OPAC	-	Online Public Access Catalogue
PEO	-	Program Educational Objectives
PG	-	Post Graduate
Ph.D	-	Doctor of Philosophy
PO	-	Program Outcome
PTR	-	Peer Team Report
QIC	-	Quality Improvement Cell
R&D	-	Research and Development
RRC	-	Red Ribbon Club
RTOS	-	Real Time Operating System
SJR	-	SCImago Journal Rank
SLET	-	State Level Eligibility Test
SNIP	-	Source Normalized Impact per Paper
SOC	-	System on Chip
ST	-	Scheduled Tribes
SWOC	-	Strengths, Weaknesses, Opportunities and Challenges
TA	-	Travelling Allowance
TCI	-	Theme Centered Interaction
TL&FD	-	Teaching Learning and Faculty Development
UG	-	Under Graduate
UGC	-	University Grants Commission
UPS	-	Uninterrupted Power Supply
VLSI	-	Very Large Scale Integration
WHO	-	World Health Organization
Wi-Fi	-	Wireless Fidelity
YRC	-	Youth Red Cross

Mar Ephraem

PREFACE

Mar Ephraem College of Engineering and Technology which has its parent organization as Marthandam Diocese has a traditional hold from the very first century. It is indeed, firmly believed and traditionally accepted that St.Thomas, one of the Apostles of Jesus Christ had come to India in 52 A.D and established churches to enlighten with Evangelism, thus, the civil district of Kanyakumari is privileged to have the "ARAPPALLY" at Thiruvithancode. Though there was a Christian community in Kanyakumari right from the beginning of the 1st century, it could not prevail to be a sizeable Christian community.

On 20th September 1930, Metropolitan Archbishop, Servant of God, Mar Ivanios together with a group of four people of the Malankara Church paved the way for a reunion with the catholic community. As an essence, with dedicated works of priests, the dioceses and the congregation, many parish missions of Malankara started to germinate in the district of Kanyakumari. The Diocese was guided in a well-organized manner by the bishops His Beatitude Archbishop Benedict Mar Gregorios, His Beatitude Cyril Mar Baselios and His Beatitude Moran Mor Cardinal Cleemis Catholicos. After rigorous efforts by the Bishops, the fourth Diocese of Malankara Catholic Church came into existence and, His Grace Most Rev. Lawrence Mar Ephraem assumed the office as the Bishop of Marthandam Diocese. After a keen observation of the society in and around Marthandam, the bishop took initiatives to increase the literacy and the quest for higher education.

Thus Mar Ephraem College of Engineering and Technology as a 'Brain Child' of the first Bishop of Marthandam Diocese got its shape. The college was established in 2009, with The motto as 'Erga Lumen', which literally means 'Towards Light', at Elavuvilai, serving access towards almost every part of the district. The founder of the college was His Grace Most Rev. Yoohanon Mar Chrysostom and the founder Correspondent was Very Rev. Fr. Prem Kumar. The activities of Mar Ephraem College of Engineering and Technology are centered within the key points of 'Excellence in Science and Technology', 'Holistic Development', 'Value Based Education', 'Inclusiveness' & 'Community Orientation'. It is to be hailed that His Grace Most Rev. Dr. Vincent Mar Paulos is serving as the Chairman of the institution and Very Rev. Fr. Josephin Raj is guiding the college as the Correspondent. Currently, Mar Ephraem has taken its place in serving the society with higher professional education around and across the borders of the district. The institution provides five programs at undergraduate level and three programs at postgraduate level with more than 1500 students on roll.

EXECUTIVE SUMMARY

CRITERIA ONE: CURRICULUM PLANNING AND IMPLEMENTATION

Mar Ephraem has a solemn consideration when it comes to curriculum. The institution adheres to the curriculum put-forth by Anna University to which the institution is affiliated. In this token, the institution shows meticulous efforts in conveying the curriculum to the students. Apart from this, the institution finds a number of habitude to feed the students with a curriculum salted up with 'content beyond syllabus'. The institution takes up regular feedback from all the stakeholders and industrial partners and thus ensuring a need based educational system. As a crux, the institution finds the so called gap which takes the curriculum far from the industrious standards. After a button down of potential gaps, the institution enriches the students with the content beyond syllabus with some sort of value added courses and some seminars from industrious people on the campus. In addition, the institution also practices the well formulated Plan, Develop, Check and Analyze cycle, by a proper bounce back from all the stakeholders. The institution raises its collar for a well-equipped campus, and, a well-trained faculty team, for its betterment in conveying the curriculum to the students.

CRITERIA TWO: TEACHING LEARNING AND EVALUTAION

Mar Ephraem accustoms an 'outcome based education' system, when it comes to teaching and learning methodologies. The students are familiarized about the outcome of the course and the program and towards the outcome for which they tend to learn the subjects. A clear follow up of the teaching methodologies, with ample feedback mechanism guarantees the teaching and learning process to its utmost best. The teaching learning activities are closely monitored by the class committee, academic planning committee and the top level management. The student progress report which holds a track of the academic performance of the student, is periodically evaluated and the slow learners are concentrated a 'bit' more to adopt with the curriculum, and thus, their competency is ensured.

CRITERIA THREE: RESEARCH, CONSULTANCY AND EXTENSION.

The institution has the fortuity to take up the pride on its achievements in research and development. The anthologies of online resources, tagged under the institutions name, is a

monition for the institutions feats in research and development. Every faculty in the campus is motivated vigorously to take up a research in their area of interest. Thus, providing a pool for research for faculty, it provokes the graduates and undergraduates in the campus to underlike Challenging research programs. Moreover, the unified approach of the institution is to identify potential problem by frequent interaction with the society and trying to address these problems with technology. The institution is being funded by prestigious funding agencies which include Department of Science and Technology (DST) & Indian Space Research Organization (ISRO). In addition, the institution has filed two patents for intellectual property development. To crown up, the institution is bestowed upon with adequate laboratory facility and wireless fidelity, which stimulates a research environment.

CRITERIA FOUR: INFRASTRUCTURE AND LEARNING RESOURCES.

The institution is fortunate to have a classy green campus, which is being packed up with facilities to ensure the blooming of an engineer and a researcher. The institution is centralized with a centralized library whose racks are being filled up with the writings of eminent personalities. The anthologies are diverse in its fields. In addition, the library tables are topped up with technical periodicals which inform about almost all technological updates across the globe. The laboratories are equipped with updated machineries which are on par with industrious standards. The students are allowed to use up the laboratories across the clock to practice their learned theories in the classrooms. To highlight, the classrooms are smart enough to shape up an engineer.

CRITERIA FIVE: STUDENT SUPPORT AND PROGRESSION

Mar Ephraem publishes its updated prospectus with all the needed information. The need for every student is given equal consideration. The students are administered with a properly structured 'mentoring system' where their every move in academic, personal and emotional are monitored very closely by a faculty who may be captioned as a 'mentor'. The mentor knows very well about his/her mentee and thus ensures his/her progress with his constrains, under due considerations. In addition, the institution offers and clears up the channel for securing scholarships from various governmental and non-governmental agencies. Thus, financially unsound students are given a chance for their inclusiveness. Moreover, special classes on competitive examinations, value added courses are in progress in the campus, to elevate competency of the students.

CRITERIA SIX: GOVERNANCE, LEADERSHIP AND MANAGEMENT.

The institution adopts a bottom up approach, wherein, the policies are framed by the suggestions and necessity of the stakeholders. The governance of the institution is well structured and the top level management extends ample support to the plans formulated by the academic planning committee. In addition, the leadership quality in every faculty is stimulated in every possible accordance. The internal quality assurance cell has a keen eye on every move of the institution, thus ensuring every activity taken, has something to do, with the fulfillment of the institution's formulated vision and mission. The administration is in smooth move with all the plans put-forth by the individual schools and the academic planning committee.

CRITERIA SEVEN: INNOVATIONS AND BEST PRACTICES.

The Institution initiates the students' activity with concern. The students of the institution have coined up a group and through which they frequently do charity works. Mar Ephraem Manna is a welfare organization organized by the students that feeds up the people who are in need of 'food'. To delineate about the best practices, the institution is open handed to help the community when there is a quest. In addition, mentoring system ensures appropriate support for students in their personal level. As a crown, we adopt a 'peer learning' methodology wherein the students club up among themselves and the so called fast learners help the so called slow learners to fasten up in their performance. In the peer learning methodology, the students practice the theory which they have heard in the classroom in the lab or in the field in a lively manner.

SWOC ANALYSIS OF MAR EPHRAEM

STRENGTHS

- Mar Ephraem is owned and managed by the Catholic Diocese of Marthandam, which has been in the field of education for the past decades, and has a strong Vision.
- An ambience most suited for Academic Pursuits with eco-friendly and green initiatives such as Rainwater Harvesting, use of Solar Energy, Biogas Plant and Energy Management.
- Dedicated and committed faculty with aptitude for research
- The management is assisted by a well-experienced and committed Governing Board, IQAC and Academic Planning Council.
- The management plans strategically its policies and procedures to fulfill its Mission and Vision.
- Transparent administration policies
- Adaptation of Outcome based Teaching and Learning process
- Participatory approach in planning, implementation, monitoring and evaluation of action plans.
- Better career advancement schemes for staff.
- One to one attention and attachment with stakeholders as "Mar Ephraem Family"
- Decision making process in Objective, Analytical and corrective approach.
- Structured interdisciplinary research culture in campus.
- Multi expertise team in campus
- Progressive admission and result status.
- Dynamic young researchers attracting more funded projects.

WEAKNESS

- The location of the college is remote from the nearby town.
- College is in a rural environment with very few industries nearby.
- Non autonomous status leads to delay in decision makings on curriculum planning and design.
- Entry level of students admitted is academically poor.

OPPORTUNITIES

- ➢ People in the rural village are given opportunity for higher education.
- ➢ More MoU initiated with reputed institutes.
- ➢ More number of alumni, well placed in reputed industries and hence acting as a bridge for Industrial networking.
- ➢ Inadequate expertise and dynamic work force in the field of research in government institutes.
- ➢ Good book of records in ISRO, IPRC Mahendragiri.
- ➢ Proposed government schemes like harbor and infrastructure development in the District.
- ➢ Orientation of skills to promote entrepreneurship.

CHALLENGES

- ➢ Less passion on traditional engineering learning among students.
- ➢ More number of colleges in the district.
- ➢ Poor quality and skill attributes of engineers graduated recently.
- ➢ Foreign policies, regarding employment overseas.
- ➢ Poor quality of Higher Secondary grade output.
- ➢ More attraction towards short term courses.
- ➢ More distance from capital cities attracts less placement opportunities.
- ➢ Attracting more academically bright students.

SECTION B : PREPARATION OF SELF-STUDY REPORT

1. **Profile of the Affiliated/Constituent College**

1. Name and Address of the College:

Name:	*MAR EPHRAEM* *COLLEGE OF ENGINEERING AND TECHNOLOGY*	
Address:	*Malankara Hills, Elavuvilai, Marthandam, Kanyakumari District*	
City:*Marthandam*	Pin : 629171	State : *Tamil Nadu*
Website:	*www.marephraem.edu.in*	

2. For Communication:

Designation	Name	Telephone With STD code	Mobile	Fax	Email
Principal	Prof. Dr. A. Lenin Fred	O : 04651-271111 R : 04651-257372	9443483072	04651-270158	*leninfred.a@gmail.com*
Vice Principal	Prof. Dr.N. Austin	O : 04651-271111 R : 9443808582	9443808582	04651-270158	*austin@marephraem.edu.in*
Steering Committee Coordinator	Mr.J.Bright Brabin Winsley	O: 04651-271111 R : 9443376177	9443376177	04651-270158	*brightwinsley@gmail.com*

3. Status of the Institution : *Affiliated College*

4. Type of Institution :

    a. **By Gender**

     i.   For Men

     ii.   For Women

     iii. Co-education   ✔

    b. **By Shift**

     i. Regular   ✔

     ii. Day

     iii. Evening

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5.   It is a recognized minority institution?

Yes   ✔

No

If yes specify the minority status (Religious/~~linguistic~~/~~any other~~) and provide

documentary evidence.

Christian Minority

6. Sources of funding :

Government

Grant-in-aid

Self-financing   ✔

Any other

7.   a. Date of establishment of the college : *22.07.2009*

b. University to which the college is affiliated/or which governs the college (If it is a constituent college): *Anna University, Chennai*

c. **Details of UGC recognition:**

Under Section	Date, Month &Year	Remarks (If any)
i.2(f)	*03-03-2014*	*8-81/2013(CPP-1/C)*
ii.12(B)	*NA*	*NA*

(Enclose the Certificate of recognition u/s 2(f) and 12(B) of the UGC Act)

d.Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

AICTE Approval Details

Under Section/ clause	Academic Year	Recognition/Approval details Institution/Department Programme	Day, Month and Year (dd-mm-yyyy)
Engineering	*2016-2017*	*Southern/1-2811348710/2016/EOA*	*05.04.2016*
Engineering	*2015- 2016*	*Southern/1-2452501953/2015/EOA*	*02.04.2015*
Engineering	*2014-2015*	*Southern/1-2016891277/2014/EOA*	*04.04.2014*
Engineering	*2013-2014*	*Southern/1-1402587544/2013/EOA*	*04.04.2013*
Engineering	*2012-2013*	*Southern/1-686564311/2012/EOA*	*06.07.2012*

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Engineering	*2011-2012*	*Southern/1-415281971/2011/EOA*	*01.09.2011*
Engineering	*2010-2011*	*Southern Region/1-*	*23.08.2010*
Engineering	*2009-2010*	*07/08/TN/E&T/2009/11*	*22.07.2009*

(Recognition/approval letter enclosed)

8.   Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?

Yes ✔   No ☐

If yes, has the College applied for availing the autonomous status?

Yes ☐   No ✔

9.   Is the college recognized

a.   by UGC as a College with Potential for Excellence(CPE)?

Yes ☐   No ✔

If yes, date of recognition :………………(dd/mm/yyyy)

b.   for its performance by any other governmental agency?

Yes ☐   No ✔

If yes, Name of the agency……………………and

Date of recognition :……………………(dd/mm/yyyy)

10. Location of the campus and area in sq.mts:

Location*	Rural
Campus area insq.mts	*48966.76 Sq.mts*
Built-up area in sq.mts	*43818.658 Sq.mts*

(*Urban, Semi-urban, Rural, Tribal, HillyArea, Any others specify)

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11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.

➤ Auditorium/seminar complex with infrastructural facilities ☑

➤ Sports facilities

Volleyball, Table Tennis, Badminton, Football, Shuttle, and Basketball

    ➤ playground ☑

    ➤ Swimming pool ☒

    ➤ gymnasium ☑

➤ Hostel

    Boys' hostel

    i.   Number of hostels   1

    ii.   Number of inmates   515

    iii.   Facilities

[Common room, Newspapers& Periodicals (Tamil, English, Malayalam) Potable Drinking water, Generator, Security service, Ambulance, First Aid room, Chapel, Indoor games (Table tennis, Carrom, Chess, Treasure Hunt]

    Girls' hostel

    i.   Number of hostels   2

    ii.   Number of inmates   120

    iii.   Facilities

[Reading room, Newspapers (Tamil, English, Malayalam), Drinking water, Generator, Security service, First Aid room, Chapel]

    Working women's hostel   NIL√

    i.   Number of inmates

    ii.   Facilities (mention available facilities)

➤ **Residential facilities for teaching and non-teaching staff:** *The entire faculties are from local area; however sufficient guest rooms are available for any service requested.*

➤ **Cafeteria** ☑

➤ **Health centre** ☑

First aid, Inpatient, Outpatient, Emergency care facility, Ambulance,

Health centre staff

Qualified doctor	Full time [ ]	Part-time [✓]		
Qualified Nurse	Full time [✓]	Part-time [ ]		

➢ **Facilities like banking, post office, book shops**   [✓]

➢ **Transport facilities to cater to the needs of students and staff**   [✓]

➢ **Animal house**   [NA]

➢ **Biological waste disposal**   [✓]

➢ **Generator or other facility for management/regulation of electricity and voltage**   [✓]

➢ **Solid waste management facility**   [✓]

➢ **Waste water management**   [✓]

➢ **Water harvesting**   [✓]

12. Details of programmes offered by the college (Give data for current academic year)

SI. No.	Programme Level	Name of the Programme/ Course	Duration	Entry Qualification	Medium of instruction	Sanctioned/ approved Student strength	No.of students admitted
1	Under Graduate	Civil Engineering	4	+2, Diploma	English	120	112
2		Computer Science and Engineering	4	+2, Diploma	English	60	49
3		Electronics and Communication	4	+2, Diploma	English	120	25
4		Electrical and Electronics	4	+2, Diploma	English	60	38
5		Mechanical Engineering	4	+2, Diploma	English	120	120
6	Post Graduate	Applied Electronics	2	BE, B.Tech	English	18	18
7		Computer Science and Engineering	2	BE, B.Tech, M.Sc	English	18	10
8		Manufacturing Engineering	2	BE, B.Tech	English	18	17

13. **Does the college offer self-financed Programmes?**

Yes ☐ ✔   No ☐

If yes, how many? ☐ 8

14. **New programmes introduced in the college during the last five years if any?**

Yes	✔	No		Number	4

15. **List the departments: (respond if applicable only and do not list facilities like Library, Physical Education as departments, unless they are also offering academic degree awarding programmes. Similarly, do not list the departments offering common compulsory subjects for all the programmes like English, regional languages etc.)**

Faculty	Department	UG	PG	Research
Science	*NA*	*NA*	*NA*	*NA*
Arts	*NA*	*NA*	*NA*	*NA*
Commerce	*NA*	*NA*	*NA*	*NA*
Any Other Engineering	*B.E-Civil Engineering* *B.E-Computer Science and Engineering* *B.E-Electronics & Communication Engineering* *B.E-Electrical & Electronics Engineering* *B.E-Mechanical Engineering* *M.E- Applied Electronics* *M.E- Computer Science and Engineering* *M.E- Manufacturing Engineering*	*5*	*3*	*NA*

16. **Number of Programmes offered under (Programme means a degree course like BA, BSc, MA, M.Com…)**

a. **annual system** ☐ NIL

b. **semester system** ☐ ✔

c. **trimester system** ☐ NIL

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17.   Number of Programmes with

    a.   Choice Based Credit System   Nil

    b.   Inter/Multi-disciplinary Approach   Nil

    c.   Any other (specify and provide details)   Nil

18.   Does the college offer UG and/ or PG programmes in Teacher Education?

Yes [ ]   No [✔]

If yes,

    a.   Year of Introduction of the programme(s)…………………(dd/mm/yyyy) and

        number of batches that completed the programme [ ]

    b.   NCTE recognition details (if applicable)

        Notification

        No.:………………………………………

        Date: ……………………………(dd/mm/yyyy)

        Validity:………………………

    c.   Is the institution opting for assessment and accreditation of TeacherEducation

        Programme separately? Yes [ ]   No [ ]

19.   Does the college offer UG or PG programme in Physical Education?

Yes [ ]   No [✔]

If yes,

    a.   Year of Introduction of the programme(s)………………..(dd/mm/yyyy)

        and number of batches that completed the programme [ ]

    b.   NCTE recognition details(if applicable)

        Notification No.:……………………………

        Date: ……………………………(dd/mm/yyyy)

        Validity:……………………

    c   Is the institution opting for assessment and accreditation of Physical Education

        Programme separately?

        Yes [ ]   No [ ]

20. Number of teaching and non-teaching positions in the Institution

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC/University/ State Government	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yet to recruit	-	-	-	-	-	-	-	-	-	-
Sanctioned by the Management/ society or other authorized bodies Recruited	7	-	5	3	63	67	14	13	20	4
Yet to recruit	-	-	-	-	-	-	-	-	-	-

*M-Male*F-Female

21. Qualifications of the teaching staff :

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	-	-	-	-	-	-	-
Ph.D.	7	-	1	1	1	1	11
M.Phil.	-	-	1	1	0	19	21
PG	1	-	4	-	60	48	113
Temporary teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-
Part-time teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-

22. Number of Visiting Faculty/Guest Faculty engaged with the College. | 1 |

23. **Furnish the number of the students admitted to the college during the last four academic years.**

Categories	Year 1 (2016-17)		Year 2 (2015-16)		Year 3 (2014-15)		Year 4 (2013-14)	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	-	-	2	0	2	0	0	1
ST	-	-	-	-	0	0	0	0
OBC	106	21	104	39	118	35	104	40
General	184	29	157	38	195	48	159	49
Others	-	-	-	-	-	-	-	-

24. **Details on students enrolment in the college during the current academic year:**

Type of students	UG	PG	M.Phil.	Ph.D.	Total
Students from the same State where the college is located	588	35	-	-	-
Students from other states of India	858	33	-	-	-
NRI students	0	0	-	-	-
Foreign students	0	0	-	-	-
Total	1446	68	-	-	-

25. **Dropout rate in UG and PG (average of the last two batches)**

UG   3 .03%   PG   1.04%

26. **Unit Cost of Education**

(Unit cost=total annual recurring expenditure (actual) divided by total number of students enrolled)

(a) including the salary component   *Rs. 55,248.86*

(b) Excluding the salary component   *Rs. 34,603.88*

27. **Does the college offer any programme/s in distance education mode (DEP)?**

Yes [ ]   No [✔]

If yes,

a) Is it a registered centre for offering distance education programmes of another University?

Yes ☐   No ☑

b)   Name of the University which has granted such registration.

☐

c)   Number of programmes offered ☐

d)   Programmes carry the recognition of the Distance Education Council.

Yes ☐   No ☐

28.   Provide Teacher-student ratio for each of the programme /course offered

B.E. Civil Engineering - 1:15

B.E. Computer Science and Engineering -1:15

B.E. Electronics and Communication Engineering -1:15

B.E. Electrical and Electronics Engineering -1:15

B.E. Mechanical Engineering -1:15

M.E. Applied Electronics -1:12

M.E. Computer Science and Engineering -1:12

M.E. Manufacturing Engineering -1:12

29.   Is the college applying for

Accreditation: Cycle1 ☑   Cycle2 ☐   Cycle3 ☐   Cycle4 ☐

Re-Assessment: ☑

(Cycle1 refers to first accreditation and Cycle2, Cycle3 and Cycle4 refers to re-accreditation)

30.   Date of accreditation*(applicable for Cycle2, Cycle3, Cycle4 and re-assessment only)

Cycle1:………………(dd/mm/yyyy)   Accreditation

Outcome/Result…….....Cycle2:………………(dd/mm/yyyy)   Accreditation

Outcome/Result…….....Cycle3:………………(dd/mm/yyyy)   Accreditation

Outcome/Result………...

Kindly enclose copy of accreditation certificate(s) and peer team report(s) as an annexure.

31. Number of working days during the last academic year.

243 days

32. Number of teaching days during the last academic year

(Teaching days means days on which lectures were engaged excluding the examination days)

148 days

33.   Date of establishment of Internal Quality Assurance Cell (IQAC)

3ʳᵈ October 2016

34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC: NA

AQAR (i)………………(dd/mm/yyyy)

AQAR(ii)………………(dd/mm/yyyy)

AQAR(iii)………………(dd/mm/yyyy)

AQAR (iv) ………………(dd/mm/yyyy)

35. Any other relevant data (not covered above) the college would like to include. (Do not include explanatory/descriptive information: NA

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Criterion: I

Curricular Aspects

CRITERION I
CURRICULAR ASPECTS

1.1   Curriculum Planning and Implementation

1.1.1.   State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.

a. 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.

b. 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.

c.   GOALS:

1. To provide value based engineering education that produces engineers who are innovative entrepreneurial, globally competitive and vested with high values and understanding of their professional, social and ethical responsibilities.

2. To provide general, specific and soft skills to the engineers. To advance the knowledge and competence of engineers for a successful career and lifelong learning.

3. To initiate research activities focused on need based areas in engineering and technology which enhances creative and innovative endeavors and promote social development.

4. To motivate the engineers to participate in community activities that will serve as avenues for lab to land application of knowledge in engineering and technology.

5. To establish linkages and MoUs with National, International Governments, Industries and other Institutions in the areas of engineering education, research and extension services.

d. Dissemination process of the Vision, Mission and Objectives of the College to the Stake holders

The Vision, Mission and the goals of Mar Ephraem are conveyed to the stakeholders by all possible means which includes,

➢ The vision and mission statements are being cited in all media publications of the college, which encircles Website, Prospectus, Program Invitations, College Magazine,

Printed Stationeries, School Magazine & Newsletters and Mar Ephraem Informatica (MIS).

➢ The Vision and Mission statements are portrayed in the main reception area of the college and at strategic locations in each building. In addition, the same is being exhibited in prominent locations of every block.

➢ The mentioned dogmas are printed in the Faculty Assessment Record by which it is being sculpted in every faculty.

➢ The percept of the statements is also printed in the laboratory record notebooks of the students.

➢ On the day of stepping into the college, the students are provided with all the statements which includes Vision, Mission and Goals of the Institution, where they would be a stakeholder, and their significant responsibility to attain the same are elaborated by the Correspondent. The history of the college is also limned in addition.

➢ A pledge card with the Vision, Mission and Goals printed on it, is given to all students on the Fresher's day.

➢ The college commune formally with a letterhead with the Vision statement, and in doing so, the Vision of the college is expected to reach the borders of the campus.

➢ Any sort of induction or orientation program for faculty or students has its germinal session for annotating the Vision, Mission and Goal statements.

➢ To ensure that the parents get detailed glance of the dogmas, they are expounded in Parent-Teacher meetings and other important Socio-Cultural gatherings.

1.1.2 How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).
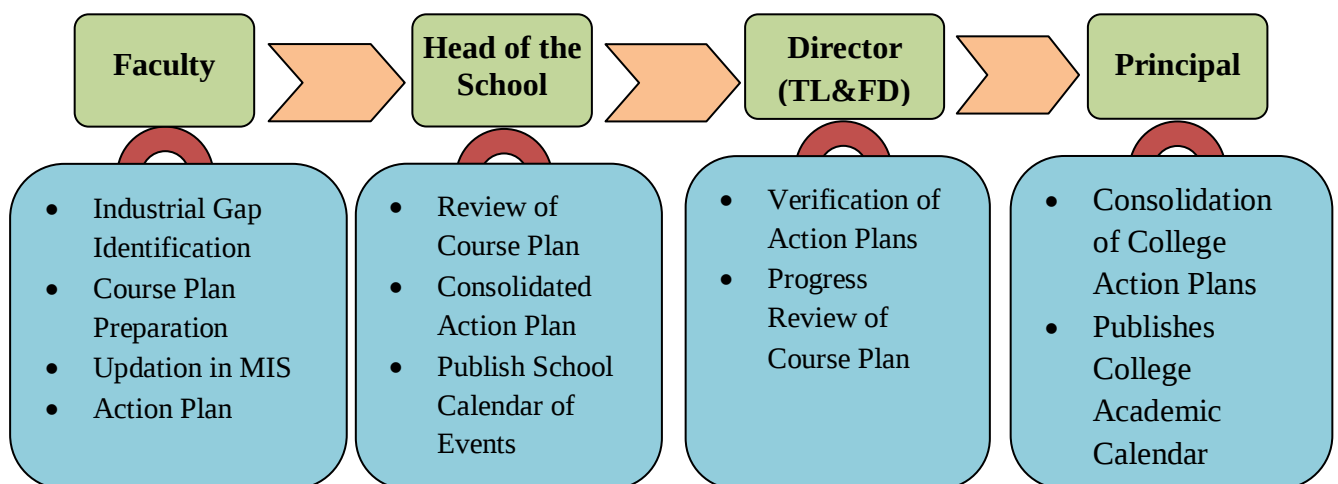
Figure: Development of Action plan

Mar Ephraem follows the curriculum prescribed by the Anna University. Mar Ephraem develops action plan for every semester and academic year, for the implementation of the curriculum, at every program level, in the school. They are validated by the Academic Planning Council before the start of every semester.

The action plans are developed and deployed at different levels given below,

Faculty:

➢ The course is allotted to a faculty as per course allocation procedure.

➢ The faculty shares the syllabus of the course along with its chain of courses to the industrial expert, "Industrial Partner".

➢ The Industrial Partner identifies the course - industrial gap for the course, the identified gap is added along with the course syllabus by the faculty as content beyond syllabus.

➢ The faculty plans the delivery of the course through course plan and maps the expected Course Outcome with the Program Outcome and Program Educational Objectives of the corresponding programs.

➢ The course plan is prepared online in Mar Ephraem Informatica an Online Management Information system (MIS).

➢ In the course plan the faculty plans for prerequisite test, bridge course, industrial visits, micro projects, mini projects, seminars, tutorials, internships, assignments and guest lectures.

➢ Evaluation tools and methods to assess the level of attainment of course outcomes are also planned and revived.

Head of the School

➢ The Head of the School reviews the course plan along with other faculty and then faculty presents the course plan to the Principal. This is scheduled at least 3 weeks before the start of every semester.

➢ The faculty also prepares the action plan for their academic roles.

➢ The Head consolidates the action plans of the faculty and forwards it to the Academic Planning Council for approval, through the Director (TL&FD).

➢ The Head also prepares draft calendar of events including all planned activities, curricular events like Continuous Assessment Examinations, Model Examinations,

Publication of Results, Parents meeting, Value Added Courses, Co-Curricular and Extracurricular events.

➢ Class Committee meetings, School Consultation Committee meetings and feedback collection dates are also added in the calendar.

➢ Remedial classes for slow learners are planned after every assessment.

➢ Regular meetings are scheduled within the Schools, to plan and review academic plans, Course syllabus coverage, student's feedback and for the reschedule of the plan, as per the available time.

Director (TL&FD) :

➢ The Director (Teaching Learning and Faculty Development) verifies the action plans and calendar of events and forwards to the Academic Planning Council.

➢ The Director (TL&FD) reviews the progress of the course plan and action plan once in every month.

Principal :

➢ The Principal as the chairperson of the Academic Planning Council, scrutinizes the action plans of the schools and approves them.

➢ Every school publishes its calendar of events and the Principal also publishes the college academic calendar.

➢ The Principal reviews the action plan every month, suggests remedial measures and appreciates the outcomes through the Academic Planning Council meetings.

1.1.3 What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?

a. **Support from University.**

➢ University publishes curriculum, schedule of examinations, syllabus and its credits, including, text books, reference, course objectives and outcomes are given by the University, which our institution strictly adhere to.

➢ Semester exams are conducted at the end of each semester by the University, in the campus itself, and the degrees are awarded by the university to the candidates.

➢ With reference to the exam results, conducted by the University, it ranks the students with due consideration to the credits secured.

➢ To ensure, that the faculties are refurbished with the latest updates in their areas, the University galvanize with frequent Faculty Development Programs, on thrust areas, wherein, the faculties are invited and motivated to participate.

➢ The University avails Quality Improvement Cells (QIC) through Center for Faculty Development, wherein, webminars and video courses are archived, which would be accessed by any faculty, at any time.

➢ Faculty notifies the deviations in the end semester examination questions, to the valuation board and participate in Central valuation conducted by the University. Examiners for Practical courses are appointed and conducted by the University.

➢ The University bestows the institution with online facility, wherein, the periodic updation of attendance and continuous assessment examination marks are done. This can be viewed by the students, which increases the transparency.

b. Support from Mar Ephraem

➢ Every Course is allotted well in advance to the faculty, which is followed by proper orientation and training: to prepare the course plan effectively.

➢ The faculty enjoys the autonomy to develop new teaching and learning methodology. Adaptation of Outcome based teaching and learning methodology is encouraged at every check point.

➢ The format for preparation of course plan is circulated and training to new faculty is accustomed by induction to course plan preparation, quality policy and procedures. This ensures preparation of course plan in a handy manner.

➢ Time tables are published well in advance for the planning.

➢ Professional Development Training slot is allotted to the faculty during every semester, to undergo skill development trainings. Support is given to faculty to undergo Faculty Development Programs. Motivation is given to faculty and students to encourage research activities in the campus.

➢ To bridge up the gap between current technology and curriculum, feedback from the faculty, industrial partner, students, which definitely include passed out students is collected and sorted out to the faculty, which enables the faculty to reframe the teaching and include the current technology in the course.

➢ Online facility is available to access Mar Ephraem Informatica, to plan, monitor and evaluate the activities of the faculty. This enables the students to have a track of the curriculum execution and plan for the entire semester.

➢ Sufficient infrastructure such as well ventilated classrooms equipped with wifi access, LCD projectors, uninterrupted power supply, low cost reprography facilities and hygienic drinking water are provided.

➢ Frequent analysis on the 'skill necessity' is made, with the latest skills necessary to the faculty are tabulated. Based on the sessions, the faculty are encouraged and motivated to train themselves with a time deadline.

➢ Mar Ephraem is networking with industries for Industrial interactions, collaborations to get industrial updates. Many such initiatives have resulted in formal MOUs.

➢ The institution motivates and ensures the usage of learning resources akin NPTEL, Spoken Tutorial, MOOC and online journals through the centralized library.

➢ The internal assessment marks are tabulated, with which, the slow learners are identified. These slow learners are trained and concentrated with special attention, they get motivated and elevated in their performance. Mar Ephraem terms this mechanism as "Remedial Class Mechanism".

1.1.4 Specify the initiatives taken up or contributions made by the Institution for effective curriculum delivery and transaction on the Curriculum provided by the affiliating University or other statutory agency.

For effective curriculum delivery the following initiatives are taken by Mar Ephraem,

➢ Every course impels with the delineation of learning outcomes and objectives which establish a fair idea of the course, and by doing so, the student would be in clarion with the entire course. In addition, the course plan and assessment are scrutinized at the entry level.

➢ Facility for the students to view the course plan and contents through Mar Ephraem Informatica, usage of online resources like NPTEL, animations and virtual laboratories are provided.

➢ It is a fact that every course material does have a practical application and basic scientific & mathematical principles they are referred in preparation of the course plan questions are solved in parallel, during the delivery of the course syllabus, to

secure a fair score in GATE, IES and many more competitive exams.

➢ The institution has its dedicated mentoring system, which captures the psychological and emotional problems of the student, in taking up the syllabus. Proper educational counseling is offered to the needy students, thus making the system a paramount.

➢ The faculty ensures that the curriculum is delivered without exception to the students. Thus, a Student Assessment Record which holds the details about the attendance and academic progress of the students are reviewed periodically, which ensures the absentees to keep track of the missed out curriculum.

➢ To motivate the students and to make them learn with a goal, the institute awards, prizes for the toppers in Institution level. The University also announces ranks for academic achievement.

➢ The institution imbues self-learning practice. Thus, they are bestowed with WiFi facility and a central library, which is open for the needy, for hours apart from the usual working hours.

➢ To transform the theory to a practical notion, tutorial session is framed up, wherein, students of various learning level are alloyed up and create a 'peer learning group', which ensures a clear notion of the curriculum.

➢ To envisage the process directly, the students are taken for industrial visits periodically. Thus, to create an amiable relation with the industries, Industry Institute interactions are made frequently by every School. With such cordial relationships, the students are given In-plant training for an additional practical exposure.

➢ The Micro project and Mini Project paves a platform for implementing the solutions to the challenges encountered with respect to every course.

➢ Every course is introduced with the synopsis of the curriculum expected objectives, outcomes and plans at the end, the course objective and outcome achieved are evaluated, thus ensuring the proper delivery of the curriculum.

1.1.5 How does the institution network and interacts with beneficiaries such as industry, research bodies and the university in effective operationalisation of the curriculum?

Mar Ephraem interacts with its stakeholders regularly through various activities.

➢ The updated curriculum as given by the University, however needs current updation

at par with the industries. Mar Ephraem identifies this 'Industrial gap' for every course curriculum through identified industrial partners of the Course.

➢ Every program has a very construed Program Objectives (PO) and Program Educational Objectives (PEO). The school Consultation Committee imparts the additional requirements that are to be added in the curriculum to reach the POs and PEOs.

➢ The institution inculcates the relation with reputed research and development institutions within and outside India which facilitates interaction curriculum enrichment and joint programs.

➢ The so identified industrial partners are obliged to take up students from the institution for industrial visits and internships, with respect to the curriculum evolved.

➢ The Industries are often confabulated with MoUs for the reason of technology transfer and trainings.

➢ Mar Ephraem emphases the importance of alumni throughout its evolution. Thus, intermittent meetings are held to expose their experience for the student's skill development, in accordance with the curriculum.

➢ Due to the fact, that the institution holds a sound support from the industries, it is obvious that the 'Industry Gap' and the 'Content Beyond Syllabus' is identified with ease. The institution takes these gaps to the University Board of Studies for consideration.

➢ Guests from reputed industries offer technical in-puls as to the current syllabus and the lag of syllabus in industrial expectation, as guest lectures, which empower the students to get informed about the industrial adaptations.

➢ The institution addresses the social challenges through Micro, Mini and Major Projects, which give real contents to be added in the curriculum.

➢ The institution holds a very strong network of industrial partners which tend to a potent curriculum. A list of few industry partners are listed below:

    ✓ Rajiv Gandhi Center for Biotechnology (RGCB), Thiruvananthapuram

    ✓ ISRO, Mahendragiri

    ✓ AStar, Singapore

    ✓ NTU, Singapore

    ✓ CDAC, Thiruvananthapuram

    ✓ Puspagiri Medical Institute, Rajagiri

- ✓ MetroScan, Thiruvananthapuram
- ✓ Regional Cancer Center, Thiruvananthapuram
- ✓ Environ Constructions Private Limited, Singapore
- ✓ Texas Instruments, Coimbatore.
- ✓ STUP Consultants, Bangalore.
- ✓ NCESS, Thiruvananthapuram
- ✓ L&T, Chennai
- ✓ Ultratech cements, Thiruvananthapuram
- ✓ Southern Railways, Thiruvananthapuram
- ✓ Prestige group, Bangalore
- ✓ Shapoorji Pallonji & Company, Bangalore
- ✓ Hyasun Engineering Projects, Chennai
- ✓ Green Viewz Piping, Chennai
- ✓ AUSIND Pvt Ltd, Chennai
- ✓ Eureka Forbes, Bangalore
- ✓ Simplex piles, Kolkatta

1.1.6 What are the contributions of the institution and/or its staff members to the development of the curriculum by the University? (number of staff members/ departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.)

- ➢ Mar Ephraem gives a cordial comeback from the alumni who are placed in reputed industries and archives the gap from the industries. In addition, the institution induces frequent meetings with the employers, and listen to their requirements. This enables the faculty to sort out the places where the syllabus lags.
- ➢ The identified gaps from the industries are captioned as 'Content Beyond Syllabus' which is fed as a feedback to the Academic Planning Council which after tedious brain storming sessions, forward it to the university.
- ➢ Mar Ephraem lacks board of studies membership in the affiliated University. However, one of the faculty Prof. Dr. A. Lenin Fred, holds the position of member in the Board of Studies in PSN College of Engineering and Technology (Autonomous).

1.1.7 Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating university) by it? If 'yes', give details on the process ('Needs Assessment', design, development and planning) and the courses for which the curriculum has been developed.

Yes, Mar Ephraem develops curriculum for courses offered other than those under the purview of the affiliating University, as, value added course, enrichment course and add on course.

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┌─────────────────────────────────────────────────────────┐
│  Head of the school gets inputs from industry, alumni,    │
│          employers, parents and students                  │
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┌─────────────────────────────────────────────────────────┐
│            Prioritization of additional courses           │
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                          ⇓
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│         Preparation of Course content and schedule        │
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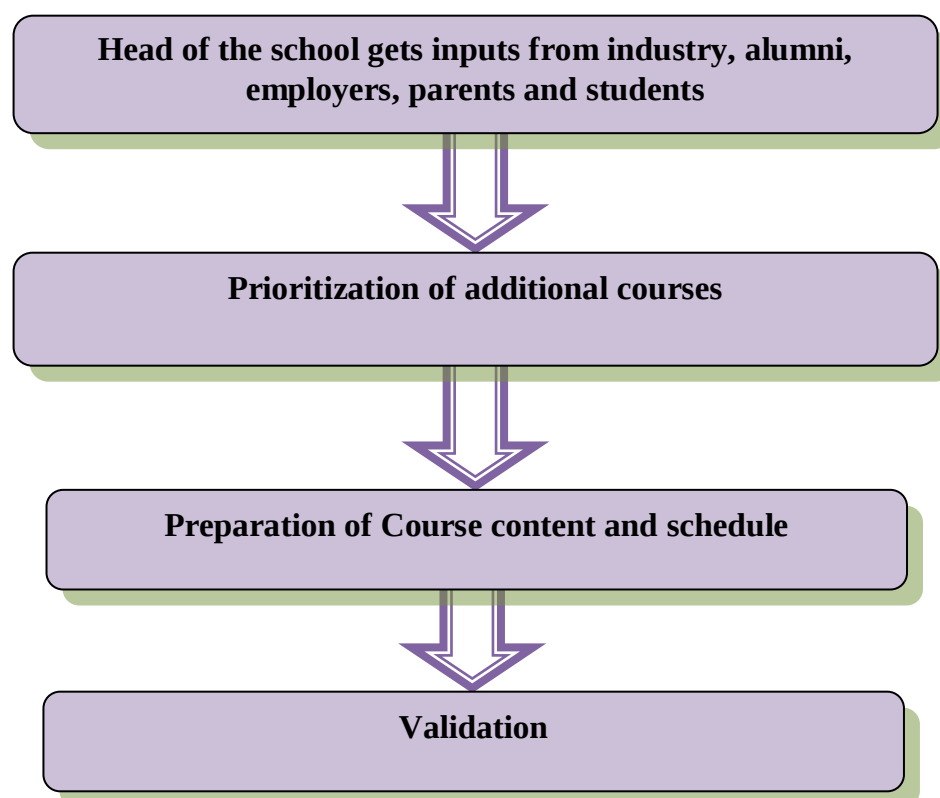
Figure: Curriculum Development for Courses

Courses common at Mar Ephraem

➢ The interest, passion and enthusiasm of every student is channelled through the class committee and through the respective mentor, by which, the need for every student are sorted out and presented to the Academic Planning Council.

➢ The Academic Planning Council takes every need in the prescription with a keen consideration. Pertaining to the need, courses like, Entrepreneur course, Moral Value courses, Robotics crash course etc are considered.

➢ Based on input, course contents are designed and validated.

Courses based on Curriculum

➢ The institution is cautious with the need of value added courses and henceforth take action in the development and conveying the same to the students. The head of the school takes up input from the industries, alumni and employers with which they sort out the important skills which are mandated for the students. With these suggestions a 'need list' for long term and short term courses are formulated.

➢ The Head presents the course list to the School Consultation Committee and prioritizes the courses, prepares schedule for the conduction and allot coordinators for each course. The coordinator prepares the curriculum for the course and it is validated by experts before conduction.

➢ In the interim, an action plan which holds all the schedules of the events is prepared and put-forth in the academic calendar.

➢ The Institution motivates every faculty to take up training to sharpen up their skills in their respective courses.

1.1.8 How does institution analyze/ensure that the stated objectives of curriculum are achieved in the course of implementation?

➢ The expected outcomes are clearly defined for every course in the curriculum, value added course, micro, mini & major projects, activities and events before the conduction based on need analysis and the process is monitored for the achievement of the stated objectives and expected outcomes.

Analysis:

➢ The direct and indirect assessment tools are used to assess the outcome achievement level. Moreover, after every Continuous Assessment Examination, Model Examination and University Examinations, the results are tabulated by the class in charge.

➢ The so tabulated results are analyzed scientifically and reviewed by the Principal.

➢ Feedbacks are collected from the students and analyzed. It is communicated to the concerned faculty for identifying the areas of improvements in the curriculum.

➢ Periodical verifications of assessment records, progress of course and outcome achievement is done by the Head of the School and Director (TL&FD).

Ensuring:

➢ Academic Audit is conducted at the end of every semester, during which the process and documents are verified.

➢ For courses in curriculum the head of the school verifies the course plan prepared by the coordinators to be conducted within the school and validated by the Principal in the review meeting.

➢ The faculty records their progress, achievements and assessment record in the MIS.

The class in charge and Head of the School monitor the progress every week.

➢ A 'course exit survey' is taken from the students that depict the expected outcomes of the course by the student.

➢ During the end of every semester, the level of outcome achievement is reviewed and recorded.

➢ The institution paves the path for archieving the recommendations and suggestions on attainment of outcomes after the Principal's review, which would be considered for the forthcoming plans.

1.2 Academic Flexibility

1.2.1 Specifying the goals and objectives give details of the certificate/diploma/ skill development courses etc., offered by the institution.

Mar Ephraem is keen in the progress and welfare of the students. In this respect, the institution conducts value added courses, workshops and skill development courses based on the need of the students in every stage of their education.

Certificate Value Added courses:

Sl. No	Program	Objectives	Duration	Outcomes	No of Beneficiaries
1.	Certificate Course on Primavera	To describe planning methodologies in construction.	15 days	Plan and schedule construction activities	65
2.	Certificate Course on Total Station training	To describe the functions of Total station	15 days	Carry out any survey work using Total station	144
3.	Certificate course on Autodesk Revit Architecture	To create 3D modeling of structures	20 days	Develop model of any structure	130
4.	Certificate course on Mat lab	To make the students aware of the programming methodologies in mat lab like usage of loops, functions for image processing applications	25 days	The students are motivated to do innovative projects in image processing applications	30
5.	Certificate course on Java	To develop an in-depth knowledge in functional, logic and oop paradigms and to apply in project development	3 months	To apply the object oriented concepts of java for developing java applications	10

6.	Certificate course on Android App development	To design and develop android applications by creating own layouts and views for project development	3months	Simple mobile applications are created by applying the android programming concepts	8
7.	Certificate course on Php	To design and develop web applications for project development using Php	3 months	Develop web based applications by the use of Php object oriented classes	7
8.	Certificate course on .net	To design and develop web applications for project development using .net	3 months	Create the web based distributed applications using ASP.net	10
9.	Mat lab for beginners	To make the students familiar with Mat lab	1 month	The students can be able to do their project using Mat lab	114
10.	Certificate course on Designing and installation of solar power plant	To make the students to understand the design and installation procedure for a solar PV power plant	15 days	The students are able to design and install solar power plant for a particular load	30

Skill Development Courses:

Sl no	Course	Objectives	Duration	Outcomes	No of Beneficiaries
1.	Winning Edge	To motivate students on goal setting	3days	Develop self-confidence &self-awareness	340
2.	Spoken English	To improve students communication	2days	Apply approximate communication skills in various situations	40

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3.	Motivation Communication	To focus on Skill development strategies, knowledge &understanding	2days	Direct their behavior and skills in right path	240
4.	Survey Camp	To handle various surveying instruments	10 days	Do surveying in any site	144
5.	Stadd PRO	To describe analytical designs	30 days	Design any structural members	144
6.	Aptitude Training	To enhance aptitude skills among students	10 days	Solve any aptitude & reasoning problems	400
7.	CFD Workshop	To understand the properties, mathematical characteristics, computational solutions techniques using CFD	3 days	Students are able to solve the heat transfer problem using CFD	42
8.	Student Empowerment Program	To empower the students in leadership skills ,attitudes and carrer	1day	Students are able to face interview in respected concerns	124
9.	Arudino Uno controller used in robotics	To increase the visual modality of students towards the skills also to develop robot assembly	1day	Apply the basics of robotics and automatic in the context using robotic products. The effective usage of software and programming	60
10.	Yoga	To organize health practices	2 days	Develop self-discipline& self-control	340

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Workshops :

Sl no	Course	Objectives	Duration	Outcomes	No of Beneficiaries
1	Theme centered Interaction	To identify ones inner potential	4 days	To develop attitude and behavioral changes	330
2	Design & Fab of Steel Structures	Describe the design concept of steel structures	2 days	Design any steel structures	60
3	Project Planning	Describe the planning methods	3 days	Plan any project effectively	58
4	Prestressed Structures	Formulate prestressing concepts	2 days	Design any prestressed structure	75
5	Sustainable development in Engineering	Formulate sustainable methods	1 days	Consider the sustainability in design process	140
6	Latest Trends in Civil Engineering	Describe the new trends in construction	2 days	Implement the latest tech in field	130
7	Total Station	Describe the usage of total station	1 days	Carryout survey work in any places using total stations	245
8	Concrete Mix Design	Describe various Mix methods	1 days	To perform mix design with effective resource usage	62
9	Ground water Management Techniques	Describe various water management tech	2 days	To manage water utilization in any challenging aspects	400
10	Automobile Workshop	To develop the practical skills on automobiles	120 hours	Identified the various thrust area of research	46
11	PCB Design and Testing	*Designing of printed circuit board *Provides students the opportunity to practically with PCB designrules	1week	Learning by doing and understanding of current electronic industry and aimed to build modern technology/industrial skills in students	45

12	Verilog HDL	To know about different modeling styles in Verilog HDL and implementation in FPGA	1week	Write codes in Verilog language using various coding styles and its implementation in FPGA	45
13	Recent Advances in Medical Electronics for Human Safety	To relate Electronics principles in medical applications	1week	To solve problems faced by Cyber issues	48
14	Cyber Security	To analyze various issues in Cyber security	1week	Apply security algorithms in programming and applications	50
15	Rasp berry pi	*Providing knowledge on Mat lab and python programming *Importing working experience with real time signals Providing knowledge on hardware interface *Hardware in Loop Interface	2 weeks	*Participants can analyze any type of signals real-time *Participants can develop their projects on their own	50
16	Robotics- ARUDINO UNO	*To provide deep insight into Robotics building block *To increase the visual modality of students towards the education and improve the skills of students towards approaching the different problem statements *To develop robot assembly & testing skills	1 day	*Apply the basics of Robotics and Automation in the context using Robotics products *Apply the process configurations and their realization of given Robot *Putting to effective use of a robot through usage of software and programming	48

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17	Workshop on Research Challenges in ICT	To know the various thrust areas of research and to kindle them in getting involved in research	1 day	Identified the various thrust area of research	46
18	Workshop on Computer Programming	To enable to students to develop the programming in C	7 days	Students are able to solve problems in placement drives using C	320
19	Workshop on Printed Circuit Board	To make the students understand the PCB fabrication procedures	1 day	The students will be able to fabricate printed circuit board for their project work	82
20	Entrepreneurship Awareness Camp-2no's	To expose the students to the entrepreneurship development process and them with the necessary frame work to start	3 days	To make a student become a successful entrepreneur	250
21	Seminar on Solar Photo Voltaics	To understand the importance of solar photo voltaic	1 day	The students can use solar power for their regular domestic application	82
22	Seminar on Energy Conservation	The students can understand the energy avidiliry procedure	1 day	The students can be able to save energy through energy avidiliry	114

1.2.2 Does the institution offer programmes that facilitate twinning /dual degree? If 'yes', give details.

No, Mar Ephraem does not offer any twinning/dual degree; however, to fill up this, the institution encourages distant mode of learning to get Degree, Diplomas, Advanced Diploma and certified courses.

1.2.3 Give details on the various institutional provisions, with reference to academic flexibility, and, how it has been helpful to students in terms of skills development, academic mobility, progression to higher studies and improved potential for employability. Issues may cover the following and beyond:

Range of Core / Elective options offered by the University and those opted by the college

The selections of the electives are based on student's interest and industrial requirements.

➢ U.G students can select their electives from 5th semester onwards and P.G students can select from 1st semester onwards as per the University regulations.

➢ Introduction class about the nature of elective course for the next semester is given to the students with industrial application of each elective course during the end of every semester, and their interest is recorded in their class committee minutes, and the courses are selected as electives for the next year.

Elective courses offered per semester

Sl No	Program	No of Elective courses selected per Semester							
		1	2	3	4	5	6	7	8
1	B.E- Civil	0	0	0	0	0	1	2	2
2	B.E- CSE	0	0	0	0	0	1	2	2
3	B.E- ECE	0	0	0	0	0	1	3	2
4	B.E- EEE	0	0	0	0	0	1	2	2
5	B.E- MECH	0	0	0	0	0	1	2	2
6	M.E – Applied Electronics	2	2	2	-	-	-	-	-
7	M.E – Computer Science and Engineering	2	2	2	-	-	-	-	-
8	M.E – Manufacturing Engineering	1	2	3	-	-	-	-	-

Choice Based Credit System and range of subject options

Choice based credit system is not available. However, the institution would adopt itself when the university to which the institution is affiliated would encourage this aspect.

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Courses offered in modular form

No, the institution does not offer any courses in modular form.

Credit transfer and accumulation facility

Credit transfer and accumulation facility is not available. However, the institution would adhere to this aspect when provisions are availed from the university to which the institution is affiliated.

Lateral and vertical mobility within and across programs and courses

Students are not permitted to switch their selection of program at any point of time as per university regulation; however the students are encouraged to take inter-disciplinary projects throughout any programs.

Enrichment courses

The institution is student-centered, and thus it takes concerns seriously when it is for the benefit of the students. Thus, we do concentrate on enrichment courses.

- ✓ Competitive examination preparation courses
- ✓ Spoken tutorial
- ✓ Virtual laboratory
- ✓ MOOC courses
- ✓ Entrepreneurship Awareness Camps
- ✓ Patent drafting courses
- ✓ Internships and industrial visits
- ✓ Special courses by professional bodies and associations
- ✓ Hindi learners course

The electives and enrichment courses have helped the students to go for higher education and employment. Some of the benefits are given below,

List of Electives supported for higher education and Employment

Program/ Semester	No of participants	Name of the elective/ Enrichment Course	Number of students doing higher education relevant to the elective course	Number of students working in industry relevant to the elective course
B.E/Civil/06	409	Construction Planning and Scheduling	25	150
B.E/Civil/08	295	Total Quality Management	25	150

B.E/Civil/08	295	Repair and Rehabilitation	30	150
B.E/MECH/06	553	Unconventional Machining Process	50	45
B.E/MECH/06	61	Renewable Sources of Energy	6	20
B.E/MECH/07	479	Maintenance Engineering	23	175
B.E/MECH/07	479	Process Planning and Cost Estimation	46	200
B.E/MECH/08	58	Non-Destructive Testing of Materials	10	40
B.E/MECH/08	298	Advanced IC engines	NIL	40
B.E/MECH/08	250	Production Planning & Control	5	200
M.E/MAN/ 01	58	Advances in Casting and Welding	NIL	22
M.E/MAN/ 02	58	Polymer & Composite Materials	NIL	20
M.E/MAN/ 02	58	Non-Destructive Evaluation	NIL	21
M.E/MAN/ 03	42	Computer Aided Product Design	NIL	18
M.E/MAN/ 03	42	Research Methodology	NIL	15
M.E/MAN/ 03	42	Mechatronics	NIL	22
B.E/ECE/06	330	Medical Electronics	30	6
B.E/ECE/07	280	Digital Image Processing	100	80
B.E/ECE/07	280	Advanced Computer Architecture	20	15
B.E/ECE/07	55	Opto Electronic Display	NIL	15
B.E/ECE/08	26	Professional Ethics in Engineering	5	20
B.E/ECE/08	29	Software Project Management	5	10
B.E/ECE/08	26	Total Quality Management	5	10
B.E/CSE/6	183	Total Quality Management	NIL	NIL
B.E/CSE/7	234	Cyber Forensics	NIL	1
B.E/CSE/7	183	Embedded & Real Time System	NIL	NIL
B.E/CSE/8	183	Knowledge Management	NIL	NIL

B.E/CSE/8	161	Software project management	NIL	3
B.E/CSE/8	20	Professional Ethics in Engineering	NIL	NIL
B.E/EEE/6	39	Power System Transients	NIL	NIL
B.E/EEE/7	42	Fibre Optics and Laser Instruments	6	6
B.E/EEE/7	18	Bio Medical Instrumentation	NIL	1
B.E/EEE/7	18	Flexible AC Transmission System	NIL	8
B.E/EEE/7	24	Micro Controller Based System Design	NIL	3
B.E/EEE/8	18	Power Quality	NIL	8
B.E/EEE/8	34	Power Electronics for Renewable Energy System	NIL	15
B.E/EEE/8	24	Professional Ethics in Engineering	NIL	20

1.2.4 Does the institution offer self-financed programmes? If 'yes', list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.

Yes, Mar Ephraem is a self-financing institution and all the programs offered by Mar Ephraem are self financed programs.

Courses Offered:

Mar Ephraem offers 5 U.G and 3 P.G programs under self-financed category.

U.G Programmes

- ➢ B.E - Civil Engineering,
- ➢ B.E - Computer Science and Engineering,
- ➢ B.E - Electronics and communication Engineering,
- ➢ B.E - Electrical and Electronics Engineering,
- ➢ B.E - Mechanical Engineering,

P.G Programmes

- ➢ M.E - Applied Electronics,
- ➢ M.E - Manufacturing Engineering
- ➢ M.E - Computer Science and Engineering,

Admission:

The admission policies are governed by the state government regulations and those framed by the Management.

Curriculum and fee structure:

The curriculum and fee structure for the programs is as prescribed by the University.

Quality of faculty members and salary:

The qualifications and salary of faculty are as per UGC/AICTE norms.

1.2.5 Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If 'yes' provide details of such programme and the beneficiaries.

Yes, Mar Ephraem envisages the competitive era and strives hard to compete with the global employment scenarios. The institution firmly assumes that competency would increase only on providing additional skill oriented programs relevant to regional and global employability markets. The lists are given below.

Skill oriented programmes to meet Global Employment market

Sl. no	Program	Duration	Beneficiaries
1.	Total Station Training	14days	130 students/year
2.	Survey Camp	10days	130 students/year
3.	Firebird-v. Robotics Research Platform	1 day	50 students
4.	PLC Scada	3days	60 students
5.	Embeded Based Robotic Training	5days	60 students

1.2.6 Does the University provide for the flexibility of combining the conventional face-to-face and Distance Mode of Education for students to choose the courses/ combination of their choice" If 'yes', how does the institution take advantage of such provision for the benefit of students?

No, the University does not provide space for combining the conventional face-to-face and distance mode of education for students to choose the courses/combination of their choice such facilities.

1.3 Curriculum Enrichment

1.3.1 Describe the efforts made by the institution to supplement the University's Curriculum to ensure that the academic programs and Institution's goals and objectives are integrated?

The curriculum provided by the University is followed by the faculty. To achieve the goals of the Institution, the college has evolved its own academic strategy, to keep students updated in emerging areas, by organizing various activities to reach its Goals.

Goal 1: Provide value based engineering education

- ✓ Value added courses
- ✓ Experiments beyond syllabus
- ✓ Content beyond syllabus

Goal 2: Provide general, specific and soft skills

- ✓ Industrial internships
- ✓ Video lectures and online courses
- ✓ Guest lectures, seminars and F.D.P
- ✓ Project exhibitions
- ✓ Skill development courses
- ✓ GATE, I.E.S and Competitive examination preparation
- ✓ Micro projects at course level and mini projects at every semester
- ✓ Co- curricular like symposiums, conferences, technical events and extra curricular activities like sports meet, cultural fest.

Goal 3: Initiate research activities

- ✓ Participation of students in funded projects

Goal4: Participate in community activities

- ✓ Solving social problems in projects
- ✓ Community interaction for indentifying social problems.

Goal 5: Establish linkages and MoUs

- ✓ MoU with industries for internships, projects and visits.

1.3.2 What are the efforts made by the institution to enrich and organize the curriculum to enhance the experiences of the students so as to cope with the needs of the dynamic employment market?

Mar Ephraem facilitates the following programs to enrich the learning experience and needs of the dynamic employment market. Every year a few modules and trainings are given to the students as given below.

Technical Skills

➢ Value added courses are catered to the students from the second year onwards to make them get familiar with the courses.

➢ Experiments were conducted beyond the syllabus to enhance students learning experience to cope with dynamic employment market. The students are encouraged to take up internships from the third year onwards through the institution's industrial partners. Thus, they get trained with industrial standards.

➢ During their final year, the students are strongly motivated to take up 'field project' wherein they can do 'live projects'.

➢ The students are galvanized to take part in competitions akin, eYantra, for National competency.

➢ The institution mandates the students to take up micro project for every course and mini project for every semester to apply the learned concepts.

Soft Skills

➢ The institution realizes the importance of 'global language' and thus training its students in communication skills viz, Listening, Speaking, Reading and Writing.

➢ The analytical and aptitude of the students are sharpened with vigorous competencies from year one onwards.

➢ Training modules in interpersonal skills are provided to the students.

As a 'diamond in the throne', the students are bestowed upon with modules for competitive examinations akin, GATE, IES, & Competitive examinations which are in relevance to the course.

1.3.3 Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?

Gender based education, Human rights, Climate Change and Environmental Education

➢ Debates, quiz programs and poster presentations on gender equality and climate change are held very often for creating awareness.

➢ Anti-ragging cell and separate timings for lunch and break for first years are being incorporated which would lessen the rate of harassment.

➢ Women's grievance cell is setup for the welfare of women students.

➢ Anti-drug campaign is in action to prevent the use of drugs in and around the campus.

➢ Tobacco free campus restricts the usage of tobacco and its products around campus.

➢ Bio gas plant is being setup to initiate the production of green energy from bio wastes.

➢ Waste management workshops and vermicompost preparation are being adopted by the institution.

➢ In house organic test bed for herbs and vegetables are in action.

➢ The institution strives for Plastic free green campus towards which it is getting converged to.

➢ Environmental Science is given as compulsory course for all U.G Programs.

➢ Clean India Rally and campaigns are conducted.

➢ Human rights awareness campaigns are conducted very often in the institution.

➢ Proper awareness and education are provided on cyber security, hacking, its lawsuits and also about ethical hacking via workshops.

Use of ICT

➢ The institution encourages the use of E- resources like journals, NPTEL videos, animations in class.

➢ Live demonstrations of experiments are given by virtual laboratories to encrypt the concepts of course to the students.

➢ Online training for GATE and placement are given with proper guidance.

➢ Spoken tutorial and MOOC courses are provided.

➢ Wi-Fi enabled campus, wherein the student and staff can access resources for their betterment.

- ➢ Mar Ephraem Informatica to view course contents from anywhere.
- ➢ LCD projector for all classrooms for multimedia presentation which ensures delivering the curriculum in an apt channel.
- ➢ Use of animations and power point presentations are encouraged along the courses to visualize the concepts.

1.3.4 What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?

Moral and ethical values

- ✓ Annual retreat for staff and students
- ✓ Daily morning prayer by students
- ✓ In-house chapel for meditation
- ✓ Blood donation camps by RRC
- ✓ Visit to care the needy, once in a year class wise to orphanage, differentially able person's residence.
- ✓ Adopting the 'Vazode' village, providing Educational and Technical assistance to the village as extension service.
- ✓ Various Charity services by staff and Students.
- ✓ Mar Ephraem Manna a charity cell by students
- ✓ Activities of Jesus Youth for willing students
- ✓ Celebration of festivals like Pongal, Onam and Christmas
- ✓ Celebration of days of National and International importance like Republic day, Independence day, Youth Awakening day, Teachers day, Womens day, & Engineers day etc
- ✓ Support to Orphanages
- ✓ Theme Centered Interaction Trainings

Employable and life skills

- ✓ Value added courses as per industrial requirements
- ✓ Cultural and sports feast
- ✓ Personality development Courses
- ✓ Motivational and goal formation Courses
- ✓ Special classes for good manners and character formation
- ✓ Students programs coordinated by students for teamwork and leadership skills

✓ Entrepreneurship training

✓ Training on Kung fu and Yoga

✓ Project exhibitions

Better career options

✓ Training for G.A.T.E, I.E.S and competitive examinations

✓ Special Hindi classes.

✓ Communication skills, Aptitude and G.D training for placement

✓ Industrial updates by seminars and guest lectures

✓ Micro, mini and major projects to apply the learned concept

Community orientation

✓ Community based projects at course, semester levels

✓ N.S.S activities

✓ Science camps for school children

✓ Career guidance to school and polytechnique students

✓ Science camp for tribal school teachers

✓ INSPIRE camp for creamy layer of higher secondary school students.

✓ Visit to tribal community for problem identification

✓ Charity works by faculty like construction of house to the poor, donations for the sick, donations for orphanages and mentally challenged centers

1.3.5 Citing a few examples enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?

Feedbacks are collected from various stakeholders at different levels as given below; the feedbacks are added with the curriculum at different levels given below.

Stake holder's Feedback and Enrichment-made

Stake holder	Examples of Feedback	Enrichment-made
Student	Site visit to learn latest techologies	Industrial visit are arranged
Alumni	Knowledge of recent trends	Industrial & Inplant training arranged
Parents	To improve logical solving skills	Aptitude training were provided
Employers	Communication skills	Communication training was given
Guests	Additional practical training	Total station training/survey camp was provided.

Mar Ephraem

1.3.6 How does the institution monitor and evaluate the quality of its enrichment programmes?

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                    ┌──────────────────┐
                    │  Need Analysis   │
                    └──────────────────┘
                             │
                             ▼
            ┌────────────────────────────────┐
            │ Objectives of Enrichment Course│
            └────────────────────────────────┘
                             │
                             ▼
            ┌────────────────────────────────┐
            │       Expected Outcomes        │
            └────────────────────────────────┘
                             │
                             ▼
            ┌────────────────────────────────┐
            │  Conduction of Enrichment Course│
            └────────────────────────────────┘
```

Evaluation of Feedback	Evaluation of Enrichment Course Outcome Attainment Level

Strength & Areas for Improvement are Reported
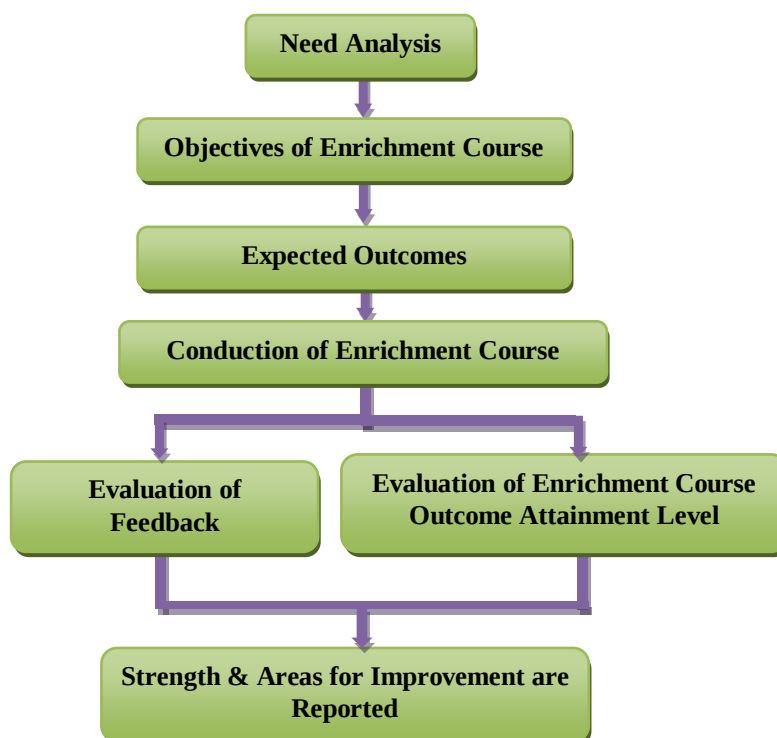
Figure: Quality Evaluation of Enrichment programme

Quality of enrichment programs in Mar Ephraem are monitored by the following steps

➢ For any enrichment program the need for the program is analyzed.

➢ Objectives and expected outcomes are formulated.

➢ Action plan is prepared with time plan.

➢ Feedback is collected from the participants and attainment level of the enrichment course outcome is also evaluated.

➢ The program is reviewed and the comments on strength and areas for improvement are recorded for further reference.

1.4 Feedback System

1.4.1 What are the contributions of the institution in the design and development of the curriculum prepared by the University?

Mar Ephraem collects feedbacks on curriculum regularly from its stakeholders. The academic planning council regularly updates the inputs from Students, Alumni, Industry and faculty to the University

1.4.2. Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?

Yes, All the Schools of Mar Ephraem collects feedback from the stakeholders – students, Alumni, parents, employers, faculty and visitors about curriculum at different levels. The feedback is discussed at School meetings and in the Academic planning council meetings and the recommendations are given to the corresponding Board of Studies, Anna University, Chennai. If the curriculum is not revised by the University, we conduct them as Content beyond syllabus and Value added course modules.

Students Feedback:

Student's feedbacks about curriculum for the courses are collected at the end of every semester. The areas of improvement and new areas to be added are suggested by the students and discussed in class committee meetings and the progress is reviewed.

Alumni Feedback:

During the Alumni visit, for the Annual Alumni meet in the campus, feedbacks from Alumni are collected. Feedback regarding skill trainings are reviewed in Academic Planning Council meetings and Training & Placement cell meetings. Curriculum feedbacks are reviewed in school meetings. All are recorded by the Alumni Association. The email correspondence and social media postings are also taken into account.

Parents Feedback:

Parent's feedbacks are collected during their visit to the campus. The Parent teachers association at School level interacts with the parents during their visits.

Employers Feedback:

Employers feedback is collected once in every year and during campus recruitments.

Faculty Feedback:

Faculty feedbacks and suggestions are represented in the academic planning council through their representatives.

Visitors Feedback:

Feedback from N.G.O and other visitors to college are collected during their visits and interactions.

1.4.3. How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/ programmes?)

The following are the new programs introduced during last four years,

New programmes introduced in the last four years:

Program	Degree	Year	Rationale
Applied Electronics	M.E	2013-2014	To enhance the skill of developing electronics based projects and research
Manufacturing Engineering	M.E	2013-2014	To conduct research on manufacturing process and support students in manufacturing products.

Any other relevant information regarding curricular aspects which the college would like to include.

Criterion: II

Teaching- Learning and Evaluation

CRITERION II

TEACHING - LEARNING AND EVALUATION

2.1 Student Enrollment and Profile

2.1.1 How does the college ensure publicity and transparency in the admission process?

Mar Ephraem ensures publicity in the admission process by advertisements through,

➢ Regional Newspapers

➢ College Website, College brochure and Prospectus

➢ Social Media

➢ Newsletters and magazines published by the college

➢ Local Cable Network

➢ Word of mouth by Alumni, Parents and Benefactors.

➢ Announcements in Local Parishes

➢ University Single window admission website

➢ Mar Ephraem strictly follows the rules laid down by both the Anna university and Government of Tamil Nadu to ensure transparency in the admission process.

➢ Mar Ephraem ensures transparency in admissions

✓ by publishing rank list by consortium for management quota (50%) in the college website.

✓ for government quota, single window counseling system by Anna University is followed.

➢ The merit list for management quota is communicated to the applicants through post.

➢ The fee structure is transparent as dictated by the Anna University and the State Government.

➢ The transparency is guaranteed and maintained all through the process from the beginning till the end of admission.

2.1.2 Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any other) to various programmes of the Institution.

Bachelor of Engineering (B.E):

➢ 50% seats (General Merit) are filled as per the State Government norms through TNEA- SWA (Tamil Nadu Engineering Admission Single Window Admission).

- ✓ The counseling status is updated online by the Anna University website.
- ✓ The communal reservation is followed by the State Government.
- ✓ At the time of counseling, the students choose the college and Program of their choice

➢ 50 % seats consist of Management Quota which is filled as per the College policy of inclusive and merit based admission.
- ✓ Students from diverse community are encouraged.
- ✓ The advertisement is given through local paper and website.
- ✓ During admission,
  - The application forms are collected
  - Merit list is prepared and published by consortium and communicated to the applicant through post.
  - From the merit list, the judges committee, in the consortium, selects the eligible candidates.

Master of Engineering (M.E):
➢ The admission for the seats in the Management quota is based on marks of Qualifying Examinations, TANCET, GATE score and the entrance exam.
➢ Based on above criteria, a merit list is prepared and the students are selected by consortium for both Government and Management seats.

2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the programmes offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.

U.G Courses: Cut off Out of 200

Course	2016-17		2015-16		2014-15		2013-14	
	Min	Max	Min	Max	Min	Max	Min	Max
Civil Engg	90.66	174.36	116.25	175.5	95.75	172	96	167
Computer Science &Engg	125.75	184.75	107.5	162.5	98.25	165	93.5	137.25
Electronics and Communication Engg	92	148	90.25	167	88	167	89.5	186.5

Electrical and Electronics Engg	96	172	86.5	158.5	96.5	159	85	124
Mechanical Engg	89.25	186.5	85.25	184.5	93.25	172.25	80	177.25

P.G Course

Course	2016-17		2015-16		2014-15	
	Min	Max	Min	Max	Min	Max
Applied Electronics	64.1	93.87	69.89	87.33	62.84	80.15
Computer Science &Engg	69.5	75.6	66.7	80.7	58.12	81.75
Manufacturing Engineering	65.3	85.7	61.78	75.88	57.54	77.5

Minimum Cutoff of Other Colleges

College	Mar Ephraem	St.Xavier	Ponjesley	C.S.I.I.T	BIT
2016-17	90.25	82.00	88.00	86.25	86.25
2015-16	90.25	84	89	86	86
2014-15	88	85	89	86.5	86.25
2013-14	91	86	90	86	86
2012-13	90.25	82.00	88.00	86.25	86.25

2.1.4 Is there a mechanism in the institution to review the admission process and student profiles annually? If 'yes' what is the outcome of such an effort and how has it contributed to the improvement of the process?

➤ Yes, Mar Ephraem reviews the admission process every year. The profiles of students are categorized with gender, region, Medium of study, Geographical location, Language and School.

➤ Based on the review the admission strategy is planned for the next academic year.

➤ The admission ambassadors are identified, motivated and appreciated for the work.

➤ Admission centers are opened at various places to facilitate admission process.

- ➢ Based on demand for a program the plan for increase in intake, or, addition of relevant program is made. Promotional, awareness programs and campaigns are conducted to promote the visibility of the college.
- ➢ Science programs are conducted for school students every academic year.
- ➢ Career guidance programs are organized at various schools, especially those at the interior area, to create awareness on the various career opportunities. Scholarships are given to the deserving candidates.
- ➢ Because of these initiatives, we have the district wise top level enrollment.

2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion

- ➢ The admission policy of Mar Ephraem is oriented to adopt inclusion and commitment to diversity in various aspects.

Community diversity:

- ➢ Students belonging to SC/ST/OBC categories are allotted seats as per state government policies.
- ➢ Tuition Fees re-imbursement, fees exemptions, and endowment benefits are also extended to these students in our college as per the state government rules.
- ➢ Students of S.T community are reached out by the visit of the college team to a tribal village.
- ➢ Science camp is conducted for the tribal school teachers, sponsored by DST.
- ➢ Students are aided with scholarship schemes of various government units.

Community	2016-2017					2015-2016					2014-2015					2013-2014				
	Mech	Civil	ECE	EEE	CSE	Mech	Civil	ECE	EEE	CSE	Mech	Civil	ECE	EEE	CSE	Mech	Civil	ECE	EEE	CSE
SC	0	1	0	0	0	1	0	1	0	1	2	0	0	0	0	3	0	0	0	1
ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OBC	49	42	8	1	20	42	0	0	0	2	55	0	0	0	14	48	0	0	0	1
Others	65	67	17	37	27	80	129	30	33	43	88	125	46	40	31	70	97	55	26	32

Gender Diversity

- ✓ Women in Mar Ephraem campus are given equal opportunity
- ✓ Separate hostels for women students are run by Rev. Sisters of Daughters of Mary Congregation.

- ✓ Celebration of Women's Day on campus
- ✓ Effective functioning of women's grievance cell in the college
- ✓ Sufficient number of rest rooms & waiting halls for women
- ✓ Equal participation of women in all academic and research activities and committees.

Differently Abled

- ✓ To include differently abled students in the college, Classrooms for differently abled students are located in the ground floor.
- ✓ Books to seat scheme to get books from the library.
- ✓ Counseling on need basis and remedial classes based on academic performance
- ✓ Students supporting differently abled students are given "Good Samaritan award".
- ✓ Provision for scribes and extension in duration of examination for end semester examinations.
- ✓ Special attention and care is given to differently abled students, with specially allotted mentors to take care of their activities.
- ✓ Special assistance for the differently abled to get appropriate employment, after their studies.

Financial Diversity

- ✓ Students with varied financial status are admitted in Mar Ephraem.
- ✓ Economically weaker section is identified; career guidance and brief details about various schemes are given to the school students.
- ✓ Students admitted in the campus are aided with scholarships given by various government agencies.
- ✓ Scholarships are given by the Management for the economically weaker students.

Minority community

- ✓ Students are given freedom to visit mosque for prayers every Thursday.
- ✓ Chapel is facilitated to offer prayers.
- ✓ Minority scholarship schemes are routed to the students.

Table : Student Diversity

Academic Year	School	Gender wise		Financial status		Community		Differently abled
		Male	female	Below poverty line	Above poverty line	Minority	Non-Minority	
2016-2017	**Mech**	119	1	12	108	6	114	0
	Civil	95	15	17	93	1	109	0
	ECE	13	12	7	18	0	25	0
	EEE	34	4	9	29	0	38	0
	CSE	20	28	2	46	0	48	0
2015-2016	**Mech**	123	3	19	105	32	93	0
	Civil	96	33	1	128	57	72	0

	ECE	15	16	1	30	27	4	0
	EEE	26	7	4	29	0	33	0
	CSE	18	22	0	40	43	3	0
2014 -2015	Mech	134	1	24	110	36	97	0
	Civil	95	31	1	124	54	72	0
	ECE	24	22	2	44	29	17	0
	EEE	36	4	0	40	0	40	0
	CSE	20	24	2	42	37	5	1
2013-2014	Mech	120	1	14	107	26	95	0
	Civil	65	32	0	97	45	52	0
	ECE	20	35	0	55	48	7	0
	EEE	24	2	0	26	0	26	0
	CSE	12	22	nil	34	29	5	0

2.1.6 Provide the following details for various programmes offered by the institution during the last four years and comment on the trends. i.e.reasons for increase / decrease and actions initiated for improvement.

The demand ratio of various programs offered by Mar Ephraem under management quota is given below

Program	2016-17			2015-16			2014-15			2013-14		
	AP	AD	DR	AP	AD	DR	AP	AD	DR	AP	AD	DR
B.E – CE	123	113	0.94	140	120	1	136	117	0.97	110	91	0.75
B.E – CSE	53	49	0.81	42	41	0.68	46	47	0.78	30	34	0.56
B.E – ECE	25	25	0.20	31	30	0.25	46	43	0.358	55	52	0.43
B.E – EEE	38	38	0.63	33	30	0.5	45	39	0.65	26	18	0.3
B.E – MECH	150	120	1	140	120	1	151	120	1	145	114	0.95
M.E- AE	18	17	0.94	12	12	0.66	18	17	0.94	-	-	-
M.E – CSE	10	10	55.5	7	7	38.8	18	17	94.4	11	11	0.61
M.E – MAN	18	17	0.94	8	7	38.8	18	16	94.4	20	18	1

Abbreviation

CE- Civil Engineering, CSE- Computer Science and Engineering,ECE- Electronics and communication Engineering, EEE- Electrical and Electronics Engineering, MECH-

Mechanical Engineering, AE – Applied Electronics, MAN- Manufacturing Engineering, AP – Number of applications received, AD – Number of admissions made, DR- Demand Ratio

- ➢ The demand for B.E Mechanical engineering program is increasing because of the larger demands and more number of Alumni in Gulf countries.
- ➢ B.E Civil engineering is also getting consistent admissions due to strong relationship with industries for International placements and internships.
- ➢ Downfall in Electronics and Communication engineering and electrical and electronics engineering admissions are seriously analyzed and new trends like robotics are introduced.
- ➢ Admissions to Computer science and Engineering is increased due to live project experiences and funded research projects.

2.2 Catering to Student Diversity

2.2.1. How does the institution cater to the needs of differently- abled students and ensure adherence to government policies in this regard?

Mar Ephraem caters to the need of differently abled by providing provision for scribes, extension of exam duration, facilities like ramp, books to seat scheme and motivation, to excel in their academic and non academic activities. It is as follows:

- ➢ All the government policies and schemes are followed and shared with the students.
- ➢ Provision for scribes and extension of duration minimum 30 minutes in examinations.
- ➢ "Good Samaritan Award" for the student who helps the differently abled student on campus.
- ➢ Scholarships from government.
- ➢ Well –laid roads within the campus
- ➢ 'Books to seat scheme' to get books from the library.
- ➢ Special attention and care is given to differently abled students, with specially allotted mentors to take care of their activities.
- ➢ Special assistance for the differently abled to get appropriate employment, after their studies.
- ➢ Classes are conducted in ground floor where ramps are provided.
- ➢ Special arrangement for food distribution to differently abled students.
- ➢ At present, no physically differently abled students are there in the college.

2.2.2 Does the institution assess the students' needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.

Yes, the institute assesses the student's needs in terms of knowledge and skills prior to the commencement of the program. The process adopted by the institution is sketched as below.
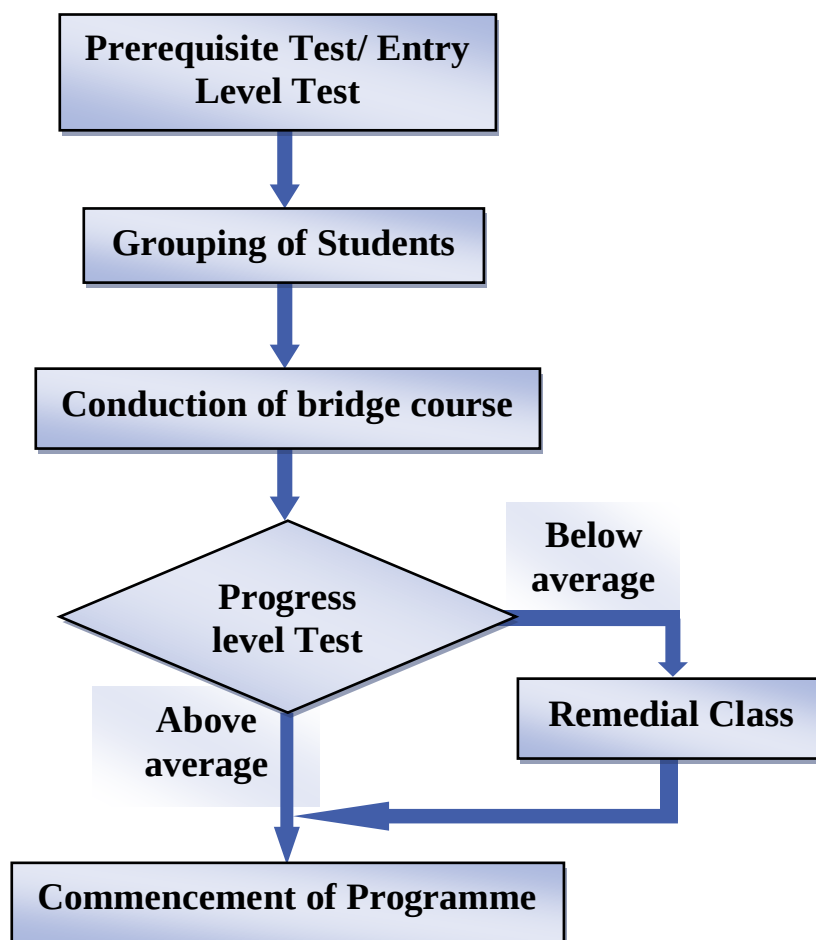
Figure: Students Need assessment

➢ Before the commencement of the program entry level test is conducted for Physics, Chemistry, Mathematics and Computer.

➢ Based on the results the students are grouped and bridge course is conducted

➢ Student's knowledge level is tested again before the commencement of the program.

➢ For the identified slow learners remedial measures are taken before the commencement of the program.

➢ For every course prerequisite knowledge test is conducted and the student's level of knowledge is identified. Bridge course is conducted and the progress is evaluated.

2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/ Add-on/Enrichment Courses, etc.) to enable them to cope with the program of their choice?

Bridge Course:

✓ Before the commencement of the regular program, bridge course is conducted for the first year, in the first semester, to bridge the gap between secondary school education and program expectations.

✓ For lateral entry students bridge course is conducted for engineering mathematics, for one week, during the third semester.

✓ In the second class of every course, in every semester, the prerequisite knowledge of the students to learn the concepts of the course is tested, assessed and bridge course is conducted from third class onwards.

Remedial courses:

✓ After the commencement of Continuous Assessment Examinations and Model Examination, the results of students are statistically analyzed.

✓ Remedial courses like peer learning, additional classes, and special attention are given to the students and remedial test is conducted.

Add on courses:

✓ The feedback from the stakeholders are collected to identify the need for add on courses.

✓ The requirements are categorized in the School Consultation Committee and relevant add on courses are identified.

✓ The identified add on courses are prioritized and scheduled for implementation.

Enrichment courses:

✓ Based on the recent updates in industrial, environmental and social trends, enrichment courses like personality development training, soft skill training, aptitude training, communication skill development training, value formation programmes, Entrepreneurship awareness camp are given to the students.

Others:

✓ Course specific industrial visits are conducted when the students are in need of practical applications.

✓ Guest lectures and seminars are given based on the need of the students.

✓ Special internship trainings and interaction with industrial experts are arranged to get industrial exposure.

2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?

Mar Ephraem is conscious about the need for developing awareness among its staff and students on issues such as gender, inclusion, environmental protection, child labor, human rights, energy conservation, food and safety, biodiversity and professional ethics.

Gender:

✓ Women Grievances cell is active and it functions for the benefit of the women employees and girl students, they regularly conduct awareness campaign on campus.

✓ Mar Ephraem encourages gender equality in its admission and recruitment process.

✓ Anti – ragging cell works along with women grievances cell to avoid ragging among students.

✓ International Women's day is celebrated to empower women in Mar Ephraem.

✓ Men and women are given equal chances and opportunities in each and every activities and committees in Mar Ephraem

✓ Because of these activities, there is no gender problem reported in Mar Ephraem, till date.

Inclusion:

✓ Inorder to reach tribal society, tribal welfare committee is activated, and, a team periodically visits the tribal village.

✓ N.S.S unit of Mar Ephraem conducts awareness programs on inclusion and equal opportunity among students.

✓ Science orientation program for tribal school teachers is conducted.

✓ The educational background of the tribal people is studied and based on their need, evening classes are conducted for school students.

✓ Because of these initiatives, Mar Ephraem has reached out to the tribal villages of Kanyakumari district, to impart awareness on the higher educational opportunities.

Environment:

✓ To ensure environment protection, cells like energy cell, campus monitoring cell are in action.

✓ Green audit is conducted to ensure that the institution is environmentally sound.

✓ Mar Ephraem energy cell conducts energy audits every year and suggests energy conservation methods.

✓ Campus monitoring cell ensures the cleanliness of the campus.

✓ Environmental science and engineering course and professional ethics course is made compulsory by the University and the students are taken field trips to the related areas.

✓ To generate energy, solar power plant and bio gas plant is installed and operated successfully.

✓ Vermicompost plant is installed to produce organic fertilizers.

✓ To save the rain water, rain water harvesting is implemented in the campus.

✓ Gardeners are appointed to maintain the greenery of garden.

✓ Electronic wastes are properly managed.

✓ Because of these activities, the campus is made greeny and environment friendly.

2.2.5 How does the institution identify and respond to special educational/learning needs of advanced learners?

➢ Advanced learners are identified from their score in the higher secondary, unit tests, model exam and University examination performance.

➢ Students with GPA above 8.0 in University examinations are identified and are given representation in the class committee.

➢ In class committee meetings, special learning and educational needs of the advanced learners are identified.

➢ Advanced learners are encouraged to participate in competitions, contests and trainings outside the campus.

➢ They are given leadership opportunities to conduct co-curricular activities.

➢ Encouraging participation in National level contests like E Yantra, Smart India Hackathon.

➢ Providing more practical exposure through additional Laboratory experience.

➢ Special training to publish in reputed journals and to file patents for their innovative projects.

➢ Advanced learners are also given extra library books.

➢ Empowering with skills to become a successful entrepreneur

➢ Advanced learners are also encouraged to take competitive examinations like GATE, IES etc. and given suitable extra coaching.

➢ Providing industrial and research internships.

➤ Encouraging with Class Topper awards and Best Outgoing Student awards in the Annual Day celebrations.

➤ To excel in placements, technical and soft skill trainings are provided.

2.2.6 How does the institute collect, analyze and use the data and information on the academic performance (through the programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

The student performance is kept a track along with the behavior of the particular student. The details are archived with the mentors who keenly observe the deviation and thus, analyze the reason for the deviation, thereby, ending up with a proper solution. The mentor system enables a face-to-face interaction with the students.

Slow learners:

✓ The continuous assessment examination marks and the model examination marks are compiled through the MIS. It also gives a detailed information about the student assessment and attendance record. The analytical part is perhaps done in a scientific manner with mark centered approach. As an essence of this analysis, the slow learners are being listed out, for whom, certain remedial measures and motivation are given for their betterment.

✓ The institute ensures conduction of remedial tests for the students who hold marks which are below the threshold marks.

✓ The institute believes in 'full duplex' communication when it comes to parent-institution interaction. This enables to discuss the student's progress with the parents and thus Lend a ear to hear the personal botheration of the students, from the parents.

✓ The so identified depressed students by the institute's effective mentor system is taken for psychological counseling by a professional counselor.

✓ Psychological counseling is done as per need for depressed students by a special counselor

Differently abled:

✓ The institute affirms ease for the differently abled on campus. Thus providing a very exceptional attention for those students is habituated with periodic motivational sessions.

✓ To ease the process of locomotion of differently abled students, facilities like ramps, 'book to seat' methods are being adopted.

✓ Proper provision for the scribe, with an extension in clock, during University examinations, are provided by the institution as per government norms.

Economically weaker sections:

✓ The students are channeled in the right direction to secure scholarships and educational loans for their 'financial ease'.

✓ The institution joins hands with the staff to aid financial support to the economically backward students. In addition, Mar Ephraem Manna supports students who are in need of their daily 'bread and butter'.

✓ The institute professes that, the dropouts in the college have been decreed by the virtue of these initiatives.

2.3 Teaching-Learning Process

2.3.1 How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)

The institution plans and frequently organizes teaching, and learning and evaluation schedules for the betterment of the students and faculty.

Semester and academic year action plan :

✓ The institution holds a habitude of preparing an action plan for academic and non-academic activities which is keenly formulated at the end of the previous academic year.

✓ The academic activities in the action plan includes

- Start and end of semester
- Exam schedule and the remedial schedule
- Class committee meeting dates
- Continuous assessment exam and model exam date
- 'Drop a Feedback' date

✓ The non-academic activities are planned and included in the action plan with due consideration of the student's notion. They include,

- Industrial visits
- Internship programs, implant training
- Industrial expectation
- Value added course, workshops, seminars, training programs

✓ The schedule is prepared in accordance with batch and also with year.

✓ Once the year's schedule is framed, an academic calendar for individual Schools, which present all the events of the School, is prepared. Thus, the academic calendar gets and holds information about the academic and non-academic activities.

✓ The timetable for every course is prepared in the School based level, on the activities mentioned in the calendar.

✓ In taking the so prepared timetable from the School level into consideration, the institution prepares its master academic calendar which holds the information about,

- List of holidays
- List of common events scheduled
- International days
- List of important events planned in each School

Course plan:

✓ Once a faculty is assigned with a course, He/She prepares a course plan and would do records in MIS.

✓ The following are given a top priority in the course plan preparation.

- Course Objective and Outcome
- Lesson
  - o Concepts & Definitions
  - o Teaching aid
  - o Reinforcement aid
  - o Related scientific/Mathematical principle
  - o Core/Inter disciplinary
  - o Lesson outcome
  - o Evaluation tool
  - o Observation to make
- Duration of each lesson
- Tutorials
- Seminars
- Assignment
- Mini project
- Course industry gap
- Remedial measure

✓ The course plan review is conducted two weeks before the commencement of classes, followed by periodic review by the Head of the School and the Director(TL&FD).

✓ The Head of the School reviews the course plan and thus forwards it to the Principal.

✓ The institution periodically looks in to the course for its alignment with the plan and also take up a record of the progress.

✓ The progress of the course is reviewed by the class-in-charge at the end of a week without exception and subsequently by the Director (TL & FD) monthly.

✓ A systematic feedback based on several criteria is annexed after examination and audited properly by the Head and the Director (TL & FD). After proper feedback sessions, the areas to be improved is conveyed to the faculty.

✓ Results are analyzed periodically and appropriate remedial measures are devised after the examination, which are reviewed by the Head and the Director (TL & FD)

✓ Attainment of course outcome is reviewed at the end of every semester.

Evaluation schedule

✓ The students are evaluated through weekly tests, continuous assessment exam and Model examination during every semester.

✓ The internal marks are calculated based on Continuous assessment exam marks and their performance in assignments and weekly tests.

✓ During each assessment period, the internal marks along with the attendance are fed to the Anna University web portal.

✓ The course outcome attainment is evaluated at the end of each semester.

2.3.2 How does IQAC contribute to improve the teaching –learning process?

➢ IQAC provides the development and application of quality benchmarks/parameters for activities and evaluation process of the institution.

➢ It also imparts knowledge through team work and persistent efforts, guarantees timely, efficient and progressive performance of academic bodies.

➢ It conducts induction programs for newly inducted faculty on course plan preparation and quality procedures.

➢ The IQAC contribution towards improving the teaching and learning process is

  ✓ Preparing forms and procedures to aid teaching and learning process

  ✓ Monitoring the academic planning and implementation process

  ✓ Collecting feedback from the stakeholders and taking necessary actions accordingly.

- ✓ Developing and formulating the result analysis procedures.
- ✓ Formulate & Monitor the internal audits.
- ✓ Formulate and Supports in maintaining the quality of every academic activities
- ✓ Organizing faculty development programs every academic year.
- ✓ Initiatives and support facilities for research activities and patent programs
- ✓ Developing the framework for monitoring the academic schedule as per the plan

2.3.3 How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

- ➢ Mar Ephraem has adopted an outcome based learning where the course plan and lesson plans are prepared based on expected outcomes.
- ➢ Mar Ephraem also provides sufficient resources for the faculty to make teaching learning process in a participatory aspect.

The following are the support structures and systems for student centric teaching and learning.

Interactive Learning:

- ✓ Group Discussions:
    - Students are clubbed together in groups that focus on a single topic wherein every student contributes his/her ideas.
    - Spacious classrooms are provided to facilitate group discussion.
- ✓ Industrial visits, Internship programs, Implant training:
    - To get industrial exposure, Industrial visit is made mandatory for all students.
    - Through college industrial network, Internship programs and implant training are arranged.

Collaborative Learning:

- ✓ Tutorial hours:
    - Tutorial hours are allotted specially in the timetable and peer learning is encouraged.
    - In the Peer learning process, Students are categorized into groups and a task is given to them for completion, which also ensures team work.

- Students of the same area of interest, form a group and strive to solve real world social problems through micro and mini projects.

Independent Learning:

✓ Students are motivated to do independent learning through quoting examples from online content.

✓ Self-Learning is enabled through assignments, seminars, paper presentation and competitions inside and outside the campus.

✓ Students are motivated to undergo online courses after working hours for which the laboratory and transport facilities are provided by the institution.

To support interactive, collaborative and independent learning, the infrastructure and support system provided are

✓ 24 x 7 Wi-Fi services.

✓ LCD projectors in all classrooms.

✓ MIS for students follow-up of course plans.

✓ Advanced laboratory for practical experience.

✓ Digital Library

✓ Seminar halls and conference halls for a pleasant atmosphere.

✓ Computers for all staff rooms and heads, faculty are with individual laptops.

✓ Light weight, easily movable tables and chairs to form groups for activities in the class.

✓ Facilities for video conferencing with experts outside campus.

✓ School level programs and college level programs are coordinated by students.

✓ Effective feedback system for students.

✓ All lesson concepts are related to applications, basic scientific and mathematical concepts.

✓ As a team, students try to solve social problems through Micro and mini projects.

✓ Activity oriented participatory teaching and learning methodology.

✓ Seminars and programs of students interest.

✓ Mar Ephraem provides provision to participate in professional societies.

2.3.4 How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

To nurture critical thinking, creativity and innovation in students Mar Ephraem conducts various activities as given below

Mar Ephraem

- ✓ Students are given freedom in class committee meeting to comment on the process involved in teaching and learning.

- ✓ Concepts are imparted to the students with 'practically known' examples. This makes the students to come up with unique ideas for the technical challenges they are facing.

- ✓ Students are made to interact effectively in technical discussions, tutorials, assignments, seminars and co-curricular activities.

- ✓ Co-curricular events are planned and organized by the students in an innovative way which ensures the leadership quality of the students.

- ✓ To satisfy the scientific temper, the students are guided with research aspect of analyzing and interpreting data, engender ideas for social challenges, in scientific way, conducting patent search for the validation of ideas.

- ✓ Mentors also meet the mentees periodically and identify the hidden talent among them.

- ✓ After pinpointing a potential in a student, proper channeling and motivation is provided. In addition, a platform is created for the students to elevate and sharpen their skills.

- ✓ A special note is recorded in the course file about the students who interact in the class frequently and provide ample solutions for technical problems. In extension they are appreciated.

- ✓ The institution organizes frequent workshops for critical thinking, decision making, creativity, leadership, team work and innovation.

- ✓ Students are facilitated to participate in E-yantra idea competition for every academic year in the month of September and October.

- ✓ Idea Competition is conducted every academic year to trap the ingenious ideas for solving problems technically.

2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? Eg: Virtual laboratories, e-learning – resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

The supporting/ enhancing facilities that help to improve the quality of Teaching-Learning process are:

- ➢ E-learning resources
- ➢ A –VIEW

- ➢ MOOC
- ➢ Virtual Lab facility
- ➢ Access to Reputed Journals
- ➢ Language laboratory
- ➢ Wi-Fi enabled class rooms & LCD Projectors in all class
- ➢ Seminars and workshops organized for faculty and students.
- ➢ Course file preparation and progress updating in MIS and the students are given provision to view and use the course file.
- ➢ NME-ICT:
    - ✓ NPTEL database in the library
    - ✓ Online innovative courses like NPTEL, SWAYAM.
    - ✓ Online Spoken Tutorial Courses

2.3.6 How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

- ➢ The participation in Faculty Development Programs for staff is made mandatory in every semester which helps to sharpen their technical notions and skills.
- ➢ Industrial visits are organized for every class with respect to their discipline
- ➢ The college organizes National and International conferences on thrust areas in engineering and science.
- ➢ Students are active members of various professional societies. Various programs are organized on behalf of these professional societies. This extracts the leadership potential from the student.
- ➢ Guest lectures and seminars are organized for faculty and students in recent and emerging technological trends.
- ➢ The library has a collection of journals and technical magazines from which the students and faculty can acquire advanced knowledge on specific areas.
- ➢ Students are given provision and guidance to participate in advanced online courses.
- ➢ Workshops, seminars and guest lectures are conducted for faculty and students by various experts in emerging technologies and advanced topics.
- ➢ Students and faculty are given provision and guidance to Participate in National level and International level conferences and competitions.

Blended Learning

✓ Each lesson concept in every course is incorporated with NPTEL videos, animations, Journal reference, demonstration and advanced tool like mind map , concept map

✓ The recent trends and emerging technologies are blended in the teaching and learning process by referring relevant journals.

✓ Apart from these micro, mini projects, guest lecture and online courses are provided to assist learning.

2.3.7 Detail (process and the number of stundents \benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling/ mentoring/ academic advise) provided to students?

Academic Support

✓ The academic progress of the students is reviewed with the help of the two Continuous Assessment examinations and a model exam.

✓ Mentoring hours are allotted in the timetable during which the mentors tend to interact with their mentees personally, knowing as a whole about them.

✓ Through mentoring academically weaker students are identified and their difficulty in learning is communicated to the corresponding staff to get a solution through remedial classes, peer learning and special classes.

✓ Students from vernacular medium are specially cared not to by heart contents.

✓ Students with good academic record, who get an arrear paper in the University examinations are motivated to go through revaluation process.

✓ Carrier guidance program is conducted to support the future career of the students.

SI. No	Carrier guidance program	Number of students attended
1.	Counseling-Students of Electronics and Communication Engineering	30
2.	Mentoring Concepts	135
3.	Career Guidance for Electrical and Electronics Engineering	62
4.	Career Guidance for Civil Engineering	351
5.	Orientation program	330
6.	Career Guidance for Computer science and Engineering	101

Table: Carrier Guidance program

Personal Support

Mentoring by faculty mentor:

- ✓ For every 20 students, an individual faculty is allotted as a mentor.

- ✓ Mentor hour is allotted in the timetable and it is given equal importance.

- ✓ The students can approach the respective mentor for discussions any time and explain their difficulties.

- ✓ The mentor is responsible for maintaining all the details of those 20 students.

- ✓ Mar Ephraem has organized mentor training programs to impart training to faculty to become effective mentors. Experts from outside have been invited to impart training to mentors in the college.

Psycho social support

- ✓ During the class, the behavior of the students is updated to the respective mentors by the course in charge. The mentor provides psychological support to the students.

- ✓ The students are given counseling by professionals periodically, on request.

- ✓ Students are motivated to do charity activities.

- ✓ Poor students are identified and fee concession is given for them.

- ✓ Physically challenged students are given special attention both in academic and in other activities.

S.No	Activities	2016-2017	2015-2016	2014-2015
1.	Academic support	2	1	1
2.	Personal support	95	81	63
3.	Psycho support	15	12	9

2.3.8 Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faulty to adopt new and innovative approaches and the impact of such innovative practices on student learning?

- ➢ Mar Ephraem adopts innovative teaching approaches and methods as follows.
  - ✓ Course plan is prepared prior to commencement of class and reviewed by the Principal and the Director (TL&FD).
  - ✓ The course plan is prepared on the basis of
    - • Relating the concepts with basic science and mathematical principles.

- Linking the course topics with core and inter disciplinary courses for interdisciplinary projects and discussions.
- Describing the application of the concepts for every lesson.
- Use of innovative teaching aids like mind map, demonstration aids, working models, flow charts etc..
- Use of tools like animations, PPT, NPTEL, Coursera Video lectures.
- Focus on solving GATE questions
- Addition of content beyond syllabus along with the course syllabus from the industrial gap identified by the industrial partner.

- ✓ Guest lectures and industrial visits to aid practical knowledge.
- ✓ Micro project at every course level to apply the learned concepts.
- ✓ Seminars by students to induce self-learning and presentation skills.
- ✓ Tutorial system by students peer group with a mixture of fast, slow and average learners to understand analytical courses.
- ✓ Participatory learning concept of teaching based on Outcome based Learning.
- ✓ Assessing every period of teaching by lesson outcome achievement.

- ➢ Facilities are provided to change the trend of output based teaching to outcome based teaching
- ➢ Specific training and Faculty development program on advanced methodology in teaching and learning is provided.
- ➢ The above activities are managed by Management Information System by which the stakeholders can easily understand, view and review.
- ➢ The impact of these activities are
  - ✓ The knowledge level of the students is improved.
  - ✓ The outcome attainment level is quantified
  - ✓ As modern tools are used for teaching the understanding level is increased.
  - ✓ Participatory learning environment is induced, life long learning is imparted.
  - ✓ Entrepreneurial skills are enhanced.

2.3.9 How are library resources used to augment the teaching- learning process?

- ➢ Mar Ephraem has a well-equipped central library. This helps the students with the latest information about books and services which are offered to them. The list of new books, useful articles, and news items and many important services are provided by the library.

➢ On need basis, the book requirements of students will be given by the respective faculty to the Head of the School, who in turn, informs the librarian about the book requirements.

➢ The students are continuously encouraged by the faculty members to use the library services. In the course plan, the relevant textbooks, reference books, journals, NPTEL videos and websites referred to, for preparing the lesson contents, are listed.

➢ Seminars, paper presentations and assignments are given as a part of the academic schedule, which in turn, makes the students to turn to the library for reference purpose.

➢ The Best library user is acknowledged and awarded semester wise.

➢ The library is subscribed to various IEEE journals, Springer journals etc.

➢ Video library of online courses like NPTEL are available and the students are encouraged to view it.

➢ Features of the library, as a resource for teaching-learning process, are listed below:

- ✓ 10,586 Volumes in the library
- ✓ Spacious reading hall
- ✓ Institutional membership in N-LIST, DELNET
- ✓ DIGITAL LIBRARY-Project Reports of Students, Previous Year Question Papers, CD mirroring, Multi Media Files of various subjects and E-articles digitalized for reference. CD/DVD collections
- ✓ Extended library hours- (8.00 A.M - 8.00 P.M) and discussion Room in the library to facilitate group learning
- ✓ Library referring is made a requirement for classroom projects, assignments, monograph preparations etc.
- ✓ NPTEL database in the library
- ✓ Online book search and reservation facility
- ✓ Online reference of previous year University question papers and GATE,IES questions.
- ✓ Book to seat scheme for differently abled students.
- ✓ In each School, School library is operated for immediate reference, by the students, which includes demonstration or models of successful projects of students and books

2.3.10 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

➢ Yes, Mar Ephraem academic plan is well set before the commencement of the classes.

   ✓ For every course, a course plan is formulated, prior to the commencement of the semester.

   ✓ The progress of the course plan is reviewed by the HOS, the Director (TL/FD) and the Principal.

   ✓ The student's feedback on completion of the course curriculum as per the course plan is obtained in the class committee meetings.

   ✓ Any deviation in the course plan is identified and is properly dealt with, framing a special timetable.

   ✓ In case of delay, due to unavoidable circumstances, the classes are compensated with extra periods and additional working hours

2.3.11 How does the institute monitor and evaluate the quality of teaching learning?

➢ For the facilitation and monitoring of this process the following activities have been carried out over the years

➢ For Course in Curriculum:

   ✓ Course plan is reviewed by the Principal and the Director (TL&FD)

   ✓ Weekly progress is monitored by the Head of the School

   ✓ Monthly progress monitoring by the Director (TL&FD)

   ✓ Assessment of outcomes achieved through mapping, with each activities of the course plan, at the end of every semester

   ✓ Feedback from students after every CAE and model examination and through class committee meetings.

   ✓ Results of Continuous assessment examinations, model examinations and University examinations are analyzed scientifically.

   ✓ Post activity review is conducted and the comments are noted for improvements in the next cycle/ plan.

2.4 Teacher Quality

2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum.

Recruitment policy:

- ✓ All the recruitments are made through open competition, following AICTE/University norms and selection procedures of the management, recruitments are made based on the need.
- ✓ Vacancies are open to all, based on merit, and is published in all the leading daily newspapers and in the college website.
- ✓ The candidate shall be interviewed by a panel consisting of Chairman, Correspondent, Principal, Director (TL&FD), Head of the school and a subject expert.
- ✓ Appointments are done purely based on merit as decided by the interview board.
- ✓ Preference is given to faculty having Ph.D. and teaching as well as industrial experience.

Retention strategy:

- ✓ The management motivates the faculty to undergo trainings to obtain expertise in their preferred area of interest. Faculties are given freedom and opportunities to undergo higher studies. Career advancement scheme is adopted. So, the faculty retention percentage is high.
- ✓ Provide a friendly and supportive environment for the faculty to work in the college.
- ✓ Financial incentives for the faculty who are providing 100% result.
- ✓ Financial incentive to the faculty to participate in research activities and to publish papers in International journals and conferences.
- ✓ Yearly appraisal on professional development is made.
- ✓ Encouraged to attend the faculty development programs, workshops, seminars, conferences and expert interaction.
- ✓ Encouraged to publish their research in reputed journals and to file for a patent for their innovative works.
- ✓ Professional development period and vacation is given at the end of each semester.

List of Part-time faculty and staff : NILL

2.4.2 How does the institution cope with the growing demand/ scarcity of qualified senior faculty to teach new programmes/ modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bioinformatics etc.)? Provide details on the efforts made by the institution in this direction and the outcome during the last three years.

➢ In the last three years, no such new courses have been introduced; however, we are adopting the following methods to cope with the growing demand of qualified faculty.

➢ Faculty members are sent for training programs/FDPs in their respective areas, to update the knowledge through certificate courses, online courses, workshops, entrepreneurship trainings and other skill development trainings.

➢ Eminent resource persons from the prestigious Institutes and corporate sector are invited to deliver expert lectures to cope up with the latest trends and challenges of the industry.

➢ Special/customized training programs are also organized for the faculty members

➢ Workshops are conducted to give hands on training to the faculty.

➢ Guest professors are invited from various reputed institutions.

➢ Faculty are encouraged to attend various conferences in modern areas, refresher programs, orientation programs and to present their research works in the same as well.

➢ Each and every faculty is motivated to do research in their interested area.

2.4.3 Providing details on staff development programs during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.

a) Nomination to staff development programmes

Academic Staff Development Programmes	Number of faculty nominated
Orientation programmes	79
Staff training conducted by the university	6
Staff training conducted by other institutions	13
Summer / winter schools, workshops, etc.	49

b)Faculty Training programs are organized by the Institution to empower and enable the use of various tools and technology for improved teaching-learning

Mar Ephraem is very much concerned about the teaching and learning methodologies. In this respect, the institution opens up several platforms to enrich the faculty to empower themselves with skills which are mandated for teaching and learning process. Furthermore,

special concentration is given for handling new curriculum**,** content/knowledge management**,** selection, development and use of enrichment materials**,** assessment**,** cross cutting issues**,** Audio Visual Aids/multimedia**,** OER's**,** Teaching learning material development, selection and use.

Sl no	Date	Title of the Programme	Objectives	Resource Person/Agency
1.	2/2/17 & 3/2/17	Agile software development using scrum	Apply the software development steps in agile using scrum	Mr. Jerry Rajamony
2.	09/06/16	Hands on training – Primavera	To plan projects by primavera	Er. Pal Baskaran
3.	27/11/16	CFD Workshop	To solve heat transfer problem in CFD	Dr. Joseph Jawahar and team
4.	7/11/16 & 8/11/16	Introduction to Firebird V Robotics Research platform	To analyse various programming techniques in robotics using Firebird V robotics	Mr. John Pradeep and Mr. Suresh
5.	12/5/16 & 13/5/16	FDP on IBM Bluemix	To use IBM Bluemix for computing	Mr.Somu Shanmugavel
6.	14/6/16	FDP in Entrepreneurship	To understand characteristics of entrepreneurship	Mr. S. Stalin & Mr.BrightWinsley.J
7.	5/12/16& 7/12/16	Robotic workshop	• To provide deep insight into robotics building blocks • To create the next generation of embedded system engineers with a practical outcome	Mr. V. Suresh Mr. Y. S. John Pradeep
8.	13/07/15	Finite element method	To analyse elements by FEM	Dr. M. Murugan
9.	18/08/14	Hands on training – Total Station	To apply total station for surveying	Er. Satheesh Gopi

c)**Percentage of faculty invited as resource persons in Workshops / Seminars**

/Conferences organized by external professional agencies

Academic Year	Number of Faculty
2016-2017	3
2015-2016	1
2014-2015	3

d) Participated in external Workshops / Seminars /Conferences recognized by national/ international professional bodies

Academic Year	Number of Faculty
2016-2017	37
2015-2016	21
2014-2015	14
2013-2014	4

e) Presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies

Academic Year	Number of Faculty
2016-2017	7
2015-2016	8
2014-2015	4

2.4.4 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized programs industrial engagement etc.)

Mar Ephraem propels the faculty with extended specific support to enrich and enhance several traits in number of ways.

- ➢ All the faculties are inspired to pursue through research in their field of interest.
- ➢ Trainings are given on teaching methodology and statistical assessment methods.
- ➢ Faculty are provided with On Duty (OD) and grants to present and participate in summits,conferences, seminars, training programs and workshops.
- ➢ Weightage up to 30% is given for research and professional development in annual performance appraisal.
- ➢ Research forum is being spread over to set in motion the research culture on campus.
- ➢ Special vacations are provided for deserving faculty on the event of research in potential institution.
- ➢ Availing of Interdisciplinary research team to brainstorm crosscutting issues in research.
- ➢ Patent grant to file patent.
- ➢ Additional weightage is given for journal publications.

➢ Incentives are given to the best faculty, the best class in charge, the best researcher and for faculty who produce good academic results.

➢ Seed money to carry out research activities.

2.4.5 Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance/ achievement of the faculty.

➢ Faculty members are recognized at the institutional level on the basis of their semester results every academic year.

➢ Cash award and merit certificate are issued to all those faculty at the annual day function of the college.

➢ Internally the best class in charge and the best researcher awards are given for those who excel in their field.

List of faculty recognized with good results

Sl no	School	Year			
		2016-17	2015-16	2014-15	2013-14
1	Civil Engg	9	8	18	13
2	Computer Science &Engg	16	21	12	10
3	Electronics and Communication Engg	6	13	3	5
4	Electrical and Electronics Engg	5	4	4	2
5	Mechanical Engg	15	28	26	13
6	Science and Humanities	13	13	25	9

2.4.6 Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?

Yes, Mar Ephraem has a process of evaluation of teachers by the students:

➢ Feedback is collected from all the students at the end of each semester for every individual course. This feedback system is done through our automation software system.

➤ Each semester, three class committee meetings are conducted, for every class, wherein student representatives will be participating in this meeting. The meeting is held in the presence of the Director, Head of the school, faculty handling the courses and the student representatives. The feedback will be shared with every faculty for their improvement.

➤ Feedbacks from the Alumni are collected in Annual Alumni meetings for evaluation

2.5 Evaluation Process and Reforms

2.5.1 How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?

Information about the evaluation processes is transparent and it reaches the stakeholders through various modes of dissemination. The different modes of information being disseminated to the stakeholders are

Students:

✓ Information about evaluation process for CAE, ME and attendance are shared to the students and parents during the fresher's day and the same is circulated in all class rooms and published on the notice board.

✓ Students are evaluated internally by their performance in Continuous Assessment Exam, Model Exam, Micro projects, Mini projects, Assignments and Seminars and the result is published on the notice board.

✓ End semester examinations & practical examinations are evaluated both internally and externally by the University representatives and the result is published in the University website, MIS and communicated to their parents through post.

✓ The evaluation process is outlined in the handbook which is provided to all the students.

✓ The format of question papers and duration of the test are clearly communicated to the students and instructors through circulars.

✓ The evaluated answer script along with the scheme of valuation is informed to the student to ensure transparency

✓ The evaluation process is shared with the parents during the parent's visit to the college.

✓ The Class-in-charge also shares the information to the students, in the class, during the start of every semester.

✓ The evaluation procedure prescribed as mandatory by the University, through its regulations, is shared to the students.

✓ The schedule of evaluation is intimated to the students and parents through academic calendar of events.

✓ For every course, in every semester, the faculty briefs the course plan with evaluation procedure in the first class of every semester.

Faculty:

✓ Faculty induction program is conducted for every new faculty recruited with an elaboration on process and procedures of evaluation.

✓ Annual appraisal covers all the parameters of evaluation.

✓ Periodical change in procedure is circulated to all faculties through circulars and communicated through Mar Ephraem e-mail.

✓ The assessment marks are evaluated on statistical package.

2.5.2 What are the major evaluation reforms of the university that the institution has adopted and what are the reforms initiated by the institution on its own?

✓ The University has introduced entry of assessment marks and attendance marks in university web portal, this is adopted by Mar Ephraem.

✓ Modifications in revaluation procedure is circulated among students and envisioned in action.

✓ Changes in question patterns are circulated and strictly adhered.

✓ Mar Ephraem has developed an information management system "Mar Ephraem Informatica" to evaluate the performance of the students and staff.

✓ The question paper for the Continuous assessment exam is set as follows

- 3 sets of question papers are collected from the course instructor.

- The question paper is designed in such a way that it should contain 30% questions from basic concepts and fundamentals, 30% from application and remaining 40% form important thrust areas. The certainty of the question paper is analyzed by the Head of the School.

- The Head of the school forwards the question paper to Examination Control Cell from there one question is randomly chosen from the set by the Director (TL & FD).

✓ Mar Ephraem has adopted rubrics based assessment for Micro projects, Mini projects, seminars, Assignments and Projects.

✓ The students are evaluated based on their performance in academics, co-curricular activities, extra- curricular activities, library usage, assistance given to the those who are in need and the best students are rewarded.

2.5.3 How does the institution ensure effective implementation of the evaluation reforms of the university and those initiated by the institution on its own?

For effective implementation of the evaluation reforms the institution has adopted the following mechanisms:

- Examination control cell is functioning in the college which will take care of internal and external examinations

- Examination schedule of the University and the College announced in prior, is added in the academic calendar of events and circulated among the staff, the students and the parents.

- Internal marks are published on time and the information is communicated to the parents and uploaded in the University Web portal.

- The internal marks and attendance are also entered in the University Web portal and the students are given access to view it.

- Proper schedules for result analysis with SPSS and picturing the same to the Principal, is mandated.

- Monthly review of the progress in micro, mini and major projects are carried out.

- Separate committees are formed in each School which takes forward the activities as planned by the cell.

- They also support students in University revaluation process.

2.5.4 Provide details on the formative and summative assessment approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.

✓ The College ensures quality and rigor in the Formative and Summative Assessment process by adhering to the University and institutional norms.

✓ Rubrics for learning activities listing the various expected levels of learning is made and published to the students.

✓ Studentwise and subjectwise assessment is done and the weaker areas are identified.

- ✓ The course plan is a major instrument which outlines the scheme and schedule of internal assessment in each course.

- ✓ Result evaluation by the course in charge after an exam is carried out and thus identifies the weaker students.

- ✓ Class in charge consolidates the marks and interacts with the weak students.

- ✓ Meritorious students are acknowledged / rewarded.

- ✓ Apart from academics, the students are assessed by their co-curricular and extra-curricular activities and the best efforts like Best Library users, Best Outgoing Student, Good Samaritan, and Best Ambassadors are appreciated in the Annual Day celebrations.

2.5.5 Detail on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioral aspects, independent learning, communication skills etc.

- ✓ For the internal assessment, in all courses, the institution strictly follows the norms set by the University.

- ✓ In order to ensure transparency in internal assessment the following measures have been adopted:

  - Publishing the Internal marks on the School notice boards, prior to uploading the mark list in the University portal.

  - Students can verify their marks and raise their voice for a double check through proper channel.

  - If a student has assessment related grievance, she/he can approach the three-tier academic grievance redressal system of the college (Course Faculty - Class in charge -Head of the School).

- ✓ For laboratory courses, the experiment completion, observation and record maintenance are recorded in the attendance and assessment record.

- ✓ The distribution of evaluated answer sheets gives a chance for the students to assess the evaluation process and to identify their mistakes and improve their performance.

- ✓ For internal assessment, the aspects considered for marks internally are behavioral aspects, independent learning and communication skills.

2.5.6 What are the graduate attributes specified by the college/ affiliating university? How does the college ensure the attainment of these by the students?

- ✓ Graduate attributes are attained through the program outcome and evaluated through the direct and indirect assessment methods. The following are the Graduate Attributes (GA) of Mar Ephraem
  - Engineering Knowledge
  - Problem Analysis
  - Design/ Development of Solutions to problems
  - Conduct Investigations on Complex Problems
  - Modern tool usage
  - Understanding of the role of Engineers in the Society
  - Concerns for Environment and Sustainability
  - Response to Ethics in life and Social issues
  - Capability for Individual and team work
  - Good Communication skills
  - Efficient Project management and finance
  - Motivation for Lifelong learning
- ✓ Program Outcomes are mapped with PEO, in the light of Graduate Attributes,.
- ✓ Various teaching, learning, co-curricular and extra-curricular activities are impregnated to ensure the attainment of Graduate Attributes of our graduates.
- ✓ The attainment of Program Outcome is assessed at different level and recorded.

2.5.7 What are the mechanisms for redressal of grievances with reference to evaluation both at the college and University level?

Internal Examinations:
- ✓ The redressal of grievances regarding evaluation in internal assessment at college level is carried out as the faculty shows evaluated copies to the students in the class and discuss the solutions of the question paper.
- ✓ A student can ask if he/she has any doubt in the evaluation and get the same clarified.
- ✓ Grievance in Internal Examination is dealt with the Class in Charge and the Head of the School

University Examinations:

- ✓ The grievance in the University Examination questions like questions which are from out of syllabus, beyond the expectation level are communicated to the Controller of Examination of the University, by the course instructor, through the Principal.
- ✓ The redressal of grievances regarding evaluation in the University Examination is through the following process:
  - Within the stipulated days of the announcement of the results, students can apply for the revaluation through the college.
  - Then the University will send the photocopy of the valued answer script
  - The answer script is then valued by the subject expert and recommended for revaluation.
  - The University values the answer script again and publishes the result.

Year	Schools	No. of Subjects applied for revaluation		No. of Subjects for whom grievances are addressed	
		April/may Exam	Nov/Dec Exam	April/may Exam	Nov/Dec Exam
2016	Mech	233	66	67	22
	Civil	339	350	123	126
	ECE	12	07	36	03
	EEE	31	27	22	21
	CSE	91	29	37	11
2015	Mech	290	295	104	93
	Civil	150	327	61	95
	ECE	42	40	40	64
	EEE	18	24	9	12
	CSE	107	121	33	40
2014	Mech	134	35	126	48
	Civil	156	107	82	64
	ECE	63	93	23	33
	EEE	10	14	6	9
	CSE	63	63	21	27
2013	Mech	86	18	82	23
	Civil	128	98	72	61
	ECE	9	11	7	10
	EEE	5	8	4	5
	CSE	63	15	26	4

Table: University Examination Results

2.6. Student performance and Learning Outcomes

2.6.1 Does the college have clearly stated learning outcomes? If 'yes' give details on how the students and staff are made aware of these?

- ✓ The institution has published its Graduate Attributes GA, PO and PEO through the following media to reach to its stakeholders:

  - Official website of the college

  - Mar Ephraem Informatica-MIS used in our college

  - Program brochures, invitations periodicals and other printed materials like records, progress reports etc..

  - Lab records used by the students

  - Attendance and assessment record used by the staff

2.6.2 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of the course/program? Provide an analysis of the students results/achievements (Program/course wise for last four years) and explain the differences if any and patterns of achievement across the programs/courses offered.

- ✓ Every student has a student profile which is updated and maintained by the mentor.
- ✓ The entry level marks of the students are collected during admission.
- ✓ For every course, activity assessment is made and communicated to the students.
- ✓ After every examination the results are published and sent to the parents.
- ✓ Semesterwise results are published by the University and communicated to the parents, by the college.
- ✓ Achievements of students are published in the website
- ✓ The performance of the students are analyzed under various criteria as excellent (81-100), good(71-80), average(50-70), below average(>50).

Batch	Program	Total Students	No of all clear students	% of pass
2012-16	B.E – Civil Engineering	66	36	54.54
	B.E – Computer science	43	29	67.44
	B.E – Electronics & Communication	53	45	84.91
	B.E – Electrical and Electronics	19	12	63.16
	B.E – Mechanical Engineering	120	58	48.33
	M.E – Applied Electronics	14	14	100
	M.E - Computer Science & Engineering	17	17	100
	M.E – Manufacturing Engineering	18	13	72.22
2011-15	B.E – Civil Engineering	85	34	40

	B.E – Computer Science & Engineering	27	27	100
	B.E – Electronics & Communication	50	40	80
	B.E – Mechanical Engineering	122	79	64.75
	M.E – Applied Electronics	17	15	88.24
	M.E - Computer Science & Engineering	13	6	46.15
	M.E – Manufacturing Engineering	18	15	83.33
2010-14	B.E – Civil Engineering	67	39	58.21
	B.E – Computer Science & Engineering	53	17	32.08
	B.E – Electronics & Communication	65	36	55.38
	B.E – Mechanical Engineering	63	47	74.6
	M.E - Computer Science & Engineering	16	15	93.75
2009-13	B.E – Civil Engineering	63	43	68.25
	B.E – Computer Science & Engineering	14	8	57.14
	B.E – Electronics & Communication	60	31	51.67
	B.E – Mechanical Engineering	66	45	68.18

Table: Four year Result status

2.6.3 How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?

The teaching, learning and assessment strategies of the Institution are structured into four stages to facilitate the achievement of the intended learning outcomes; the aspects of planning are curriculum based, skill based and research based.
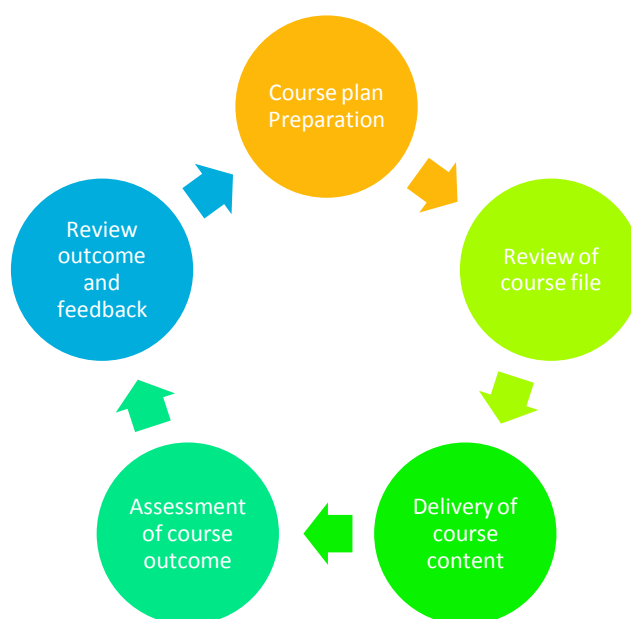
Figure: Achievement of learning outcomes

Planning for the course:

✓ The course is allotted to the faculty well in advance, for course allocation the HOS may follow the below procedure.

• Inviting the faculties to submit the course preference in 1:2 ratio spread over the different semesters

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- If any Course is not preferred by any one of the faculty, identify a competent person for the particular course in the team and assign the course to him assuring his first choice for his second course

✓ If any course is preferred by more than one, HOS can consider one of the following:

- Previous result of the same course

- Seniority in the School

- Feedback of the student

- Specification in the post-graduation.

✓ If the same course is preferred by one faculty continuously for more than 1 year the HOS has to analyze based on the student's feedback and the previous university result of the same Course.

✓ The faculty prepares the course plan with tutorials, assignments, micro projects, content beyond syllabus, industrial visits, interdisciplinary linkage and learning outcomes.

✓ The course file is reviewed by the Head, Director (TL&FD) and the Principal.

✓ For other learning events the need of the event, objectives and expected outcomes are stated and action plan is prepared and reviewed.

Course Delivery:

✓ The faculty has to implement the course file as it is planned.

✓ After the completion of every lesson, the observation of the class has to be entered in the Mar Ephraem Informatica.

Evaluation and Feedback:

✓ The outcomes are assessed and the student's feedbacks about the course are collected as scheduled.

✓ The feedback and minutes of the class committee meetings, regarding the respective course are reviewed by the HOS in the School meeting and the areas for improvement have to be noted. The same has to be entered in the Course file review file and duly signed by HOS and Director (TL&FD)

Review and Replan:

✓ The review of the course preparation, implementation, monitoring and outcomes will be reviewed by the Principal at the end of every semester.

✓ The HOS shall summarize the Program Outcome Achievement status for the Programs at the end of the Odd semester and all CO-PO mapping, PO achievement, CBS, VAC, course exit survey and Program exit survey for the passed out batch.

✓ After that, every faculty has to justify the outcome achievement for the course handled.

2.6.4 What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitude developed among students etc.) of the courses offered?

Specific steps are taken by the College to make the program offered socially and economically relevant. They include,

Student placement initiative taken:

✓ Mar Ephraem has training and placement cell headed by a placement officer

- Career opportunity awareness programs are conducted for every student through the placement cell.

- In the first year, trainings on communication skills like reading, listening, speaking and writing skills are given.

- In the second year, trainings on aptitude modules are given.

- In third year, training on technical skill training is given.

- Mock interviews are conducted in the fourth year.

✓ Special trainings on GATE, IES and competitive exam preparations are given along with each course.

✓ Seminars and online practice is given to the students.

✓ Through the Institution Industry Network, to get industrial exposure, implant training and internship programs are arranged.

Innovation and Research Attitude is developed among students through:

✓ Idea competition is conducted in the campus every year to encourage problem identification for research.

✓ Students are encouraged in E-Yantra competition.

✓ Participation of students in research by three tier system

- Faculty expert in a thrust research area

- Two P.G students under a faculty

- Three to four U.G students of the third year under a P.G student

- Hence a faculty, a P.G student and three to four U.G studentsform a research team.

✓ The challenges from the society are identified, prioritized and listed for the students to come up with innovative ideas.

✓ The student selects an area of interest and identifies few problems in their second year (third semester), every concept in the course in the semester are applied with micro projects.

✓ Every semester students are encouraged to take mini projects towards the solution of the problem identified.

✓ Students are involved in funded research projects conducted in the campus.

✓ Motivation is given to participate in conferences, experts talks and to publish papers in reputed journals.

✓ Project expo is conducted every year and the best research projects are awarded.

✓ Separate Research fund is allocated to the students and the staff by the management to encourage research.

Mar Ephraem fosters Innovation & Entrepreneurship among students through the following ways:

✓ Entrepreneurship awareness camps are conducted in the college to motivate students to become entrepreneurs.

✓ Entrepreneurship development cell is functioning in the campus to train young entrepreneurs.

Social Initiatives are encouraged by the college through activities such as:

✓ N.S.S activities like awareness campaign, organic farming, waste management and green campus.

✓ Red Ribbon Club activities like blood donation

2.6.5 How does the institution collect and analyze data on student performance and learning outcomes and use it for planning and overcoming barriers of learning?

➢ The College gathers data on student performance and learning outcomes through

✓ Feedback from students is collected and analyzed by IQAC.

✓ The feedback includes

- Feedback about faculty

- Curriculum

- Infrastructure

✓ The feedbacks are discussed in school consultation committee and various remedial activities are planned accordingly.

✓ Analyzing the progress of Students to higher education and/or job placements,

✓ Assessing the performance of students in placement drives,

✓ Studying the class wise semester reports (UG), and

✓ Analysis of Graduate Attribute Attainment by students.

✓ Based on the data collected on student performances, the following actions are taken to overcome the barriers of learning.

- Remedial classes are initiated to support students who are weak in specific subjects

- Examination practice for weak students based on previous year question papers are also initiated.

- Peer learning is encouraged among students.

- Focused mentoring and counseling services are offered to students who require special help.

- Career and placement orientation program and finishing school program give direction, clarity and training to students to face job interviews with confidence.

2.6.6 How does the institution monitor and ensure the achievement of learning outcomes?

The following strategies are deployed for monitoring and ensuring the achievement of learning outcomes.

➢ Course Plan which has learning outcomes, student centered pedagogy and evaluation procedures embedded in it are prepared and published in the MIS.

➢ The course plan progression and course outcome attainment level is monitored using direct and indirect tool for the Lesson outcome and the Course outcome.

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➢ Semester-wise result analysis are used as inputs for focused academic Counseling and Mentoring support.

➢ Course feedback (integrated with the computer aided student feedback on teachers) to assesses the quality of curriculum delivery

➢ Analyzing the progression of Students to higher education and/or job placements, assessing the performance of students in placement drives, the academic result analysis as yardsticks of the achievement of learning outcomes. The achievement of learning outcomes are monitored by the Course faculty, Class in charge, Heads, Director and Principal.

2.6.7 Does the institution and individual teachers use assessment/ evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.

Yes, Semester wise formative and summative assessment outcomes are measured using

- ✓ Internal assessment tests,
- ✓ Assignments,
- ✓ Seminars,
- ✓ Quizzes,
- ✓ Discussions,
- ✓ Case study and project assessments and
- ✓ Attendance monitoring.

➢ Analyzing these evaluation outcomes, students with special needs are identified and steps are taken to cater to their needs.

- ✓ Peer teaching, leadership association, micro, mini and major projects etc, are given to students with higher potential.
- ✓ For students who need additional support remedial classes, tutorials, remedial tests, special mentoring meetings and interactions are arranged.
- ✓ In order to recognize a student's performance, awards like
  - Best Outgoing Student,
  - Best Researcher,
  - Best Ambassador award and
  - Good Samaritan award have been instituted.

Criterion: III

Research, Consultancy and Extension

CRITERION III
RESEARCH, CONSULTANCY AND EXTENSION

3.1 Promotion of Research

3.1.1 Does the institute have recognized research centers of the affiliating University or any other agency/organization? If yes give details on the research centers and the facilities available.

Yes, Mar Ephraem has established a centre for Research and Innovation on campus itself to promote research in diverse fields of engineering. Thus it is an inevitable fact that Mar Ephraem lays great emphasis on research which leads to continued innovation. All efforts are made by the institution to promote research culture on campus. As a result of concerted and continuous efforts in this direction, the following are the significant achievements:

- School of Computer Science Engineering has established Mar Ephraem International Centre for Medical Image Processing with well-equipped laboratories to carry out research activities in medical image processing and is well connected with industries/research organizations as well.
- Faculty members from in and out of the campus pursue research in our R&D labs on a part-time basis.
- Mar Ephraem acts as a recognized center for research and guidance for researchers from different University akin Anna University, Satyabhama University, Bharathiar University, Manonmaniam Sundaranar University etc.
- Application to register Mar Ephraem as research center with Anna University is filed and is under process.

3.1.2 Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition, mention a few recommendations which have been implemented and its impact.

Yes, Mar Ephraem has an Interdisciplinary Research Committee to monitor and address the issues of research, the composition is as follows:

Sl.No	Name	Designation
1.	Dr. A. Lenin Fred	Chairperson of Research Advisory Board
2.	Dr. N. Austin	Head of Research Advisory Board, Professor / MECH

3.	Dr. Binu Selin	Advisory Expert, Professor / Mathematics
4.	Dr. Melba Kani	Advisory Expert, Professor / Mechanical
5.	Mr. Rajeev	Advisory Expert, Associate Professor / Mech
6.	Mr. Anand Regilin	Advisory Expert, Associate Professor / Civil
7.	Mr.V. Suresh	Advisory Expert, Associate Professor / ECE
8.	Mr. Leo Bright Singh	Member- Research Advisory Board/ Mechanical
9.	Mr. Kumar S.N	Member- Research Advisory Board/ ECE
10.	Mr. Arthur Vasanth	Member- Research Advisory Board/ EEE
11.	Mr. Anish John Paul	Coordinator- Research Advisory Board
12.	Mr. Babin	Member- Research Advisory Board/ ECE
13.	Mr. Jackson Thanga Roy	Member- Research Advisory Board/ Mechanical
14.	Mrs.Austy Evangelin	Member- Research Advisory Board/ CSE
15.	Mrs. Ashy V Daniel	Member- Research Advisory Board/ CSE
16.	Mrs. Dhanya	Member- Research Advisory Board/ CSE

Based on the recommendations made by the Research and Consultancy Advisory Board,

➢ Suitable training programs are suggested for all staff and students.

➢ The committee continuously reviews the work of Ph.D. research scholars.

➢ Various National and International conferences in emerging areas are organized.

➢ Faculty members are preparing and submitting research proposals to various funding agencies in India and overseas

➢ Internal assessment of the research proposals are done by the experts from Research Advisory Board.

➢ The frequency of meeting is four per annum.

➢ Three tier procedures are followed for student's projects which goes through; mini, micro and major projects.

➢ As a result of focused and coordinated efforts of the Research Advisory Board, 2 projects from DST and 1 project from ISRO were sanctioned in the year of 2015-16.

➢ The number of projects submitted to different agencies for funding is steadily increasing every year with the support of Interdisciplinary Research Committee.

Recommendations	Implementation	Impact
OD for researchers	Attending conferences, training programs, Workshops	Journal Publications
Leave for full time Ph.D.	Motivation to do Ph.D in reputed institutes	Effective Research activity and publications
Training programs	Gain Knowledge and interaction with many experts	Skill development
Organization of National and International conferences	Gain Knowledge and interaction with many experts	Skill development
Submission of Research proposals	Patent, Publications and Innovative Products	Society development

3.1.3. What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes /projects?

Autonomy to the Principal investigator:

➢ The principal investigators/ faculty are given freedom to apply for any research projects Nationally and Internationally.

➢ The principal investigator is given freedom to access all facilities on campus.

Timely availability or release of resources:

➢ The expense for preparing the proposal till it gets succeeded is provided by the college.

➢ They are given freedom to select any faculty/ staff/ recourse as per their requirement for their team.

➢ Financial accounts are maintained by the Principal investigator and the college jointly and has given the freedom to use it, as per the sanctioned value.

Adequate infrastructure and human resources:

➢ Usage of infrastructure for research is provided with full support.

➢ Facilities like uninterrupted power supply, electricity, water etc are given duringnon-office hours also.

➢ Common facilities like conference halls, seminar hall, internet, video conferencing, telephone are also provided.

Time-off, reduced teaching load, special leave etc. to teachers:

➢ Investigators in research projects are provided with reduced teaching workload.

➢ Special leaves and O.D are given to carryout research related activities as per their need and request.

Support in terms of technology and information needs:

- ➢ Library is updated with the required technical books
- ➢ Laboratories are updated as per the needs of the research.
- ➢ For research, collaborations are made with external research institutions to use their facilities and expertise.
- ➢ Research laboratories are computerized and connected with wifi and internet.
- ➢ Management arranges visit to National and International research agency. Few of such visits are listed below.

Table: *Visit to Reputed Institutes*

Sl.No	Date	Name of the faculty	Visited Institute	Outcomes
1	August 2014	Dr.A.Lenin Fred	Agency for Science, Technology and Research, Singapore, Singapore Bio-imaging Consortium (SBIC)	Collaboration, Research Publication
2	May 2015	Dr.N.Austin	Agency for Science, Technology and Research, Singapore, Robotics Lab, Singapore	Collaboration, Research Publication
3	November 2016	Dr.A.Lenin Fred, Dr.N.Austin, Mr. Leo Bright Singh	IIT Guwahati	Collaboration, Lab Visit
4	June 2016	Dr.A.Lenin Fred Mrs. Shanmugha Priya	Wolkite University, Ethiopia	Collaboration, MIS & Website Development
5	Feb 2016	Dr.A.Lenin Fred Dr.N.Austin Mr. Leo Bright Singh Mr. Anish John Paul	National Banana Research Institute, Trichy	Collaboration, Testing

Facilitate timely auditing and submission of utilization certificate to the funding authorities:

After completion of the project by the Principal investigator, the College arranges for auditing of financial 'in-out's and also assists in obtaining the utilization certificate for submission to the respective funding agency through Project Management Cell.

3.1.4 What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?

Mar Ephraem promotes research temper and research culture among students by various promotional activities.

➢ Seminars and workshops are conducted on research methodologies in the third semester for all students.

➢ Idea competition is conducted in the campus every year to encourage problem identification for research, which traps 'n' number of ideas of versatile natures from the students.

➢ Research participation of students in three tier system

- ✓ Faculty expert in a thrust research area
- ✓ Two P.G students are assigned under a faculty to work on the thrust area of research.
- ✓ In turn, these P.G students are supported by four U.G students from pre final year, for exposure in research.
- ✓ Hence a faculty, a P.G student and three to four U.G students form a research team.

➢ The student selects an area of interest and selects challenges identified from the society in their second year (third semester) thus, every concept learned in the course, in the semester is applied with micro projects.

➢ Students are involved in funded research projects which are conducted in the campus.

➢ A strong motivation is provided to the students to participate in conferences, expert talks and also to publish papers in reputed journals.

➢ Project expo is conducted every year and the best research projects are awarded.

➢ Separate Research fund is allocated by the management to encourage research.

➢ Conducting micro projects at course level and mini projects at every semester, to initiate research.

➢ Conduction of International and National conference in campus, in collaboration with National research institutes, to promote research.

➢ Students are motivated to participate in e-Yantra competition sponsored by MHRD, GoI

➢ Seed money which is the prime source for research in the student level is initiated by the institution and thus the institution serves as a funding agency for student level research and projects.

3.1.5 Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative research activity, etc.)

➢ Our faculties are research guides of Anna University, Sathyabama University, M.S University and Bharathiar University. Faculties are involved in guiding Ph.D. scholars.

➢ Many faculty members applied for funded projects in which they are principal / co principal investigators.

➢ Every faculty is trained in an area of expertise, their expert areas are detailed to the students to attract them, the interested students, join the research team of their choice, they are also involved in funded research projects, publication, product development and patenting.

➢ Interdisciplinary approach is adopted throughout the entire process.

➢ Faculty members guide UG and PG students in their final semester and in-house projects categorized as micro, mini and major projects.

➢ Faculties guide and motivate students to participate in the innovative project competition held in the college every year.

Leading Research Projects:

Sl no	Faculty	Title	Funding Agency	Status
1	Prof.Dr. A. Lenin Fred (PI) Mr. S. N. Kumar (Co PI) Dr. P. Sebastian Vargheese (CoPI)	Development of a portable instrument for medical image analyzing, compression and transmission compatible for CT/MRI low slice thickness images	DST	Ongoing
2	Prof.Dr. A. Lenin Fred (PI) Mr. Jackson Thanga Roy (Co PI)	Development of Automated Rubber tapping machine to improve the Socio-Economic Status of Rubber Growers in Rural Areas	DST	Ongoing

3	Prof.Dr. A. Lenin Fred (PI) Mrs. D.Dhanya (Co PI)	Development of customized software for the Data Management related to integration of Cryo Upper Stage(CUS-SOFT)	ISRO Respond	Ongoing
4	Prof.Dr. A. Lenin Fred (PI) Mrs. R. K. Shanmugha Priya (Co PI)	Development of Dynamic Website for Wolkite University	Wolkite University	Ongoing
5	Prof.Dr. A. Lenin Fred (PI) Mrs. R. K. Shanmugha Priya (Co PI)	Management Information System for Wolkite University	Wolkite University	Ongoing

3.1.6 Give details of workshops/ training programmes/ sensitization programmes conducted/organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students.

➢ Research orientation training was given by Dr. Pachaimal on 11/8/2012 to 13/8/2012

➢ International conference on Engineering & Scientific Innovations (ICESI-2015) on March 20,21-2015

➢ Mar Ephraem in collaboration with Rajiv Gandhi Centre for Biotechnology conducted an International Conference on "Translational Medicine and Imaging" (ICTMI) on 4th and 5th March 2016. The conference ended as a great grand success as we were able to attract leading scientists like

1. Prof. David W. Townsend, Director Clinical Imaging Research Centre (CIRC) Singapore, and founder of PET/CT imaging system.

2. Prof. Balazs, Professor and Scientific Director Nanyang Technological University (NTU) Singapore.

3. Prof. Richard Reynolds Professor of Cellular Neurobiology, Imperial College London.

4. Dr. Ramasamy Paulmurugan Assistant Professor of Radiology Stanford University Technology and Innovation Park, U.S.A.

5. Dr.Michele M Bailey, Director, Comparative Medicine and Attending Veterinarian, Yong Loo Lin School of Medicine, National University of Singapore Centre for Life Sciences.

6. Prof. Murukeshan V M, Associate Professor, School of Mechanical & Aerospace Engineering, Nanyang Technological University, Singapore.

Several workshops, training programs and sensitization programs were arranged based on the need of the faculty. The list is as follows.

Name of the Event	DATE	RESOURCE PERSON
National Level Technical Symposium EPIC-16	10/08/2016	Mr.R. Chandramohan, Placement officer, Kongu Engineering College, Erode.
Design and fabrication of steel structures	29/07/2016	Mr. Parameshwaran, C.E.O, Tradition Construction Company
Programming in C language	19/09/2015	Mr. Gavaskar / Asst. Prof, St. Xavier's Catholic College of Engg, Nagercoil
A national level technical symposium	26/09/2015	Mr. Satheesh Gopi
Workshop on concrete mix proportion	27/03/2015	Er. Manavalan Joseph
Preparing research project proposal for government funding agency	07/06/ 2015	Prof. Dr.Ashok, Mepkco Engineering College, Sivakasi
Workshop on SPSS - a tool for statistical analysis of students performance, research and faculty improvement	06/06/ 2015	Prof.Dr. Binuselin
Embedded systems and real time applications	27/09/2014	Er.L. Jinlal, Controls Engineer Jlr, Tataelxsi, Technopark Campus.
Applications in computer hardware and networking	17/02/2014	Er.M.Vijay Ganesh, Software Engineering, Paxterra Software Solution Private Limited, Bengaluru.
Workshop on nuvoton microcontroller	27/08/2014 & 28/08/2014	Er.Sheik Abdullah, Alaa Technologies, Pudukkottai
Industry institute interaction program	01/09/2014	Mr. Anbu Thomas Samuel / Director, Stup Consultant Pvt Ltd, Bangalore
Industrial institutional interaction programme-2014	09/01/2014	Mr. P.Baskaran& Mr. Baaldwin Bruce/ Project Manager , Global Petro Project Service, Switzerland, & Secretary, Builders Association India
Recent advancement in computer and communication engineering (RACCE'14)	14//03/2014 to 15/03/2014	Captain S.K.Thakur (Director - Projects, DIPAC, Mod, New Delhi)
Workshop on C programming	10/11/2014 to 18/11/2014	Prof.Dr.A.Lenin Fred

Seminar on Recent challenges in Information & communication technology	13/02/2014 to 14/02/2014	Dr.S.G. Prakash Vincent
Students Projects and Funded Projects	18/06/2014	Prof.Dr.Kanagasabapathy, NEC, Kovilpatti
Programming in C language	31/07/2013	Mr. Gavaskar / Asst. Prof, St. Xavier's Catholic College Of Engg, Nagercoil
Advancements in signal processing	24/07/2013	Mr. Arun V Aloshious (IIT Madras, Research Scholar)
Emerging trends in communication	20/03/2013	Dr.V.Vetrivel, IIT Madras.
International collaborative industrial interaction program	08/04/2013& 09/04/2013	Mr. Richard Joseph Cheng &Mrs. Anne Cheng / Director, Environ Construction Company Pvt Ltd, Singapore
Industry institute interaction program	29/07/2013	Mr. Anbu Thomas Samuel / Director, Stup Consultant Pvt Ltd, Bangalore
Recent advancement in civil engineering 2013(ACE-t13)	10/4/2013	Dr.Sekaran.V / Principal, C I College Of Engineering
Recent advancement in computer and communication engineering(RACCE'13)	15/03/2013	Prof.Dr. S. Thamaraiselvi M.E.,Ph.D (Dean, MIT Campus, Anna University-Chennai.)
Workshop on Computer hardware and networking (Trigger -13)	19/02/2013 to 26/02/2013	Prof.R.P.Anto Kumar, Head / Department of IT, St. Xavier's Catholic College Of Engg&Team
Workshop on Journal Writing	6/6/2012	Prof.Lakshmi Narashiman, West Carolina University, USA
Research Methodology in Image Processing through Sci-Lab	11/10/2012-13/10/2012	1.Prof.Dr.A.Lenin Fred 2.Dr.R.K. Selva Kumar
Seminar on Molecular Imaging	1/10/2012	Mr.Parasuraman Padmanabhan, LCIMS, NTU Singapore
Seminar on career Guidance	14/08/2012	Mr.Justin Jose
Workshop on Project Proposal Writing	11/8/2012 to 13/8/2012	Prof.Kamaraj, TNAU
Seminar on various funding agencies and options	4/6/2013	Prof.Murugasen, SRM University
Seminar on Evaluation of students project report	5/6/2013	Prof.K.T. Job, Professor, Centre for Management Development,

		Thiruvananthapuram
Workshop on research and developments in nano Technology	November 2012	Prof. Krishna Gopa Kumar Warrior, Scientist, National Institute for Inter Disciplinary Research.
Java Programming	21/7/2011	Prof. Saravanan
Training Program on "Soft Skills for Employability"	1/10/2011	Dr.R.Mohan Kumar
seminar on Cyber Crimes: Challenges and Issues	24/9/2011	Mr.N.VinayaKumaran Nair
seminar on I phone Customer Application Development	8/7/2011	Mr.Nalan Chakaravarthy

3.1.7 Provide details of prioritized research areas and the expertise available with the Institution.

Mar Ephraem has enlisted faculty on their prioritized research areas considering expertise available and the overall vision and mission of the college. List of faculty members and their prioritized research areas available with the institution:

Sl.No	Area of Research	Faculty
1	Medical Image Processing	Dr. A. Lenin Fred
		Mr. S. N. Kumar
		Mrs. Ashy.V.Daniel
		Ms. Shobhana
		Mrs. L. R. Jonisha Miriam
		Dr. BinuSelin
		Mrs. L. T. Herlin
		Mrs. Benisha Janice
		Mrs. Lincy
2	Thermal Engineering	Dr N Austin
		Mr. Vijayakumar
		Mr. Joseph Bencier C.K
3	Power electronics for renewable energy sources	Mr. Anish John Paul.M
		Mr. Arthur Vasanth
		Mrs. NandiniPriya
4	Robotics	Mr. V Suresh
		Mr. John Pradeeb
		Mr. Abhilash
5	VLSI	Mrs.Reeba Rex

		Mr. Lalin L Laudis
6	Cloud Computing	Mrs.Dhanya
7	Metal Matrix Composite	Mr. Rajeev
		Mr. John Iruthya Raj
		Mr..Lalu G Robin
		Mr. Leo Bright Singh
8	Manufacturing	Mr. Beschiselvan
		Mr. Anto
		Mr. Manoj
		Mr. Dani
9	Computer Aided Design	Mr. Jackson Thanga Roy
10	Fluid Mechanics	Mr.Arun
11	Alloys	Mr. Godwin Pithalis N.E
12	Energy Engineering	Mr. Franklin.G
13	Networking	Mr. Ashwin Singergi
		Mrs.ShanmughaPriya
		Mrs.Janila
		Mrs.Ayana
14	Data Mining	Mr. Babu
		Mrs.Austy E Evangeline
		Mrs.InnasiLinita
15	Concrete Technology	Mr. AnandRegilin
		Mr. Bright Winsley
16	Converters	Mr. Arthur
17	Power Distribution	Mr. Huxley

3.1.8 Enumerate the efforts of the institute in attracting researchers of eminence to visit the campus and interact with teachers and students?

The institute makes concerted efforts to attract researchers of eminence from academic and industrial background to visit the campus and interact with faculty members and students through national and international conferences organized by the departments, seminars, workshops and innovative project competitions. To name a few of the experts who visited our campus are

Sl no	Experts	Designation	Date of Visit
1.	Dr.C. Kamaraj	Senior scientist of Central Road Research Institute, New Delhi	October 27th, 2010
2.	Captain S.K.Thakur	Director projects, DIPAC, MoD, New Delhi	March14th to 15th,2014
3.	Prof. Dr. S.	Dean, MIT Campus, Anna	March 15th 2013

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	ThamaraiSelvi M.E.,Ph.D	University-Chennai	
4.	Dr.Kandaswamy.P	Department of Mathematics, Bharathiar University, Coimbatore-641046	August 22,2016
5.	Dr.Ganesan.K	Department of Physics, Manomaniam Sundaranar Univ., Abishekapatti, Tirunelveli 627 012	August 22,2016
6.	Dr.S.Soma Sundaram	Associate Professor Department of Microbiology and Cell Biology Indian Institute of Science Bangalore -	August 22,2016
7.	Dr.Perumal Subramanian	Assistant Professor Deptt of Physics Indian Institute of Technology Guwahati	August 24,2016
8.	Dr.Manoharan.K	Professor & Head Dept of Plant morphology Centre for Excellence in Genomic Sciences School of Biological Sciences Madurai Kamaraj University, Madurai 625 021	August 24,2016
9.	Prof. Somnath Das Gupta	Metamorphic Petrology, Ore Geology, Precambrian Geology	August 26,2016
10.	Prof. Selvam G.S	Professor & Head Department of Biochemistry Center for Excellence in Genomic Sciences School of Biological Sciences Madurai Kamaraj University, Madurai 625021	August 26,2016
11.	Dr.Kumaresan.G	Reader Dept. of Genetics Centre for Excellence in Genomic Sciences School of Biological Sciences	August 26,2016

3.1.9. What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?

➢ Mar Ephraem is provides study leave for the faculty who are pursuing fulltime PhD programme.

➢ Faculties are given O.D and leave to present/ attend conferences/ seminars/workshops.

➢ Motivation towards research shown by the management has made 22 faculties to register for PhD in various Universities.

3.1.10. Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land)

➢ Mar Ephraem adopts '3L' (Land to Lab to Land) concept for transferring research findings. Its perception is to transform challenges to solution, solution to product. Mar Ephraem also serves as a transforming medium from potential resource to technology enhancement, then to the land for the users.

➢ The initiatives taken by the institution to share research knowledge are categorized under three heads, viz, print & online media, Institutional systems &procedures, and faculty as resource persons.

➢ Interesting and important research contributions from the college are given publicity through newspapers, electronic media, televisions channels, website, social media and college newsletter.

➢ Project expo is conducted once in every year to transfer the research findings and funnel it to the student level.

➢ Research achievements are showcased as banners on campus for greater visibility.

➢ Research findings are also patented and published in indexed and peer refereed journals.

➢ Faculties are encouraged in 'knowledge sharing activities akin, delivering lectures, F.D.P s, workshops as a resource person in other institutions.

3.2 RESOURCE MOBILIZATION FOR RESEARCH

3.2.1. What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.

To carry out the research facilities Mar Ephraem College provides a par share from its budget.

➢ The budget allocation is used for conducting hands on trainings and seminars with the help of industrial partners, conducting workshops, national and international conferences, providing scholarship grants concerned with research activities for

students and faculty members, industrial visits, in-house training and evaluation, and other similar activities for the enhancement of research.

➢ The amount is spent in top priority for improving the facilities of library and laboratory.

➢ A part of the amount is utilized for purchasing books, Journals, e-books, online resources, software tools, hardware components like Raspberry Pi and Arduino kit, computers, Wi-Fi facilities and research promotion measures.

➢ The college encourages the faculty to participate and to conduct various faculty development programs in other reputed institutions.

Expenditure on Research

Sl. No	Student Name	Research Project	Amount Disbursed	Year
1	Cibin Babu Sajith Joy Tobin tony	Intelligent Latex Sensor for Rubber Tree	18,000	2016-2017
2	Vinoth Arjun Merlin Suder Renin Saviour	Design and Structural Analysis of Mechanical Module for Automated Rubber Tapping Machine	40,000	2016-2017
3	Robotics Team	E-yantra Project	1,00,000	2016-2017
4	Robotics Team	E-yantra Project	10,000	2016-2017

3.2.2 Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?

➢ Yes, the institution is has a provision to provide seed money to the faculty for research expense based on the need and request. Seed money of 3 lakh is available for the faculty for research purpose.

➢ The institution also provides fund for participating in National conferences, International conferences and research workshops outside the college upon individual request.

➢ Selection of the research project for getting seed money is governed by the criteria in the research policy. Every selected research project is given INR 25,000/- as seed money.

➢ Every year during the Annual Day celebrations, the best faculty researcher award is given to the faculty who shows outstanding outcomes in research.

SI.No	Faculty Name	Purpose	Amount	Year
1	Mrs. Shanmugha Priya R.K	Digital Marketing training	14,300	2016
2	Ms. Shobhana.S	Digital Marketing training	14,300	2016

3.2.3 What are the financial provisions made available to support student research projects by students?

To encourage research Mar Ephraem supports students by various schemes.

➢ Every year during the annual day celebrations, the best student researcher award is given to the student who shows outstanding outcomes in research.

➢ Expense to participate in national level research competitions and financial support is provided to students to participate in national level project contests like, E-yantra, Smart India Hackathon and seed money for research are supported by the respective School fund.

➢ Every year project expo is made to showcase micro, mini and major projects and the students are awarded with INR 3,000 for the first prize and INR 2,000 for the second prize in each category.

➢ Students select their research area by identifying the societal problem based on in-depth field study.

➢ The students are supported with laboratory facilities, skill assistance and other facilities to carry out their research projects.

Sl. No	Student Name	Research Project	Amount Disbursed	Year
1	Cibin Babu, SajithJoy Tobin tony	Intelligent Latex Sensor for Rubber Tree	18,000	2016-2017
2	Vinoth, Arjun Merlin Suder Renin Saviour	Design and structural Analysis of Mechanical Module for automated rubber tapping Machine	40,000	2016-2017
3	Robotics Team	Eyantra Project	1,00,000	2016-2017
4	Robotics Team	Eyantra Project	10,000	2016-2017

3.2.4. How does the various departments / units / staff of the institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavors and challenges faced in organizing interdisciplinary research.

➢ Interdisciplinary research is very much encouraged by the institution as proposed by the research committee of the college.

➢ Separate interdisciplinary research forum is functioning on campus to promote interdisciplinary research.

➢ The management motivates the faculty members to do interdisciplinary research for their academic career and for the welfare of the society.

➢ The institution encourages students for doing innovative project with respect to interdisciplinary research.

➢ The project that is 'on-going' in the campus is also an interdisciplinary research projects.

Sl. No	Faculty/Student Name	Title of the project	Area of Research
1	Dr. A. Lenin Fred Mr. Leo Bright Singh	Development of a Portable Biosensor and Purification System for Rapid Detection of Pathogens and Purification of Drinking water to enhance its Quality	Bio-Technology
2	Dr. A. Lenin Fred Mr. John Pradeep	Design and development of a thermal protected intelligent machine with heat resistive coating for assisting the fire rescue team with optimal path guidance in human detection at fire disaster environment	Robotics
3	Dr. N. Austin Mr. Franklin	Development of medicinal juice and fibre products from banana stem aligned with entrepreneurial opportunities to enhance socio economic development in South Tamilnadu	Instrument Development
4	Dr. A. Lenin Fred Mr. Anish John Paul	Development of Solar Powered Smart Dhobi Cart to improve the livelihood of traditional Indian Dhobies	Product Development
5	Mr.Lalin L Laudis	Smart Irrigation System Using Moisture Sensor	Product Development
6	Mrs.L.T. Herlin	TechLocat - Mobile App for locating Home Maintenance Technicians	Mobile App Development
7	Mrs.R.K Shanmugha Priya	Automated Post Harvest Management System for Horticulture	Product Development

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8	Mr.John Thankam	Automated Hydrophonic Cattle Feeder System	Product Development
9	Mrs.M.Manjusha	Smart Domestic Poultry	Product Development
10	Mr.Gigin Durai	Low Cost Semi-automatic Candle Making Machine	Product Development
11	Mr.D.Dani	Semi Automatic Tea Blender	Product Development
12	Mr.Bravin Ebanesh V	Trans power Pack	Product Development
13	Ms.Shobana	Digital marketing through Website and Mobile app for promoting business	Mobile App Development

3.2.5 How does the institution ensure optimal use of various equipment and research facilities of the institution by its staff and students?

Mar Ephraem is committed to providing good infrastructural facilities for research development. This facility is made available to students, faculty and people outside. The optimal usage of facilities is ensured by providing availability, accessibility, flexible timings, motivation and tracking for feedback, among other things.

➢ The departmental facilities and instruments are available for use by the faculty members and students for day-to-day practical classes, research projects and in organizing seminars/workshops.

➢ Provision for training faculty members and students related to the specific use of a particular instrument is available in the institution.

➢ It is ensured at the time of procuring an instrument that the product specialist gives a demonstration to the faculty and laboratory staff about the various parts and use of the instrument.

➢ Laboratories are upgraded to conduct consultation projects.

➢ Regular visits are conducted with other research institutes to identify the procedures, equipments and facilities available for upgrade.

➢ Log registers are also maintained to monitor the usage.

➢ The library and the labs can be made available till late hours and on holidays by getting prior permission.

➢ Internet connectivity is round the clock.

3.2.6 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If 'yes' give details.

➢ Yes, the institution received grant from beneficiary agencies for developing research facility.

➢ The institute has received grants from industries through consultancy work and sponsored projects.

➢ The details of consultancy work and sponsored projects are provided in the Table.

Industry / Beneficiary Agency	Amount
Metro Scan, Trivandrum	3,00,000
E- yantra Lab	1,50,000
Ideal Constructions Pvt. Ltd.	37270
Paver Block (J.J & S.K)	750
Green Build and Shelters	4250
Southern Railway	82350
Medical Testing	400

3.2.7 Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organizations. Provide details of ongoing and completed projects and grants received during the last four years.

➢ Management encourages faculty to go with funded projects and open up the gate for the staff to use facilities of the college for free of cost.

➢ Travel expenses for the project proposal presentation will be met by the management.

➢ The institution arranges expert lectures on Research Methodologies/ How to Write Successful Research Proposal/Research Papers.

➢ The institution is seeding collaboration with Singapore Environ Constructions, Singapore, A STAR, Metro Scans, Trivandrum, Pushpagiri Institute of Medical Science, Tiruvalla, AUSIND PVT Ltd., Australia, Rajiv Gandhi Centre for Biotechnology, Trivandrum, Changsha University of science and technology, Malankara Catholic College, Mariagiri, MIDS, Wolkite University, Ethiopia, B-Soft LLC, USA, ISRO, Trivandrum and Kovai Medical Research Centre, Coimbatore.

➢ Details of ongoing and completed projects and grants received during the last four years are given in Table.

Number of Ongoing Projects : 5
Number of Collaborative Projects : 1

Nature of the Project	Duration	Title of the Project	Dated with No	Name of the Funding Agency	Total Grant (Rs.)		Total Grant Received Till Date
					Sanctioned	Released	
Inter disciplinry Projects	3 Years 21.05.2016 to 21.05.2019	Development of Automated Rubber tapping machine to improve the socio-Economic Status of Rubber Growers in Rural Areas	DST/SSTP /TN/377	DST	37,69,651/-	15,13,251/-	15,13,251/-
	3 Years 13.05.2016 to 13.05.2019	Development of a portable instrument for medical image analysing, compression and transmission compatible for CT/MRI low slice thickness images	IDP/MED/ 03/2015	DST	34,38,400/-	12,16,477/-	12,16,477/-
ISRO Respond Project	1 year 14.06.2016 to 14.06.2017	Development of customized software for the Data Management related to integration of Cryo Upper Stage(CUS-SOFT)	ISRO/RES/ 3/710/16-17 DATED May 16,2016	ISRO RESPOND	10,85,000/-	10,85,000/-	10,85,000/-
Students Research Projects	3 Months	Detection of Poisonous gas using Robots	TNSCST/2 013/109-23	TNSCST	8000/-	8000/-	8000/-
University Sponsored Projects	6 Months	Management Information System for Wolkite University	NA	Wolkite University	6,30,000/-	-	-
	3 Months	Development of Dynamic Website for Wolkite University	NA	Wolkite University	2,10,000/-	-	-

3.3 Research Facilities

3.3.1What are the research facilities available to the students and research scholars within the campus?

➢ Mar Ephraem College is proud of its culture of research and innovation that it has fostered and the worthy reputation that it has garnered in the academic world.

➢ The research facility available within the campus to the students and research scholars are listed below:

✓ Well-equipped laboratories with research equipments

✓ Conference rooms for research brainstorming.

✓ Green campus with learning atmosphere

✓ Faculty expert in all thrust areas

✓ Skilled technicians to operate equipments/ instruments

- ✓ Regular training on research methodology
- ✓ Training on how to write project proposals
- ✓ Trainings on Sense, analyze and respond concept in research
- ✓ Well-equipped library
- ✓ Digital laboratory for research

3.3.2 What are the institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research?

- ➢ The strategy of Mar Ephraem is to identify budding researchers amongst teachers and students and provide resources.
- ➢ The college ensures that all research related activities are timed well in advance and in such a way that they do not hamper the normal regular duties of teaching.
- ➢ Well-equipped laboratories with high speed processor computer systems and advanced software.
- ➢ The laboratories are fully networked and well equipped for the students and faculty members to undergo their projects and research works.
- ➢ Every year we update the research facilities in the library.
- ➢ Laboratories and library are well equipped with Wi-Fi.
- ➢ Research groups with various emerging areas are initiated to promote the intellectual ideas to practice
  - ✓ Mar Ephraem center for Medical Image Processing to do research in imaging and to meet the challenges in the medical field.
  - ✓ Robotics Lab for creation of robots for the welfare of the society.

3.3.3 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities? If 'yes', what are the instruments / facilities created during the last four years:

No, The College has not received any financial assistance from industry or other agency for developing research facility.

3.3.4 What are the research facilities made available to the students and research scholars outside the campus / other research laboratories?

- ➢ Mar Ephraem has collaborated with various research laboratories all over the world for the benefit of its researchers.
- ➢ UG and PG Students are assigned research projects/ dissertations.

➢ Students are encouraged and supported in taking up projects in industries.

➢ Some parts of their dissertations (testing/ analysis) are carried out at University laboratories as well as in other national laboratories.

➢ The faculties take all necessary efforts and ensure that facilities needed for student projects are fulfilled.

➢ MoUs signed with industries also open up avenues for students to take guidance from Industrial engineers for their research and also use equipment and other facilities available in the organization.

➢ Following is the list of institutional Collaborations.

Research laboratories	• Malankara Catholic College, Mariagiri • Rajiv Gandhi Centre for BioTechnology, Thiruvananthapuram • Pushpagiri Institute of Medical Sciences, Thiruvalla • A STAR, Singapore • B SOFT LLC, USA • Metro Scan, Trivandrum • ISRO ,Trivandrum • Wolkite University, Ethiopia • AUSIND PVT Ltd., Australia • Changsha University of science and technology, • Kovai Medical Research Centre, Coimbatore. • FAB lab,Trivandrum

3.3.5 Provide details on the library / information resource center or any other facilities available specifically for the researchers?

Library

➢ well-equipped library with enormous collection of books, Journals & back volumes etc

➢ Wi-Fi internet connectivity with high speed.

➢ Access to E-Resources (E-Journals, E-Books, E-thesis & online databases) by researchers

➢ Online Public Access Catalogue (OPAC) facility

- 90 print periodicals including 45 international journals are being subscribed in our Library.
- E- Library with 510 CD ROM database, NPTEL video lectures and web courses in various disciplines.
- Mar Ephraem Library is an Institutional member in DELNET.
- Separate area for research discussions.
- Non available books and journals are purchased based on request.

3.3.6 What are the collaborative research facilities developed / created by the research institutes in the college. For ex. Laboratories, library, instruments, computers, new technology etc.

The college has been privileged enough to have the collaborative research facilities developed or created by the research institutes etc. in the college as:

SI.no	Funding Agency	Instruments/Facilities
1.	Department of Science and Technology, Government of India (DST)	Development of Automated Rubber Tapping Machine
2	Department of Science and Technology, Government of India (DST)	Development of portable instrument for medical image analysis.
3	MHRD	e-yantra Lab
4	TNSCST	Gas sensing Robots
5	ISRO	Software development
6	Wolkite University	Website and MIS development

3.4 Research Publications and Awards

3.4.1 Highlight the major research achievements of the staff and students in terms of Patents obtained and filed (process and product) :

Inventors	Title	Date of filing and Registration No
Prof.Dr.Lenin Fred	An automated machine capable of sensing the latex layer of the rubber tree and tapping the latex fluids without damaging the cambium layer of the rubber tree'	201641023740, **CBR Number:**16163 dated 12-07-2016'.

Prof.Dr.Lenin Fred	An easily movable solar roofed smart ironing cart to interact with users through mobile applications'	6373/CHE/2015, **CBR Number : 24462** dated 27-11-2015'

∗Original research contributing to product improvement;

SI.No	Projects	Funding Agency
1	Development of Automated Rubber tapping machine to improve the socio-Economic Status of Rubber Growers in Rural Areas	DST,GoI
2	Development of portable instrument for medical image analysing, compression and transmission compatible for CT/MRI low slice thickness images	DST, GoI

∗Research studies or surveys benefiting the community or improving the services:

Almost all projects listed above are focused towards improving the services to consumers and for the ultimate benefit of the society. Students are actively involved in such research projects to give them awareness on the importance of carrying out projects the outcome of which will be of direct use to the society.

1.	Research Project, "Rubber tapping'' – A development of rubber trapping machine for easy usage of social workers.
2	Research Project, "Telemedicine"- A development of telemedicine equipment for medical image analysing in medical field.
3	Research Project, "Dynamic website"- A development of dynamic website for the usage of university.
4	Research Project, "Management Information System"- A development of Management Information System for university.
5	Research Project, "Customized software"- Development of customized software for the Data Management related to integration of Cryo Upper Stage(CUS-SOFT)
6	Gas Sensing Robots
7	Online energy motoring and energy conservation API using Smart Meters
8	Automatic solar tracking system for human wave detection based street light
9	Fuzzy Logic based reduced switch inverter for BLDC Motor aped control
10	Mobile Phone Detector using Op Amp
11	Wireless power transmission system using inductive coil

∗Research inputs contributing to new initiatives and social development:

➢ The research inputs for contributing new initiatives and social development are obtained from the students and the staffs ,which include following process

✓ Visiting the field

✓ Communicating with the society

✓ Identification of problems and their social needs

✓ Survey on existing methodology

✓ Planning for innovative technology which meets the social needs

✓ Patenting

✓ Development of innovative product for the society or product enhancement.

3.4.2 Does the Institute publish or partner in publication of research journal(s)? If 'yes', indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?

No, Mar Ephraem does not publish or partner in publication of research journal.

3.4.3 Give details of publications by the faculty and students:

Publications	Number of Publications
Journal/ Conference	85
Books with ISBN	9

3.4.4 Provide details (if any) of

*Research awards received by the faculty:

SI.No	Faculty Name	Title of Award/ Honor	Constituted by
1	Prof.Dr. A. Lenin Fred	Dr. A.P.J. Abdul Kalam Best Researcher Award 2016	IET, KKLN
2	Prof.S.N.Kumar (ECE) Prof.Dr.A.Lenin Fred	"Soft Computing Based Segmentation of Anoamalies on Abdomen CT images" -Best paper award	IEEE (ICICES14) hosted by S.A Engineering College, Chennai
3	Prof.Dr. A lenin Fred Prof.Suresh. V Prof.Abhilash. R Prof.John Pradeep Y.S	First place. Restaurant Assistant Robot	e-Yantra Robotics Teacher Competition (eYRTC)

*Research awards received by the students:

SI.No	Student Name	Title of Award/ Honor	Constituted by
1.	Varghese Sunny(CSE) Jerin George(CSE) Shejin A Vaidyan (CSE) Joseph Paulose(CSE)	Category: Best Demonstration and presentation, No parking area clearing robot	eYS-2016,IIT Mumbai
2.	Abel Jacob (CSE) Abin T john (CSE) Baby paul (ECE) Shijin Raj S (ECE)	Category: Judges choice Intelligent car parking robot	eYS-2016,IIT Mumbai
3.	Rahul R U (ECE) Benedict babu (ECE) Danny Patrick (ECE) Sobhin T saj (ECE)	The Pizza delivery service won the Third prize(cash award Rs 12,000)	eYS-2016,IIT Mumbai
4.	Tobin tony (EEE)	Robotics (first prize) Sportech(first prize) Robo tryst(first prize) Project(first prize) Pico tear robot (second prize)	IIT and Reputed engineering institutions
5.	Ashish Thomas John(EEE)	Robo-zest (first prize)	Reputed engineering institutions
6.	Athul Tom Philip(EEE)	Robo-zest (first prize)	Reputed engineering institutions
7.	Cibin Babu(EEE)	Robo tryst (second prize) Robo-zest (second prize)	Reputed engineering institutions
8.	Nithin thomas(EEE)	Project (first prize)	Reputed engineering institutions
9.	Blesson Varkey Chacko(EEE)	Paper presentation(First Prize)	Reputed engineering institutions
10.	Joe Mol G.J(EEE)	Poster designing(Second Prize)	Reputed engineering institutions
11.	Aneesh j(EEE)	Project expo(Second Prize)	Reputed engineering institutions
12.	R. joy(EEE)	Paper Presentation(Second Prize)	Reputed engineering institutions
13.	Blesson Varkey Chacho(EEE)	Paper Presentation(First Prize)	Reputed engineering institutions
14.	Krishna Prasad(EEE)	Paper Presentation(Second Prize)	Reputed engineering institutions
15.	Abiya Mol(EEE)	Paper Presentation(Second Prize)	Reputed engineering institutions

16.	Abisha Jaya Prabha(EEE)	Paper Presentation(Second Prize)	Reputed engineering institutions
17.	Ananthu(EEE) Jishnu Nair(EEE) Tibin(EEE) Akhil(EEE)	Project Expo(First Prize) Project Expo(First Prize) Project Expo(First Prize) Project Expo(First Prize)	Reputed engineering institutions
18.	Sherin Thomas(EEE) Renju Varghese(EEE)	Paper Presentation (First Prize) Paper Presentation(First Prize)	Reputed engineering institutions
19.	Naveen	Paper Presentation (First Prize)	Reputed engineering institutions
20.	Johns Daniel	Paper Presentation (First Prize)	Reputed engineering institutions
21.	Varghese	Paper Presentation (First Prize)	Reputed engineering institutions
22.	Nian	Paper Presentation (First Prize)	Reputed engineering institutions

*Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally

SI.No	Faculty Name	Department	Professional bodies and agencies
1.	Prof.Dr.Lenin Fred	CSE	• Member of IEEE,IET,IST,ISTE • Reviewer of plus one, KSII Transactions on Internet and Information System
2.	Mrs.Janila	CSE	Member of ISTE
3.	Mrs.Renu	CSE	Member of ISTE
4.	Mrs.Dhanya	CSE	Member of ISTE
5.	Mrs.Lincy	CSE	Member of ISTE
6.	Mrs.Herlin	CSE	Member of ISTE
7.	Mrs.Benisha Janice	CSE	Member of ISTE
8.	Mr.Ashwin Singergi	CSE	Member of ISTE
9.	Mrs.Austy Evangelin	CSE	Member of ISTE
10.	Mrs.Innasi Lineta	CSE	Member of ISTE
11.	Mr.Babu	CSE	Member of ISTE
12.	Mr.V.Suresh	ECE	Member of IEEE,ISTE
13.	Mr.Lalin L.Laudis	ECE	Member of IEEE, IET
14.	Mrs.Reeba Rex	ECE	Member of ISTE
15.	Mrs.Jeba.P.S	ECE	Member of ISTE

16.	Mrs. T.S.Akhila	ECE	Member of ISTE
17.	Mrs.G.Brenda	ECE	Member of ISTE
18.	Mrs.Anbu Shamini.G.N	ECE	Member of ISTE
19.	Mr.Babin.T.Praise	ECE	Member of ISTE
20.	Mr.S.N.Kumar	ECE	Member of ISTE, BMES, IAENG, ISRD
21.	Mr.J.M.Aravind	ECE	Member of ISTE
22.	Mr.Anish John Paul	EEE	Member of ISTE
23.	Mr.J. R. Aldous Huxley	EEE	Member of ISTE
24.	Mr.J. Arthur Vasanth	EEE	Member of ISTE
25.	Mrs.J. Stephy Angelin	EEE	Member of ISTE
26.	Mr.S. Stalin	EEE	Member of ISTE
27.	Mrs.Nandhini Priya	EEE	Member of ISTE
28.	Ms. Pameela Jennifer	CIVIL	Member of IET
29.	Mr. Anand Rejilin	CIVIL	Member of ISTE
30.	Mr. Charles Dyson	CIVIL	Member of ISTE
31.	Mr. Abishek	CIVIL	Member of ISTE
32.	Mr. John Thankam	CIVIL	Member of ISTE
33.	Mr. Prabin	CIVIL	Member of ISTE
34.	Mrs. Soniya Vini Parrot	CIVIL	Member of ISTE
35.	Mr. Lin	CIVIL	Member of ISTE
36.	Mr. Bright Winsley	CIVIL	Member of ISTE
37.	Mrs. Manjuram	CIVIL	Member of ISTE
38.	Mr. John Iruthayaraj	MECH	Member of SAE
39.	Mr. Arun	MECH	Member of SAE

*Incentives given to faculty for receiving state, national and international recognitions for research contributions.

➢ During annual performance appraisal, the achievements in research are added considering the publications, patents, funded projects and colloborations.

➢ Financial assistance to attend seminars, conferences etc. in the form of registration fee and travel grant.

➢ Best researcher award is given to the faculty conducting extensive research.

3.5 CONSULTANCY

3.5.1 Give details of the systems and strategies for establishing institute-industry interface?

➢ For every course, industrial experts are linked as industrial partners; they provide inputs on curriculum and industrial updates.

➢ Faculty makes individual relation with the industry.

➢ The research teams relate with research laboratories.

➢ Team of faculty visits industries in cities to create opportunities to students for placement.

➢ To hold a good relationship between institute and industry, various institute-industry interaction programs are arranged as seminars, workshops by different schools.

➢ Periodically campus to corporate courses is conducted to create awareness among students about the employment opportunities and the current scenario of the corporate.

➢ Students of every School are encouraged to undergo In-plant training at least once during their period of study.

➢ Every year students are taken for industrial visit to know more about their fields.

➢ Alumni of Mar Ephraem who are working in different parts of the world make regular visits to college to encourage students for employment.

3.5.2 What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

➢ The details regarding consultancy is publicized in our college website www.marephraem.edu.in

➢ The faculty of each school identify the problems of industries and convince them to utilize the experts in the field in our college.

➢ The webpage of the college also gives explicit details of the work undertaken by the consultancy, in all disciplines.

➢ Every year the college publishes the college prospectus and brochure with information on consultancy.

➢ A Placement brochure is published by the placement cell every year indicating the benefits and details of consultancy.

➢ Magazine of each School and college exhibits the success work of the consultancy.

➢ The expertise are advocated through e-mails, events in college, awareness programs.

3.5.3 How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?

➢ The management supports the purchase of new equipment and creation of new facilities.

➢ To encourage faculty for consultancy services, the faculty members are given a share from the revenue through the services. Unique weightage is given to Staff appraisal for the consultancy services carried out by the faculty.

➢ The consultancy team is networked with different agencies.

➢ They are given proper guidance to take up more Value Added Courses and trainings to update their knowledge in their area of expertise.

➢ Faculties are given freedom to publicize their area of expertise.

3.5.4 List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.

INDUSTRY	SERVICE	AMOUNT Rs
Ideal Constructions Pvt.Ltd.	Mix Design, Compression Strength Of Concrete	37270
Paver Block (J.J & S.K)	Compression Test on concrete	750
Green Build And Shelters	Compression Test on concrete	4250
Southern Railway	Mix design, Tests on Steel, Cement, Sieve analysis, Water quality, Compression strength of Concrete, Bricks, Mortar	82350
Marthandam Integrated Development Society (MIDS)	Soil Testing, Mix Design	Social Interest

3.5.5 What is the policy of the institution in sharing the income generated through consultancy (staff involved: Institution) and its use for institutional development?

Revenue through consultancy is shared in the following proportion:-

SHARING	PERCENTAGE
INSTITUTION	30
PRINCIPAL	10
HEAD OF THE SCHOOL	20
CONSULTING FACULTY	20
LAB ASSISTANT	20

3.6. Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the institution promote institution-neighborhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?

As stated in the goals of the institution, imparting human values to the students and providing ethical professionals with concern for the society are emphasized during the program of study. Accordingly, the following Centre/Forum/Clubs have been formed and students take active part in the activities and imbibe social responsibility, acquire team spirit and leadership qualities so that, they serve the society and the nation.

Adoption of village for technical support

Every School has adopted the village "Vazode" and contributes towards its development.

Ephraem Manna

The students of Mar Ephraem has formed a charity unit "Ephraem Manna" to support the weaker students on campus financially, technically and spiritually.

Collaboration with MIDS for social development.

Mar Ephraem has collaborated with MIDS – Marthandam Integrated Development Society a N.G.O for supporting with technology in low cost construction, water purification, sanitary systems and energy management.

Charity services

Staff of Mar Ephraem; "Mar Ephraem Family" donate money for the needy every year from Mar Ephraem extension service. The students and staff also donates blood to the local hospitals.

Student's regular visit to differentially abled

Students along with their Class in-charge visit differentially abled people in different charity centers and spent one day living with them. They continuously support them and have spent 1 lakh rupees for them.

Problem identification from society

Every year students are requested to sense the problems faced by the society and these problems are addressed by the micro, mini and major projects in the form of products, process and software.

Support to Taluk Supply Office

The students support Taluk Supply office in linking Aardhar number in the ration card of our taluk.

3.6.2 What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?

The student's involvement in various social movement activities is observed and motivated. Students are given opportunity to interact with MIDS (Marthandam Integrated Development Society) and the local panchayat. Extra-curricular activities and value education provide avenues to students to become aware of the social environment, the social evils, citizen responsibilities and individual contribution to make the society a better place to live.

3.6.3 How does the institution solicit stakeholder perception on the overall performance and quality of the institution?

The stakeholders' perception on the overall performance and quality of the institution is assessed through feedback obtained from the faculty, students, parents, alumni, inspection committees, visitor's comments, accreditation committees and through meetings with them. Rating of the institute by external agencies also helps to assess the overall performance and improve the quality of the institution wherever necessary. The School collects feedback from the following.

- ➢ Local, Self, Government bodies
- ➢ Industrialist
- ➢ PTA meetings
- ➢ Social and Political leaders
- ➢ Local Community
- ➢ Potential employers when they come for campus recruitment

3.6.4 How does the institution plan and organize its extension and outreach programmes? Providing the budgetary details for the last four years, list the major extension and outreach programs and their impact on the overall development of the students.

The college is continuously organizing a number of extension and outreach activities which are directly connected with student's academic, social, cultural, community services etc., The college management with the help of many voluntary organizations and NGOs

organizes the outreach programs The major extension activities and expenditure for the Last four years are summarized in Table given below,

Sl. No	Extension activity	Year	Amount
1	HOM- School for Mentally Retarded EMMAUS- Rehabilitation Centre for Mentally Ill Women	2011-12	26,550
2	HOM- School for Mentally Retarded EMMAUS- Rehabilitation Centre for Mentally Ill Women	2012-13	39,950
3	Construction of House for Mr. Stalin(EEE)	2013-14	60,100
4	Health contribution for Mrs. Rani	2013-14	46,900
5	Mr. Sunil House Construction	2014-15	17,750
6	House Construction for E. Arun (CSE)	2014-15	1,00,000
7	Public Relief Fund for Flood	2014-15	22,000
8	Treatment of Kidney Stone for Jithu (CSE)	2015-16	25,000
9	Mr. C. Thomas (Hostel Staff) for treatment of Cancer	2015-16	15,000

3.6.5 How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National / International agencies?

Mar Ephraem encourages students to opt for joining NSS, R.R.C and other associations of the college. During the fresher's induction program staff coordinators/student coordinators introduce clubs and associations which motivate students to join either of these. All first years are members of the general clubs and others are in a technical club. All students are members of their discipline based associations

Students are involved in planning and organizing the extension activities. Student committees manage the responsibilities of extension activities like fund management, time management, documentation etc.

Special leave is granted to students participating in state and national level camps. Outstanding performers are recognized by the College by felicitating them in public meetings, by displaying achievements in College website and publications in print and visual media.

Awards and incentives are given to students to encourage their participation in extension activities.

Financial support is provided to students to participate in national and international camps.

3.6.6 Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?

Students from Mar Ephraem conduct social survey in villages. They visit orphanages every semester and provide dresses to the needy orphans by collecting money among the student community. The students of Mar Ephraem has formed a charity unit "Ephraem Manna" to support the weaker students on campus financially, technically and spiritually.

3.6.7 Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students' academic learning experience and specify the values and skills inculcated.

➢ The students involving in various extension activities come to witness the hard realities of life. This gives them an opportunity for experiential learning.

➢ The extension activities complement and supplement the academic learning experience of students by strengthening the knowledge level, practical exposure, soft skills, aptitude and attitude, social commitment and inculcation of social and moral values that promote good citizenship.

➢ They develop empathy, life skills and imbibe social values during the process. The core values promoted by the institution such as Faith in God, Faith in oneself, Integrity, Innovation, Secularism, Commitment to Environment, Gender Equity, National Integration and Inclusion are acquired by students through the various extension activities.

➢ The students acquire leadership skills, team work and organizing skills. The challenges indentified by them are solved by using scientific solutions.

3.6.8 How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?

➢ The institution ensures community participation by involving neighbors in the development activities.

➢ The faculty team visited the tribal settlements of our district and interacted with them for their social and educational needs.

➢ Special training program for the school teachers of tribal dominated villages was organized in the college.

➢ A faculty team visited Peermade Development Society to understand their practices.

➢ The student and faculty team is involved in cleaning a vast tank at Vazode.

➢ The representatives of the community are involved on the advisory board of NSS.

➢ The ideas and suggestions of the representatives of the community are given due weightage in the planning process of any community activity.

➢ The institution provides the infrastructure facilities and human resources to the community for organizing meetings, workshops, seminars, training, etc.

3.6.9 Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.

Mar Ephraem has many constructive relationships with other organizations and a few of them are given below to highlight our interactions with other esteemed organizations.

Organization	Activities
MIDS	*Design of low cost housing for the poor
Tribal Villages	*Basic education

3.6.10. Give details of awards received by the institution for extension activities and / contributions to the social/community development during the last four years:

Mar Ephraem received a certificate of Appreciation from MIDS for its technology contribution in social development.

3.7 COLLABORATION

3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities? Cite examples and benefits accruing from the initiatives – collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.

Collaboration with industries benefits the students and staff considerably in terms of exposing them to field-based research activities. We network and collaborate with institutes when our expertise is not sufficient to continue our research.

The College takes constructive efforts for collaboration with various agencies for academic, extension, research, placement, and resource mobilization. Majority of the

departments have collaboration with various agencies for extensive learning and research.

Collaboration with other institutions by the departments

Sl. No	Collaboration	BENEFITS	ACTIVITY
1	Environ Constructions, Singapore	1. Student internship 2. Project exchange 3. Staff interaction	Placement and Training
2	A Star, Singapore	1. Joint research 2. Paper publication 3. Sharing of resources	Digital Image Processing
3	Wolkite University, Ethiopia	1. Lab setup 2. Infrastructure 3. Faculty exchange 4. Staff training 5. Project proposals for research	Software Development
4	Changsha University of Science And Technology, China	1. Faculty exchange 2. Student exchange 3. Joint degree program 4. Short-term courses	For Academic Collaboration.
5	Ausind Pvt Ltd., Australia	1. Food grain storage	Product Development
6	Pushpagiri Medical College	1. Research proposal 2. Research sharing 3. Technology transfer	Medical Image Processing.

3.7.2 Provide details on the MoUs /collaborative arrangements (if any) with institutions of national importance / other universities / industries / corporate entities, etc. and how they have contributed to the development of the institution.

Sl. No	Collaboration	ACTIVITY
1	Environ Constructions, Singapore	Placement And Training
2	A* Star, Singapore	Digital Image Processing
3	Wolkite University, Ethiopia	Software Development
4	Changsha University Of Science And Technology	For Academic Collaboration.
5	Ausind Pvt Ltd., Australia	Product Development
6	Pushpagiri Medical College	Medical Image Processing.

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8	Core Alliance Engineering Consultancy, Sharjah, United Arab Emirates	Placement
9	Dhafir development and contracting at UAE	
10	Hills & Forts LLC at UAE	
11	Abdulla Mukadam& Partners L.L.C., Sohar Branch, S. of Oman	
12	Ali Mousa& Sons Holding, Abu Dhabi, United Arab Emirates	
13	Al Tasnim Enterprises LLC, Oman	
14	Hisham contracting, Salemabad, kingdom of Bahrain	
15	Ultratech Cements Aditya Birla group, Trivandrum	
16	Sobha Ltd. [formerly Sobha Developers ltd.], Chennai	
17	Veritable technology and solutions, Cochin	
18	P.N.R.Construction.	
19	Tata Consultancy Services,	
20	HCL.	
21	Wipro.	
22	ISRO	Faculty Exchange and Professional Development
23	National Centre for Earth Science Studies, Trivandrum.	
24	NUS, Singapore.	
25	Biopolis, Singapore.	
26	Rajiv Gandhi Centre for Biotechnology, Trivandrum.	
27	TBGRI, Tropical Botanic Garden and Research Institute, Trivandrum.	
28	Changsha University of science and technology, China.	
29	B-Soft LLC, USA.	
30	Eureka Forbes	

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The importance of MoU in our college is based on improvement of teaching, access to funding, reputation enhancement, and access to empirical data from industry.

The main focus is on vocational and professional degrees, which ensure ready employment. Students also promote entrepreneurial skills while they study, and more.

3.7.3 Give details (if any) on the industry-institution-community interactions that have contributed to the establishment / creation / upgradation of academic facilities, student and staff support, infrastructure facilities of the institution, viz., laboratories / library / new technology / placement services, etc. Establishment of highly specialized laboratories / facilities as a result of industry interaction

- ➢ A well equipped Mar Ephraem International Centre for Medical Image Processing is established for DST Funded projects.
- ➢ A robotics lab is established as a part of e-Yantra Lab Setup.
- ➢ Recognized center for PMKVY Scheme under Skill India.

3.7.4 Highlight the names of eminent scientists / participants, who contributed to the events, provide details of national and international conferences organized by the college during the last four years.

NAMES OF EMINENT SCIENTISTS
- ✓ Dr.Kamaraj
- ✓ Dr.KrishnaGopa Kumara Warrier
- ✓ Dr.Murugasen
- ✓ Dr.K.T.Job
- ✓ Dr.Rengaraja
- ✓ Dr.Kanagasabapathi
- ✓ Dr.Lakshmi Narashiman
- ✓ Dr.Kandaswamy, Department of Mathematics, Bharathiar University
- ✓ Dr.Raman, Department of Chemistry, VHNSN College
- ✓ Dr.S.SomaSundaram, Department of Mathematics,ManonmaniamSundaranar University
- ✓ Prof.P.J.Pandian, Senior Scientist, Indian National Science Academy &Camp, Central Marine Fisheries Research Institute
- ✓ Dr.Natarajan, Former Dean, Anna University
- ✓ Prof.Selvam.G.S, Head Department of Biochemistry, School of Biological Sciences,Madurai Kamaraj University

- ✓ Dr.Manoharan, Head dept of plant morphology, Centre for excellence in Genomic Sciences Madurai Kamaraj University
- ✓ Dr.Kumaraswamy, Professor, UGC-BSR faculty fellow, Department of Geography, Bharathidasan University
- ✓ Prof.Somnath Das Gupta, Chair Professor, Department of Geography, Faculty of Natural Sciences, New Delhi
- ✓ Prof.Chandrakumar, Professor ,Department Of Chemisty,Indian Institute of Technology
- ✓ Dr.Kumaresan, Reader, Department of Genetics,Centre for Excellence in Genomic Sciences,School of Biological Sciences

Sl no	Name of the program	Resource person	Date	Beneficiaries
1	Workshop on Journal Writing	Prof.Lakshmi Narashiman	6/6/ 2012	All Faculties
2	Workshop on Project Proposal Writing	Prof. Kamaraj	11/8/2013 to 13/8/1013	All Faculties
3	Seminar on various funding agencies and options	Prof. Murugasen	4/6/2013	All Faculties
4	Seminar on Evaluation of students project report	Prof. K.T. Job	5/6/2013	All Faculties
5	Preparing research project proposal for government funding agency	Prof. Dr. Ashok	7/6/ 2015	All Faculties
6	Workshop on research and developments in nano Technology	Prof. Krishna Gopa Kumar Warrior	Nov 2012	All Faculties
7	Workshop on SPSS - a tool for statistical analysis of students performance, research and faculty improvement	Prof. Dr.Binuselin	6/6/ 2015	All Faculties

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8	Students Projects and Funded Projects	Prof.Dr.Kanagasabapathy , NEC Kovilpatti	18/6/ 2014	All Faculties
9	Research Methodology in Image Processing through Sci-Lab	Prof.Dr.A.Lenin Fred Dr.R.K. Selva Kumar	11/10/2012- 13/10/2012	10
10	Workshop on C programming	Prof.Dr.A.Lenin Fred	10/11/2014 to 18/11/2014	280
11	Workshop on Computer hardware and networking	Prof. R.P.Anto Kumar	19/02/2013 to 26/02/2013	324
12	Java Programming	Prof. Saravanan	21/7/2011	13
13	Seminar on Recent challenges in Information & communication technology	Dr.S.G.Prakash Vincent	13/02/2014 to 14/02/2014	29
14	Seminar on Molecular Imaging	Mr.Parasuraman Padmanabhan	1/10/2012	40
15	Seminar on career Guidance	Mr.Justin Jose	14/08/2012	101
16	Training Program on "Soft Skills for Employability"	Dr.R.Mohan Kumar	1/10/2011	56
17	seminar on Cyber Crimes: Challenges and Issues	Mr.N.Vinaya Kumaran Nair	24/9/2011	125
18	seminar on I phone Customer Application Development	Mr.Nalan Chakaravarthy	8/7/2011	55

3.7.5 How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated

	ACTIVITY	COLLABORATION
A)	Curriculam development	• Wolkite University
B)	Internship	• Wolkite University, • Environ Construction, Singapore
C)	Summer placement	• L & T • Prestige group
D)	Faculty exchange	• Changsha University, China • Wolkite University, Ethiopia • Changsha University of Science and Technology • Pushpagiri Medical College
E)	Research	• Changsha University, China • Wolkite University, • Pushpagiri Medical College • A* star Singapore
F)	Consultancy	• Ideal Engineering Construction • Southern Railways
G)	Extension	• Marthandam Integrated Development Society (MIDS)
H)	Publication	• A* star Singapore
I)	Student placement	• Changsha University, China • Environ Construction, Singapore
J)	Twinning programs	Nil
K)	Introduction of new courses	• Changsha University of Science and Technology
L)	Student exchange	• Environ Constructions, Singapore • Changsha University of Science and Technology
M)	Any other	Nil

3.7.6 Detail the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages / collaborations.

Mar Ephraem provides opportunity to the faculty and students to plan, establish and initiate linkages and collaborations with institutes. The college sends faculty to visit reputed institutes in India and abroad. The industrial partner for the course is utilized to link with the concerned institute. The Alumni are also invited for events in the college as resource persons.

Criterion: IV

Infrastructure and Learning Resource

CRITERION IV

INFRASTRUCTURE AND LEARNING RESOURCE

4.1 Physical Facilities

4.1.1 What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The Institution realizes that good and modern infrastructures are required for better teaching learning process. Mar Ephraem focuses on development of good infrastructure like modern classrooms, well equipped laboratories, Canteen, Transport facility, Wi-Fi campus, Library with reading rooms, playgrounds, Power Backup, hostels on campus etc. In order to meet all these, the Management has planned the academic and administrative activities of the college which focus on:

➢ Development of State-of-the-Art Infrastructure facilities.

➢ Providing quality education and facilities to students and faculty.

➢ Technology mediated classrooms / seminar halls, conference rooms etc.

➢ Providing conductive atmosphere for Research, Development and Consultancy services to our faculty at National & International level**.**

➢ Consultancy services by our faculty at National & International level**.**

Creation of new facility and enhancement of infrastructure:

For creating new facilities and enhancement of infrastructure the need analysis is conducted at different level like class committee, school consultation committees and other cells and committees. The requirements are approved in the Academic Planning Council and submitted to IQAC. The IQAC analyses the requirement based on the quality enhancement requirements and forwards it to the Governing Board. After the approval of the Governing Board the facilities are created; for smaller requirements, the Correspondent approves the requirements after IQAC recommendations.

4.1.2 Detail the facilities available for a) Curricular and co-curricular activities – classrooms; technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, specialized facilities and equipment for teaching, learning and research etc.

Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, specialized facilities and

equipment for teaching, learning and research etc.

Particulars	No of rooms	Area in Sq m
Class Rooms	32	2923
Tutorial Rooms	14	465
Drawing Halls	1	200
Seminar Halls	3	396
Conference Rooms	1	52.51
Common Computer Center	1	150
Central Library	1	1068.38
Laboratories	49	3127.44
Workshops	1	317.33
E-class rooms	1	100
HOS Rooms	6	117.6
Staff Rooms	11	625
Department Library	5	50
Examination Control Cell	1	53
IQAC room	1	11.66
Administrative Office	1	151.09
Training and Placement Cell	1	50
Correspondent Chamber	1	80.16
Bursar Chamber	1	29.64
Principal's Office	1	48
Professors Rooms	5	25
Server Room	1	19.58
Health Center	1	15
Entrepreneur Development Cell	1	10
Research Center	2	58.06
Counselors Room	1	10.68
Reprographic room	1	10

Classrooms:

Mar Ephraem has over 32 classrooms in 2 blocks. All classrooms are ergonomically designed to reinforce a student-centered method of imparting knowledge. The spacious, airy and well-furnished classrooms provide the right ambience for developing proper study habits and extending the attention span to the full session. All classrooms have ceiling mount LCD projectors, notice boards, uninterrupted power supply from a centralized UPS, centralized public announcement system, green board, automatic projector screen, wifi facility and wooden furniture.

Laboratories:

All laboratories are well equipped, and well maintained not only for carrying out curriculum oriented lab practicals and also to carry out research activities.

Seminar Halls:

➢ The College has three seminar halls to conduct conferences, workshops and symposium for students and faculty.

➢ Seminar halls have a maximum seating capacity of 200 students. It is equipped with LCD projector, white board and public address system.

Tutorial classrooms:

➢ Each classroom is used as tutorial classroom, to conduct tutorial classes, to address the personal level doubts and queries of the students.

➢ This room is equipped with LCD projector, glass-board, wooden benches, fans, windows for air circulation and ventilation and tube lights for proper lighting.

Specialized facilities and equipment for teaching, learning and research:

➢ The college has exclusive language lab attached with audio, video facility.

➢ Apart from the central library, each school is having separate school Library with reference and textbooks.

➢ E-learning facility is provided which covers a wide set of applications and processes, including computer based learning and virtual lab learning.

➢ For self-learning, reference books for all the subjects are available in the central library.

➢ Common Room for boys and girls are available in the campus.

b) Extra –curricular activities – sports, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.

Particulars	No of rooms	Area in Sq.mts
NSS Room	1	10.09
Indoor games	1	279.24
Outdoor games	3	300
auditorium	1	400.12
chapel	1	111.05
Guest Rooms	4	74.32

Auditorium:

➢ The college has an open auditorium with a seating capacity of 1500 individuals.

➢ College events like seminar, symposium & conferences are regularly conducted in this auditorium.

➢ The facilities in auditorium are LCD projector, lighting, stage, podium, P.A, cooling systems.

➢ The college has also a mini auditorium with LCD projector, lighting, stage, podium, P.A and cooling systems.

Cultural activities:

➢ Students are encouraged to participate in the cultural events in the college day program.

➢ Interdepartmental academic competitions are conducted to enhance the talents of students.

➢ Inter college Fest Ephra'ze is conducted every year.

➢ Inter college cultural programs are also conducted.

Communication Skills Development:

➢ All the branches of the first year students are taken care of by our placement cell by conducting classes weekly one hour to improve their communication skills.

➢ For the first year students special module is conducted on reading, writing, listening and speaking skills.

Yoga and Health

➢ Yoga classes are conducted for students, while kung fu classes are conducted for staff and students.

4.1.3 How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution / campus and indicate the existing physical infrastructure and the future planned expansions if any).

The college has initiated many activities to promote cooperative ventures with industry to promote R & D activities and training programs which would improve the employability of students. Research and development activities are an integral part of the progress of educational institutions that will also help the faculty and students to realize their

academic potential. The basic need for the research and consultancy are the laboratory facilities, availability of excellent faculty and working environment that encourages these activities. In this regard, it is proposed to encourage the faculty and students to carry out R & D and consultancy work. Consultancy assignments from different industry would bring in real life problem solving competence in the faculty and the students.

College Master Plan

The following are the new facilities created in the last four years:

➢ Playground

➢ Research centre

➢ Bitumen Road

➢ New floor (classrooms, staffrooms, Sick room)
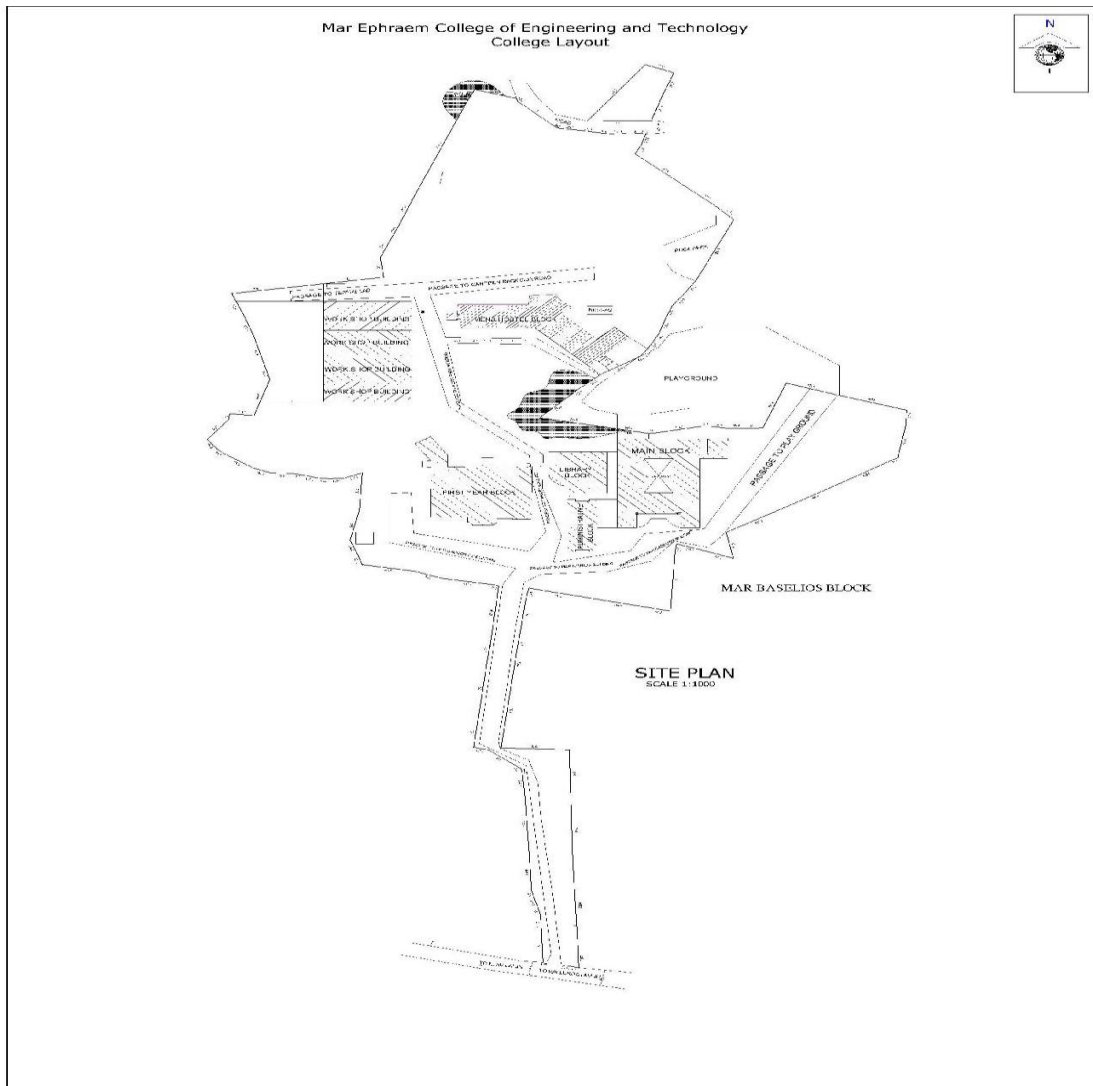
Figure: College Site Plan

4.1.4 How does the institution ensure that the infrastructure facilities meet the requirements of students with physically challenged?

`   College has taken utmost care in providing facilities to students with physical disabilities. For such students classes are conducted on the ground-floor, especially with front seating arrangement and comfortable furniture. Supporting staff is deployed to help students in their regular activities. The students are given extra attention during the midterm examinations as well as the University Examinations. Ramps are provided to facilitate easy movement of differently able students.

4.1.5 Give details on the residential facility and various provisions available within them:

➢ **Hostel Facility – Accommodation available**

Mar Ephraem provides well furnished hostel accommodation to its students. There are total three hostels for the college out of which, the boy's hostel is located within the campus; the remaining two hostels are outside the campus, for girls, managed by Reverent Sisters. The boy's hostel can accommodate 520 students and girl's hostel can accommodate 150 students. Currently there are 515 students in the Boys hostel and 120 students in two Girls' hostel.

➢ **Recreational facilities, gymnasium, yoga center, etc.**

A 200 Sq.ft Gym is available in the hostel with fitness equipments.

➢ **Computer facility including access to internet in hostel:**

24x7 wifi facility is available in the college and hostel. Access to the library for advanced learners even in late working hours is also provided.

➢ **Facilities for medical emergencies:**

Basic Medical facilities are provided within the campus. Ebanezer Medical Clinic is within 100 m radius. Multi-specialty hospitals are within 5 Km radius. First aid boxes are available at various locations and in each hostel, in case of any incident. All students are covered by medical insurance and the hospital also provides cashless treatment as and when a student needs to be treated. Ambulance is parked in campus for any emergency transit.

➢ **Library facility in the hostels:**

Malayalam, Tamil and English daily newspapers are available for the students.

➢ **Internet and Wi-Fi facility**

There is 24 hours Internet and wi-fi facility in the hostels. Students are free to use

laptops with internet facility.

➢ **Recreational facility-common room with audio-visual equipments:**

The hostlers have a TV room where they can watch movies and play DVD's, work on the computer or have parties on special days and occasions like birthdays etc. There is a very spacious and well furnished multi-activity room for the students where they can relax when they are free. Indoor games like carom, table tennis and chess are also available.

➢ **Available residential facility for the staff and occupancy & Constant supply of safe drinking water**

✓ All our staff are from the local township. So the need for residential facility for staff has not risen. However we have guest rooms to accommodate staff on special occasions.

✓ The facility of R.O water coolers is available in all the buildings of the college, as well as, in all hostels.

✓ Sufficient number of bore wells provide safe and healthy drinking water.

✓ Provisions have been made for rain water harvesting and ground water recharging as well.

➢ **Security**

In order to provide security to students, faculty and staff a reputed security agency is employed on contract. Security guards (24X7) are available in the college campus as well as in the hostel. CCTV cameras are also installed at major locations for security reasons. For safety against fire accidents adequate number of fire extinguishers are available in all the buildings. For safety proper lightening arresters are available and proper earthing of complete building has been done. A first aid box is available at reachable distance in case of any accident.

4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?

A full-fledged Health center is available on campus with a full-time nurse and a part time doctor. An ambulance is available in hospital for 24 hours, to meet the medical emergencies of personnel on campus. The doctors attend both students and staff during the visiting hours. A first aid box is available in case of any accident. Mar Ephraem is in collaboration with Ebenezar clinic located at 100m from the campus to provide emergency treatment. For special treatments we have collaboration with Jeyaraj hospital, Marthandam, which is located at 5km radius from campus. The hospital has all basic specialties including

Internal Medicine, General Surgery, Gynecology, Pediatrics, Radiology (with X-Ray & Ultrasound facilities), Orthopedics, a well equipped Pathology Laboratory, and in house Chemist etc. The hospital has an operation theatre, private, semi private and general wards. It has 24 hrs emergency facilities.

4.1.7 Give details of the Common Facilities available on the campus–spaces for special units like IQAC, Grievance Redressal unit, Women's Cell, Counselling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.

Institution has provided separate spaces for following special units:

Spaces for special units like IQAC, Grievance Redressal unit, Women's Cell, Counseling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc are provided as given below

Sl no	Name of the Unit	Staff in Charge
1	IQAC	Mr.Bright Winsley J
2	Grievance Redressal unit	Ms.Giftlin
3	Women's Cell	Ms.Seema
4	Counseling and Career Guidance	Mr.Leo Bright Singh
5	Placement Unit	Mr.Charles Dyson
6	Health Centre	Ms.Simmi
7	Canteen	Mr.Rajkumar
8	Recreational Spaces for Staff and Students	Ms.Sonia
9	Safe Drinking Water Facility	Mr.Joseph
10	Auditorium	Mr.Rastin

4.2 Library as a Learning Resource

4.2.1 Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes, we have a Library Advisory Committee (LAC), It comprises a librarian, one member from IQAC, one faculty member from each department, one member from hostel and two members from students community. The library advisory committee meets once in

three months to review, discuss and make recommendations regarding the activities of library. It also serves as a bridge between the library and the academic fraternity

Members of the Library Advisory Committee

1. Dr. G.Prince (Librarian)
2. Mr. Vinod (School of S&H)
3. Mr. Adlux Hexly (School of EEE)
4. Mr. Kumar (School of ECE)
5. Mr. Joseph Bencier (School of Mech)
6. Mr. Jein Jenish (School of Civil)
7. Mrs. Shanmuga Priya (School of CSE)
8. Mr. Stanley (Deputy Warden - Hostel)
9. Mr. Alex (Student/ III-Mech. A)
10. Mrs. Sherfa Philip (PG Student/ I-ME-A.E)

Roles of the Library advisory committee.

1. Monitoring the library activities
2. Approves and recommends the purchase of required new edition books and Journals
3. Approves and recommends for the purchase of Library book racks/Furniture items
4. Make provision for sufficient funds for the development of the library facilities like infrastructure, computers, increasing the internet connectivity and digital library facilities.
5. To formulate policies and procedures for the efficient use of the library resources.
6. Evaluate the suggestions made by the library users

Initiatives implemented by the committee to render the library

The following initiatives had been implemented for the last four years

1. OPAC facility for all users – http://192.168.2.3/library
2. Digital Library facility – University Question paper in digital form http://192.168.2.3/library
3. Documents printing and scanning facility
4. Current Awareness Service
5. University question papers in digital form - http://192.168.2.3/library
6. Library gate registrar in electronic format
7. CCTV facility
8. Fire extinguishers fixed in prominent locations of the library

Mar Ephraem

9. Drinking water and wash room facility

4.2.2   Provide details of the following:

- ➢ Total area of the library   :   1049 Sq. Mts.
- ➢ Total seating Capacity   :   150 No's
- ➢ Working Hours

     On Working Days   :   8.00 A.M to 8.00 P.M

      During Vacation   :   9.00 A.M to 6.00 P.M

      On Holidays   :   Library Closed

- ➢ Lay out of the library

Ground Floor

- ✓ Circulation Section (Book Issue/Return/Renewal)
- ✓ Reading Section
- ✓ Periodicals Section
- ✓ E- Library
- ✓ OPAC systems
- ✓ Library Server
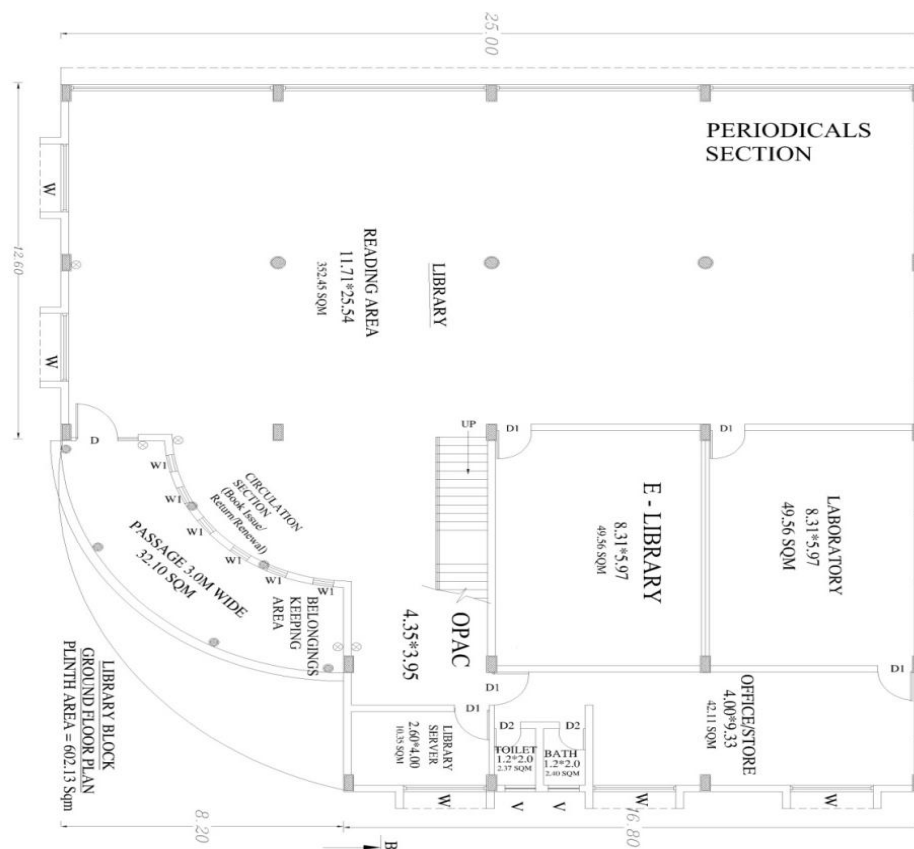
Figure: Layout of Ground Floor

First Floor

- Reference Section,
- Stack Room,
- Back Volumes, Project Reports and Store Room
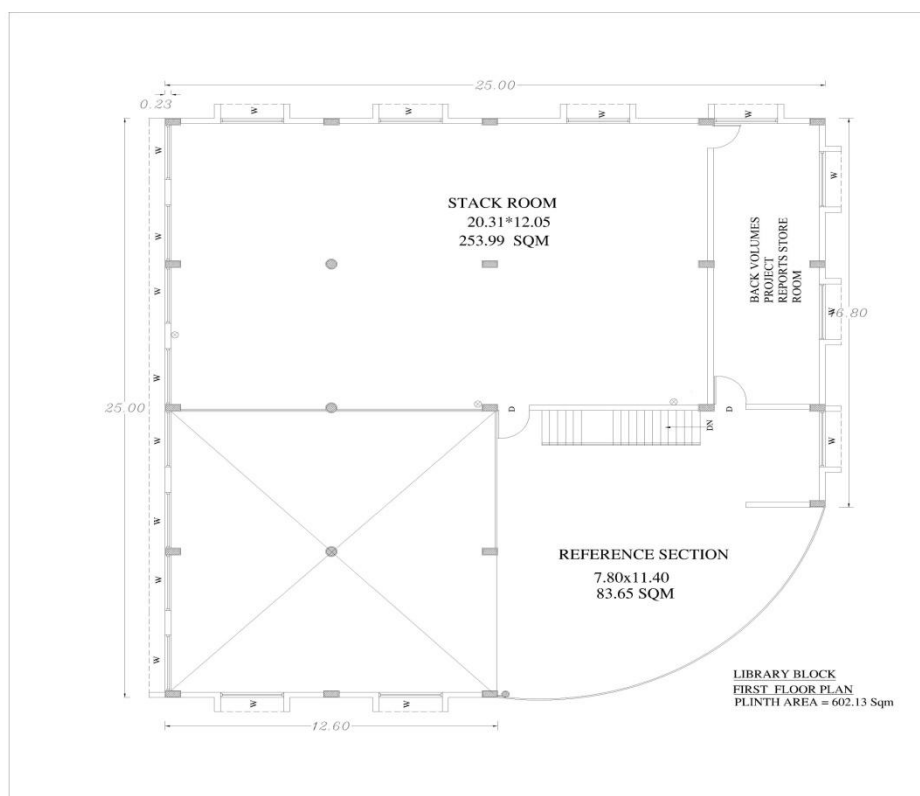
Figure: Layout of First Floor

4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.

The librarian informs all Schools through the library advisory committee members for their semester requirements. All the staff members indent the textbooks required for that semester through the respective HOS's to librarian. The librarian will consolidate the requirements from all Schools and list will be sent to the correspondent office after the approval from the library committee and principal. The librarian places the purchase order to the vendors/publishers. Occasionally books are purchased directly from book exhibitions too. Now the library has a collection of more than 10,000 books, 520 non book materials (CDs/DVDs) covering all the disciplines of Science and Engineering and a good number of national and international print journals. Back volumes of the journals and project reports are bound and kept in the library for reference.

Mar Ephraem

Library Holdings	2016-2017		2015-2016		2014-15		2013-14		2012-13	
	No.	Total Cost Rs.	No.	Total Cost Rs.	No.	Total Cost Rs.	No.	Total Cost Rs.	No.	Total Cost Rs.
Text books	245	69820	671	222036	904	327527	518	214193	1609	715984
Reference Books	11	6825	7	5948	54	96401	17	3973	18	9130
Journals/Periodicals (Calendar year subscription)	-	-	32	55700	55	88970	60	96750	32	49403
e-resources	-	-	-	-	-	-	-	-	-	1322726
NPTEL-Hard disk	Video updated		Video updated		Video updated		Video updated		15500	
Library Furniture	-		-		-	69600	-	-	-	60000
News papers	8	10953	8	12532	8	13772	8	13797	8	12533
Total Rs.	-	87598	-	296216	-	596270	-	328713	-	2185276

4.2.4 Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

➢ **OPAC**

User can search the availability of books and other library resources through this and can view their personal circulation status (issue/return/renewal of books). OPAC can be accessed throughout the campus through intranet with an IP address and also from the college website.

➢ **Electronic Resource Management package for e-journals** : Nil

➢ **Federated searching tools to search articles in multiple databases** : Nil

➢ **Library Website** :

The institute website maintains a separate link for the library-http://www.marephraem.edu.in/library.php. It is updated on regular basis and contains information about the library and its resources. Users can also access NPTEL videos through the library website.

➢ **In-house/remote access to e-publications :** Nil

➢ **Library automation :**

> Yes, the entire library management is automated using info-library management software.

➢ **Total number of computers for public access :** 50

➢ **Total numbers of printers for public access :** 02

➢ **Internet band width/ speed 2mbps 10 mbps 1 gb (GB) :** 32 mbps

➢ **Institutional Repository :** Nil

➢ **Content management system for e-learning :** Nil

➢ **Participation in Resource sharing networks/consortia (like Inflibnet):** Nil

4.2.5 Provide details on the following items:

➢ Average number of walk-ins   : 120 per day

➢ Average number of books issued/returned   : 50 per day

➢ Ratio of library books to students enrolled   : 8:1

➢ Average number of books added during last three years : 630   per year

➢ Average number of login to OPAC   : 20 per day

➢ Average number of login to e-resources   **:** Nil

➢ Average number of e-resources downloaded/printed   :Nil

➢ Number of information literacy trainings organized   : Nil

➢ Details of "weeding out" of books and other materials : Nil

4.2.6 Give details of the specialized services provided by the library

➢ **Manuscripts**   : Nil

➢ **Reference**

> A reference section with a collection of encyclopedias, dictionaries, handbooks, textbooks, general books, university question papers, project reports, books for GATE, GRE, UPSC, TOEFL, IELTS, TNPSC and other competitive examinations is made available to the users.

➢ **Reprography**

> Reprography facility is available in the library for the benefit of users. Students can take the photocopy of the material at a nominal cost.

➢ **ILL (Inter Library Loan Service):** Nill

➢ **Information deployment and notification**

- Notice boards placed at the entrance of the library disseminates information to the users on a regular basis.
- Latest additions and availability of titles can be viewed through OPAC and College web site.
- Current Awareness Service (CAS) is also provided on the notice board.

➢ **Download**:

- e- journals subscribed by the library can be downloaded
- Question Bank can be downloaded by the Students/Faculty.

➢ **Printing**

Printing and scanning facilities are available.

➢ **Reading list/ Bibliography compilation:** Nill

➢ **In-house/remote access to e-resources** : Nill

➢ **User Orientation and awareness**

✓ User orientation programs are conducted at the beginning of every academic year for first years and lateral entry students.

✓ New arrivals are displayed in the library for the users.

✓ Library information is available in the college website.

➢ **Assistance in searching Databases**

The library staff assists the users in searching for the desired information available in various sources.

➢ **INFLIBNET/IUC facilities** : Nil

4.2.7 Enumerate on the support provided by the Library staff to the students and teachers of the college.

1. Library member registration
2. Issuing and returning of library books
3. Book Search
4. Scanning and Printing
5. Textbooks purchasing for students
6. Reference service
7. Subscribing the journals and magazines
8. University Question bank maintenance
9. Back volumes and Project reports for reference
10. 24 x 7 Wi - Fi facility
11. Displaying job opportunities.

12. Competitive exam books section.

13. Seeking journal papers from other institution libraries as for the needs of students and teachers in our institution.

14. Access/Download to NPTEL video lectures and web course materials.

15. Support to register online exams like GATE,IES,TNPSC,TANCET,UPSC and other competitive exams.

16. Support to register online scholarship application.

4.2.8 What are the special facilities offered by the library to the visually/physically challenged persons? Give details.

The college has implemented 'book to seat' scheme. The library staff helps the physically challenged persons by providing the books/journals in their seat, based on their needs. The differently able student can also authorize other students for library related activities.

4.2.9 Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?)

Yes, a feedback assessment form is filled randomly from the library users in every semester and a suggestion box is kept inside the library. Every semester the feedback forms and suggestions are collected and analyzed by the library committee and corrective measures are taken to improve the library services.

4.3 IT Infrastructure

4.3.1. Give details on the computing facility available (hardware and software) at the institution.

➢ Number of computers with Configuration (provide actual number with exact configuration of each available system) – 347 (Pentium IV and above)

➢ Computer-student ratio: (6:1)

➢ Stand alone facility: 62.5 kVA generator and UPS for all computers.

➢ LAN facility: All the computers are connected with LAN; every block is connected with fiber optics.

➢ Wifi facility; 24 x 7 wifi facility throughout the campus with firewall and filter.

➤ Licensed software: All software used is open source.

➤ Number of nodes/ computers with Internet facility: All the computers are connected with LAN.

4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

➤ The Laboratories are well designed and well equipped with the latest software and are made available for students and faculties, where, they are free to access internet beyond their class hours and download any course content or access any study material.

➤ The library also extends computers and internet facility and bibliographic databases through network computer system.

➤ The computer and network facility is extended to the hostels

➤ All the faculties are made available with laptops; all the staff-rooms are equipped with computers. All the Head of the School rooms are equipped with computers and printers. Students are given access to common computer lab and advanced learners laboratory. Students can register their laptops and tablets in wifi with written request to the system Administrator.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

➤ A strong infrastructure base is imperative for providing a learning environment of high standards.

➤ The institutional plans for deploying and upgrading the IT infrastructure and associated facilities as: LAN network, internet connection to whole campus as per the latest technological development.

➤ Transformation of most of the classrooms to e-classrooms with laptop and projectors, without hampering the traditional method of teaching.

➤ Upgrading of college website and portals in order to incorporate more dynamic features like: Login authority for staff and students for uploading their documents, assignments, notes etc.

➤ High performance computers are to be provided at par to the requirements of latest software's.

4.3.4 Provide details on the provision made in the annual budget for procurement, up gradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for the last four years).

➢ Every student pays a nominal fee annually towards the use of ICT facilities.

➢ The college prepares a regular budget in each financial year for procurement, up gradation, deployment and maintenance of the computers and their accessories in the institution, which is duly approved by the ICT Committee.

➢ ICT Committee Includes System Administrator, Technical staffs for the maintenance of ICT Resources and to manage the whole campus area networking and handle the trouble shooting of computer systems.

Particulars	2015-16	2014-15	2013-14	2012-13
Computers	1,24,610	1,32,065	1,66,795	17,22,645
Accessories	37,383	39,620	50,038	5,16,793

4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?

The institution facilitates extensive use of ICT resources for the purpose of enriching the students with the latest knowledge and giving them a platform for voicing their doubts and concerns about the topic in question. The college has the full concern for:

➢ Spacious Interactive Classrooms with LCD projectors.

➢ Interactive sessions in the classroom.

➢ Power point presentations.

➢ Demonstrations & Project preparation.

➢ NPTL videos

➢ Online exams

The ICT based learning improves not only the communication skills of the students but also their inter-personal skills, decision making skills, business communication, pre-placement training, corporate readiness, thus grooming them into refined, confident and articulated young professionals, ready to face the cut-throat competitions in the corporate world.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching - learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.

➢ The learning activities and technology has deployed classrooms by the institution, to place the student at the center of the teaching learning process.

➢ The corresponding changes in the use of new technologies simultaneously address the learning and governance. As a result, a significant impact on academic development as well as on administration and governance of the college can be seen.

➢ Traditional methods of delivering higher education are needed to be complemented with computer aided teaching/ learning material so as to keep pace with the development in other spears of human endeavor.

➢ The Faculty is adequately prepared and makes use of ICT facilities optimally. Conscious effort is also being made to invest in hardware and to orient the faculty suitably whenever it is required.

➢ Audio-Visual mode of teaching is carried out by all departments with the use of the white-board, flow charts, overhead projector, LCD projector, Laptop, computer with Internet connections and e-resources of the Library.

➢ In addition to using technology as learning resources, managing the activities of the institution, in a technology-enabled way, will ensure effective institutional functioning. The Institution has moved towards electronic data management and has its own website that provides ready and relevant information to stakeholders.

4.3.7 Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

YES, 10 Mbps bandwidth is shared by the institution from NKN.

4.4 Maintenance of Campus Facilities

4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?

Utmost care is taken for budget allocation, considering the financial resources for providing the maintenance support for the entire college Facilities. Keeping in view the

priorities, department-wise, equipment-wise and to fulfill the academic needs of the students, budgeted Amounts are being utilized

Particulars (FY)	2015-16	2014-15	2013-14	2012-13	2011-12
Building	1,50,06,103	1,45,69,315	82,43,002	3,31,91,744	2,57,45,409
Furniture	1,09,60,423	43,84,413	11,85,297	21,20,962	39,62,836
Equipment	2,25,58,027	2,15,75,544	2,32,77,288	2,67,62,582	2,86,08,876
Computers	1,24,610	1,32,065	1,66,795	17,22,645	1,91,265
Vehicles	1,33,35,374	1,09,31,628	1,28,52,339	98,82,497	75,56,967
Research	2,20,633	1,49,627	71,078	87,457	84,729
Faculty & student development	4,90,674	5,02,454	12,85,654	8,41,158	4,41,416

4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the College?

Infrastructure facilities & Maintenance procedure:

Periodically all the buildings are inspected and repairs are carried out as per the building standards and specifications with a maintenance budget.

➢ All the buildings are painted once in two years with quality paint.

➢ Wall cracks and roof cracks are to be identified and filling will be done by using suitable materials.

➢ Roads inside the campus are tarred once in five years.

➢ Greenery (Lawns, Plants & Trees) Stretches are maintained periodically inside the campus.

Equipment facility:

The equipment are maintained periodically as per the manufactures 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 are functioning well and also seek external expertise if needed during the period. After this the internal audit of laboratory is done.

This ensures that teaching-learning process is run smoothly in all aspects throughout the year. The stock verification will be done during the same period to help identify the non-working equipment and suggest necessary replacements. Regular cleaning and upkeep of the equipment is overseen by the faculty member who is the in-charges of the laboratories. The annual budget and allocation of funds for and regular monitoring of utilization of funds for maintenance insures upkeep of the infrastructure in the institute. Annual Maintenance Contract (AMC) is given for critical and sophisticated equipment.

Computing facility:

➢ It is maintained by System Administrator.

➢ Inspection and servicing activities are being carried out once in semester.

➢ Computer systems in the college are connected with LAN connectivity.

➢ Licensed softwares and open source tools are available as per requirement.

Library:

Library is monitored and maintained by the library committee.

4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/ instruments?

The calibration process will be taken up by each School for various equipments in their laboratory as per the time frequency suggested by the supplier. The History of each equipment is maintained in the labs, wherein, the measured values are compared with earlier measured data and also with the standard values. Any deviation in this regard will be noted and necessary steps are initiated by calling for the technicians, from the supplier.

4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?

➢ The generator available in the institution helps in continuous power supply without any hindrance.

➢ The computer systems and other sensitive equipments are provided with UPS systems so that power failure will not cause any damage.

    Generator power back up: One generator with capacity 62.5 KVA

    No of UPS Systems: 9

    Total Capacity of back up: 81 KVA

➢ All precautions are taken to protect the precision equipments by providing voltage stabilizers and individual MCB's.

➢ Covers are provided whereever needed to keep the sensitive equipment in a dust free

environment.

➢ Continuous water supply is ensured through 5 bore-wells available in the college.

➢ The Departments take care to protect sensitive instruments from mechanical and electrical damage.

➢ Purified drinking water is supplied to all academic blocks, Hostel & canteen.

➢ Sufficient Number of water purifiers is available on campus.

➢ 24 hours water supply is provided to the hostel.

➢ Effective distribution of internet through wifi, fire wall and filters

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Criterion: V

Student Support and Progression

CRITERION V

STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

Mar Ephraem publishes its updated prospectus and handbook which reflect the transparency and commitment of the college towards all academic activities.

Handbook:

Mar Ephraem publishes updated handbook during the beginning of every academic year. The handbook provides information about the campus facilities, rules, regulations and supporting facilities for the students and parents. Some of the features of the handbook are listed below.

1. Vision, Mission, Goals and Quality Policy
2. Faculty profile and area of expertise
3. List of cells, committees its objectives and action plan
4. Academic calendar of events which includes seminar, workshop, value added courses, holidays and celebrations
5. Rules and regulations of the college
6. Students related procedures like payment of fees and scholarships.

Prospectus:

Mar Ephraem publishes prospectus every year during the month of February. The commitment and distinct features of Mar Ephraem are conveyed to the stakeholders through the prospectus. The features of the prospectus are

1. Institutional vision, mission and goal
2. Academic programs offered and its unique features.
3. Available research facilities
4. Innovative practices
5. Training and value added course modules
6. International collaborations and MOU's
7. Placement achievements
8. Social commitments /responsibilities.

9. Alumni strength
10. Teaching methodology and practices
11. Campus facilities and features
12. Co-curricular activities
13. Extra-curricular activities
14. Internship and Implant training
15. Funded projects
16. Content beyond syllabus module
17. Value added courses
18. Mentoring and support policy
19. Curriculum enrichment programs
20. Hostel boarding facilities
21. Recreation facilities

5.1.2 Specify the type, number and amount of institutional scholarships/ free ships given to the students during the last four years and whether the financial aid was available and disbursed on time?

Mar Ephraem provides institutional scholarship/ free-ship to the students based on need. The institutional scholarships/ free ships given to the students during the last four years are as below.

Name of the Scholarship	2016-17	2015-16	2014-15	2013-14
BC/MBC	1050900	1342025	800100	1411374
SC/ST	-	450000	375000	250000
Minority	-	195500	29363	149000
Institutional Scholarship	1943000	7999000	5197125	1102045

5.1.3 What percentage of students receives financial assistance from state government, central government and other national agencies?

The information about various scholarships given by Central government, State government is circulated to students and forms are made available in the office. The awareness about the nature of the scheme is given to the students by various means.

Details of the scholarship availed year wise are listed below.

Name of the Scholarship	No of Beneficiaries	2016-17	2015-16	2014-15	2013-14
BC/MBC	1176	253	348	236	339
SC/ST	31	-	9	9	13
Minority	14	-	8	1	5
Institutional Scholarship	1120	460	364	256	40

5.1.4 What are the specific support services/facilities available for Students from SC/ST, OBC and economically weaker sections:

Students from SC/ST, OBC and economically weaker sections are provided with Scholarships for their financial fulfillment. Book bank facility is available for SC/ST students. Reservation in admission is provided as per Government norms. Motivational classes are conducted for SC/ST students. Communication classes are conducted to develop soft skills. Free awareness programs on scholarships schemes and opportunities are given. Mar Ephraem extension services and Mar Ephraem Manna provides financial assistance to the needy.

Students with physical disabilities:

The college supports students with disabilities by all means wherever and whenever necessary. Special restroom facilities are available both in the college and hostel. Physically challenged students are provided with food in their respective classroom itself. Wheel chair provisions are also made available. For the past 2 years students with such physical disabilities are not available in the college. Book to seat Scheme is available in the library for such students via class-in-charge.

Overseas students:

At present the institution has no student on rolls in this category.

Students to participate in various competitions/ National and International:

Students are supported to participate in various competitions. Students are supported with on-duty leave. Internet WI-Fi facility is available to enable the students to prepare technical papers under faculty guidance and motivation. Most of the students win prizes in Inter University and Intra College events. College library is functioning from 8A.M to 8P.M

to support such activities. In addition, our college lays a good sportive ground and a well-qualified coach to guide indoor and outdoor games.

Medical assistance to students: health centre, health insurance etc:

Mar Ephraem provides health insurance for all students and staff. Mar Ephraem has a health centre with Full-time Nurse. Trained physicians are available who visit during working hours. Ambulance is available in the college for 24 hours to meet the medical emergencies of students. Regular medical checkup and vaccines are given for preventing seasonal diseases. Mar Ephraem is in collaboration with Ebanazer clinic located 100m from campus in non-working hours. For special treatments, we have collaboration with Jeyaraj hospital, Marthandam which is located within 5 km radius from the campus. It has 24 hrs emergency facilities.

Organizing coaching classes for competitive exams:

Mar Ephraem organizes coaching classes for competitive exams like GATE/CAT/GRE/TOEFL/GMAT/IES. Question bank and study material for GRE, TOEFL, GATE and CAT are made available in the library. Students should select one option based on their interest.

Skill development (spoken English, computer literacy, etc.,)

✓ Career awareness program on competitive exams are conducted in the first year.

✓ Campus language for communication is English.

✓ Personality development skills are a part of the placement training program, from the beginning of the third year of study.

✓ Extra special classes are conducted to enhance the programming skills of students opting for placement.

✓ The language lab and communication skills lab are incorporated in the curriculum to that effect

✓ In the Ist semester, a course on computer programming is included and this is taken up by all the students.

✓ Common computer lab with internet facility and audio visual facility is available to improve the communication skills from 8 A.M to 8 P.M.

Support for "slow learners":

Remedial classes are arranged for slow learners. It mainly focuses on the strengths

and weakness of slow learners and inculcates the method of studying more effectively and helps slow learners to score better marks. After this, remedial test will be conducted and analyzed. In addition to this, there is a strong mentoring system to boost the confidence of the slow learners.

Exposures of students to other institution of h i g h e r learning/ corporate/ business house etc:

The students are exposed to other institutions/industries through internships, in-plant training and industrial visit. Students participate in various inter-collegiate competitions and attend trainings organized by other institutions.

Publication of student magazines:

Student magazines are published with the participation of the students. The student editorial committee publishes the college magazine. In addition to this, a few schools have their own magazine / newsletter, as listed below.

- ✓ College magazine-EPHRA'LE
- ✓ School of Civil Engineering magazine - Krezetaz
- ✓ School of Electrical and Electronics Engineering magazine – INNOVATI

5.1.5 Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.

- ➢ Mar Ephraem has identified entrepreneurship Development as the need of the hour in the context of growing opportunities for an enterprise in India.

- ➢ IEDC; Entrepreneurship Development cell is functioning effectively in the campus.

- ➢ Three faculty members were trained for two weeks in an FDP at EDI, Ahmedabad.

- ➢ All the faculty members are trained in the competencies required for an entrepreneur through faculty development program.

- ➢ We have conducted two Entrepreneurship awareness camp for three days, each sponsored by NSTEBD, DST, Government of India, for the students.

- ➢ Technology Development Center (TDC) to transfer innovative ideas into products and hence commercialize for profit. IPR CELLS to protect the intellectual property rights of the innovators.

List of Successful Entrepreneurs.

Sl no	Name of the Alumni	Batch	Name of Initiative	Details of Operation
1	Mr. Jaison Johnson	2009-2013	Technoscan Inspection (9961585102)	Educational Entrepreneur - Providing NDT, OIL, QC courses
2	Mr. Aaron Abraham John	2010-2014	Airon Academy (9895030746)	Educational Entrepreneur - QA/QC, Oil and Gas and NDT courses
3	Mr. Selvin,	2009-2013	Dudes Venture (8508664127)	Logistics networking and supplier using mobile apps
4	Mr.Jenil	2010-2014	Landmark Infra (9578120706)	Eco friendly construction with locally available materials.
5	Mr.Dilip R Kumar	2010-2014	Sivan Construction (9489486940)	Planning and construction of energy efficient

5.1.6 Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co- curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc.

The College views extracurricular and co-curricular activities as an integral part for the holistic development of the student. Opportunities, therefore, are identified, created and given to promote student participation. Financial support, training and development support are provided by the institution appropriately. The college helps the students in these activities in the following ways.

➢ Students should consult the mentor and the mentor suggests OD to students via class in charge

➢ Additional academic support and flexibility in examination times are provided.

➢ Students are informed of special dietary requirements, provided with sports uniform, necessary materials and other relevant information.

➢ All core Schools have their own branch association. They organize seminars /workshops/invited talks from industry/inter college and intra college technical and cultural fest.

- ➢ With a view to honoring the technical and cultural skills and talents of students and promoting their aptitude for research and extension, the college offers both technical as well as non-technical clubs.
- ➢ Students are given duty leave to participate in technical and cultural activities organized

    by the university or any other college.
- ➢ Annual sports meet and inter-school games competitions are also conducted.

5.1.7 Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR-NET,UGC-NET,SLET, GATE/CAT/GRE/TOFEL/GMAT/ Central/State services, Defense, Civil Services, etc.

- ➢ Books and periodicals are made available to students via Schools
- ➢ Notifications are circulated to all the classrooms
- ➢ Guidance is given to students for applying for competitive examinations by the faculty members
- ➢ Awareness programs are conducted on competitive examinations.

5.1.8 What type of counseling services are made available to the students (academic, personal, career, psycho-social etc.)

Academic Counseling

Academic counseling is provided to the students by an educational counselor. Also, each faculty member is entrusted with 20 students to keep track of their progress and performance. Class committee meetings are conducted frequently to know the problems of the students. Every week one period is allotted for mentoring in the timetable. The mentor meets the mentees regularly and suggests for any counseling by experts from outside if required. They also motivate the students to participate in various activities in academics. All the progress of the student is recorded in the mentee progress report.

Personal Counseling

The college provides personal counseling by expert counselors. Also the students may contact their respective mentors for guidance and support.

Career Counseling

Career guidance cell is functioning effectively and it notifies all the opportunities to students. Career guidance and motivational programs by Alumni, External guest and faculty are organized frequently through career guidance cell. Skype meetings are frequently

conducted. Career guidance cell conducts various training programs as follows

Psycho-social Counseling

Psycho- social counseling is provided through various programs like Retreat, Jesus Youth, Social Service, etc.

5.1.9 Does the institution have a structured mechanism for career guidance and placement of its students? If 'yes', detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).

YES, Mar Ephraem has a system to provide career guidance and placements of the students.

During the first year special training on communication skills are given, in the second year training on aptitude is given, third year specific technical skills and training on group discussion are given, in the fourth year mock interviews are conducted.

Training and Placement Officer leads the training and placement Cell, who is assisted by a training and placement Coordinator. Add on courses, are conducted for the students to improve their technical skills. The salient activities of training and placement cell are: Aptitude training, Group Discussions, Technical Interviews, Communication Skills and In-house Mock recruitment process.

The lists of employers are given below.

Year	Name of the recruiter	School	No	Number of students placed	Total number of students placed	Percentage of placement based on eligible students
2016-17	CSS Corp IT service management company	ECE	1	1	5	33%
	VI Microsystem	ECE	2	4		
		EEE	2			
2015-16	HCL	ECE	3	3	53	35%
	Companion Business Solution India Pvt Ltd	ECE	4	4		
	Mitsuba Sical India Pvt Ltd	ECE	4	4		
	Sutherland Global Services	Civil	14	30		
		CSE	14			
		ECE	2			
	Aee Bee Acadamy	ECE	8	8		
	VeeT	ECE	2	4		
		EEE	2			

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2014-15	Om Innovation	CSE	14	17	88	50.2%
		ECE	1			
		Mech	2			
	Embetronics	CSE	2	5		
		ECE	3			
	Invensis	Civil	2	7		
		CSE	1			
		ECE	3			
		Mech	1			
	Poornam Info Vision	ECE	1	1		
	Fenna constructions chennai	Civil	3	3		
	White Oval Technologies	Civil	2	10		
		CSE	6			
		Mech	2			
	RS Windtech	Civil	1	1		
	Anno Dominic Software	CSE	3	3		
	Adhoc, Tvm	CSE	4	4		
	ETA SOFTEK	CSE	2	5		
		ECE	3			
	Nayan Commuunication	ECE	9	9		
	Sundaram Brakes Linings Limited	Mech	11	11		
	Tech Shore Inspection Services Cochin	Mech	12	12		
2013-14	Tech Mahindra	Civil	11	43	43	58.1%
		CSE	8			
		ECE	15			
		Mech	9			
2012-13	Aryaka network	CSE	1	3	62	28%
		ECE	2			
	Logic ERP	Mech	2	2		
	Sun Nework	Civil	10	18		
		Mech	8			
	Ultra Tech Trivandrum	Civil	2	2		
	Airtel Chennai	CSE	12	25		
		ECE	13			
	Naushie Infosystems pvt ltd	CSE	1	3		
		ECE	2			
	Brains Trust Technologies	CSE	3	4		
		ECE	1			
	Samcys technologies	CSE	5	5		
		ECE	6			

5.1.10 Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.

The institution has a Students Grievance Redressal cell functioning to rectify the grievances faced by the students. The grievance redressal cell coordinator circulates the information to all students via circular and notice boards and any grievance should be

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reported via the coordinator. It has been established to find the solutions for the problems faced by the students during their course of study.

5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?

Mar Ephraem has Women Grievance Cell and the members deal with any such type of problems if it arises. So far no such problems have been raised in the institution, as the institution keeps a very high level of discipline.

Lists of provisions provided by the institution are

➢ The women grievance cell organizes special sessions wherein the participants are informed about the various strategies that could be adopted to resolve any issues pertaining to sexual pestering.

➢ In addition, the cell conducts periodic awareness programs which illustrates the evils of harassment and its impact in the community.

➢ Volunteers are being setup in and around the campus who monitors the issues dealing with sexual harassment.

➢ Students are trained at every level to identify and protect themselves from harassments in any dimensions.

5.1.12 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

There is an Anti-ragging committee to handle ragging inside the college. After initiating the committee, the implications of ragging are made known to all students through yearly meetings when new students join the college. Senior students do not indulge themselves in such practices as the punishment is severe. Classes are organized on legal awareness on anti-ragging every year. Anti-ragging affidavits by both student and parents are collected at the time of admission. Because of the effective steps taken by the management the college never had any incidence of ragging. Anti-ragging slogans and posters are placed in important locations of the campus.

5.1.13 Enumerate the welfare schemes made available to students by the institution.

The welfare schemes made available for students by the institution are as follows:

➢ Scholarships, endowments and free-ships.

➢ SC/ST Book Bank

➢ Fully Wi-Fi Campus even during non-office hours.

➢ First aid and medical assistance

- ➢ Seed money for student research project
- ➢ Good Samaritan award, best outgoing award, beat ambassador award.
- ➢ Special awards and prizes for university toppers and rank holders.
- ➢ Health Insurance Scheme
- ➢ Book to Seat for differentially abled students

5.1.14 Does the institution have a registered Alumni Association? If 'yes', what are its activities and major contributions for institutional, academic and infrastructure development?

Yes, AMEOS (Association of Mar Ephraem Old Students) is a vibrant organization which caters for the inculcation of intimate fellowship and frequent interaction among the former graduates of the college.

- ➢ Annual get-together has been conducted since 2014
- ➢ The alumni association meeting is conducted along with graduation day.
- ➢ The association is in the process of legal registration as society.

ACTIVITIES

Some of the activities under Mar Ephraem Alumni Association are listed below

- ➢ **YEARLY ONCE GET TOGETHER IN MAR EPHRAEM**

The Alumni meet was in process from 2014 after every graduation day. They provide practical support to students. The institution and students are benefited from their skills and experience.

S.No	Alumni Meet	Suggestions
1	1st	➢ Additional involvement in extracurricular activity ➢ Impart importance of Communication knowledge
2	2nd	Motivation towards Practical sessions
3	3rd	➢ Extra Placement training ➢ Extra Value Added Course

- ➢ **ALUMNI CONTRIBUTION TO COLLEGE**

S.No	Name	Role
1	Libin C Varghese	Motivation about internship
2	Divyamerin Abraham	Sharing working experience

3	Jaculin	Guest Lecture
4	Alein	Technology Transfer
5	Rojee Mon	Sharing working experience
6	Benson Babu	Guest Lecture

➢ **ALUMNI FINANCIAL CONTRIBUTION TO COLLEGE**

S.No	Name	Contribution (Rs)
1	Libin C Varghese	8,000/month
2	Divya Merin Abraham	5,000/month
3	Bibin P	5,500/month
4	Jijo K	5,500/ month

➢ **ALUMNI STUDENTS CONTRIBUTION TOWARDS PLACEMENT**

Alumini supporting student recruitment both at home and overseas.

S.No	Alumni Name	Company Name	Number of Students Placed
1	Riyo Jose	Vertitable Technologies and Design	2
2	Libin C Varghese	Environ, Singapore	1

5.2 Student Progression

5.2.1 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the trends observed.

Student progression	2016-17	2015-16	2014-15	2013-2014
UG to PG	-	15	16	14
PG to Ph.D.	nil	nil	nil	nil
• Employed • Campus selection • Other than campus recruitment	Placement yet to come	45	46	45

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5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years(cohort wise/batch wise as stipulated by the university)?Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.

Programme	Pass Percentage %			
	2013	2014	2015	2016
ECE	49	40	68	69
MECH	68	68	60	60
CIVIL	65	66	58	60
CSE	65	31	64.80	69

5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?

The placement cell, with the support of core departments, conducts seminars on career guidance and higher studies. It also organizes coaching classes for GATE. The placement cell organizes on-campus and off-campus recruitments and pre-placement training programmes in Aptitude test, Group Discussions, Interviews and presentation skills in collaboration with the Department of Humanities and core departments. Mock interviews and GDs are conducted on a regular basis so as to equip final and pre-final students to face the challenges of the recruitment scenario.

Sustained practices in the college for student progression to higher level of education include:

- ✓ GATE coaching
- ✓ Guidance for higher studies like PhD
- ✓ Academic counseling
- ✓ Scholarships and freeships to study PG programs Abroad through MOU with them. Through this, placement is assured.

Practices for student progression towards employment include:

- ✓ Coaching for competitive exams like Civil service
- ✓ Add-on program, Industrial tie-ups and visits
- ✓ Finishing School program, Placement oriented Personality and skill development program.
- ✓ Placement drives, Career seminars, Sessions on Aptitude & Reasoning skills, etc.

5.2.4 Enumerate the special support provided to students who are at risk of failure and dropout?

The students who are at risk of failure and drop out are identified through attendance monitoring, results analysis every semester, and also through teacher's observations and informal interactions within and outside the classroom. Special attention and support is given to such students and they are motivated for improved performance:

- ➢ **Academic support**
  - ✓ Remedial Classes
  - ✓ Peer teaching
  - ✓ Tutorial sessions

- ➢ **Financial support**
  - ✓ A coordinator at the College level facilitates the availability of various scholarships offered by the Govt.
  - ✓ The College has constituted various scholarships through Alumni, parents and well-wishers.

- ➢ **Psycho –Social support**
  - ✓ Active Individual Mentoring is provided
  - ✓ Constant Parent Teacher interaction and House visits
  - ✓ Special counseling through psychological experts in the campus.

Drop-out rate for various courses has been made negligible over the last several years. The institution has designed and implemented an array of programs to minimize the drop-out rate of students.

5.3 Student Participation and Activities

5.3.1 List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.

Mar Ephraem provides a range of sports, games, cultural and other extracurricular activities available to students because exposure to these activities is very important for their holistic development. Various activities such as Singing, dancing, debates, quizzes, poster presentation etc were conducted. Every year sports day is conducted with various games. "Festino Beats" the cultural feast is celebrated every year. Every school will also conduct various cultural and extra-curricular events. International college cultural fest is planned to be conducted every year. The following is the list of Sports/Games facilities available to students.

S.No	Date of the event	Name of the Event	No. of participants
1	5-3- 2014	Annual Sports Day	143
2	2-3-2015	Annual Sports Day	161
3	4-3-2016	Annual Sports Day	150
4	11-3-2017	Annual Sports Day	167

5.3.2 Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University/ State/ Zonal/ National/ International, etc. for the previous four years.

The details of major student achievements in co- curricular, extra-curricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years is as below

Achievements of Students in Co-curricular, Extra-Curricular and Cultural Activities in National, International and Intra College Level

2016-2017

S.No	Name of the student	Event	Prize
1	Varghese& Team	Treasure Hunt	1st
2	Allan Kips	Running	2nd
3	Princy Wilson	Shot Put, Discus Throw	1st
4	Reshma Sara Reji	Fashion Show, Mrs Mar Ephraem, Single Dance	1st
5	Sherin Varghese	Poster Presentation	1st
6	Jibin Thomas	Poster Presentation	1st
7	Nisha Shaji	Paper Presentation	2nd
8	Rebekah Alley Jolly	Paper Presentation	2nd
9	Nevin Abraham	Basket Ball	3rd
10	Siva Prasad& Team	Seminar on semiconductor	1st
11	Nikitha Mathew	Group Song	1st
12	Jithu& Team	Internet Of Things	Best Team
13	Jerin George& Team	Robotics – IIT Bombay	Best Presentation, Demonstration

14	Minto Monu Mathews	Robotics – IIT Bombay	5th
15	Abel Jacob	Intelligent car parking robot	Judges Choice
16	Joel Samuel& Team	GPS fitted Lifebuoy	Appreciation from IEEE

2015-2016

S.No	Name of the student	Event	Prize
1	Christy	Dance	1st
2	Siva Prasad	Debate-Tamil	2nd
3	R. joy	Paper Presentation	2nd
4	Blesson Varkey Chacho	Paper Presentation	1st
5	Joy .R	Circuit Debugging	1st
6	Blesson Varkey Chacho	Technical Quiz	2nd
7	Merlin	Mrs Mar Ephraem	1st
8	Meera Rajan	Voice of Mar Ephraem	1st
9	Adlin Sweety	Running, Shot Put	1st
10	Riya	Clay Modelling	2nd
11	Sanju	Voice of Mar Ephraem	1st
12	Christy	Voice of Mar Ephraem	3rd
13	Libin & Team	MIME	3rd
14	Amal P John& Team	Paper Presentation	3rd
15	Dinu & Team	Treasure hunt	2nd
16	Arya Prasad& Team	Quiz	2nd
17	Neha & Team	Group Song	1st
18	Neha & Team	Group Song	2nd
19	Krishna Prasad	Paper Presentation	2nd
20	AbiyaMol	Paper Presentation	2nd
21	Abisha & Team	Paper Presentation	2nd
22	Rahul R U	e-yantra-	2nd
23	Dinu D	e-yantra	5th
24	Baby Paul	e-yantra	Judges choice

2013-2014

S.No	Name of the student	Event	Prize
1	Nithin Thampan	Group Song	2nd
2	Tobin Tony	Pico Tear Robot	2nd
3	Tobin Tony	Robotics	2nd
4	Blesso Varkey	Pit stop	2nd
5	Tobin Tony	Robotics	1st
6	Ashish Thomas John	Robo-Zest	1st
7	Tobin Tony	Robo-Zest	1st
	Tobin Tony	Robo Tryst	2nd
9	Tobin Tony	Sportech	1st
10	Nithin Thomas	Robo Tryst	2nd
11	Cibin Babu	Robo Tryst	2nd
12	Athul Tom Philip	Robo-Zest	1st
13	Cibin Babu	Robo-Zest	1st
14	Cibin Babu	Project	2nd
15	Tobin Tony	Project	2nd
16	Jeba	Badminton	1st
17	Ashish Thomas John	Pit Stop	2nd
18	Tobin Tony	Pit Stop	2nd
19	Tobin Tony	Pit Stop	2nd

5.3.3 How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional provisions?

Mar Ephraem takes feedback from graduates every year in order to improve the Quality Education. Suggestions for improvements are carried out to improve the performance and Quality of the institution. The feedback is collected formally through exit feedback of the final year students. Besides this, the following Informal mechanisms are also used to get the feedback:

➢ Open house, feedback from students and Graduates by IQAC

➢ Oral feedback from parents during PTA meet on which improvements are made, feedbacks were collected through meetings, social networks.

➢ Feedback from employers are gathered through emails, industry interface, visits to the industry,

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- ➢ Experts visiting the campus, interaction with Alumni working with different organizations etc
- ➢ Visitor's diary in the College and individual Schools are also used to collect feedback from visitors and guest.
- ➢ The feedback received has instilled improvements in fields like support services, activity streamlining, facilities, etc. In response to student feedback, special language and personality skills training are offered to students to enhance their employability
- ➢ Corporate testimonials from interviewers who visit our college on campus.

5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/materials brought out by the students during the previous four academic sessions.

Mar Ephraem encourages the students to participate and publish research Papers in both the National and International conferences and also students are encouraged to contribute materials for the college magazine. A faculty member is given charge of guiding and supporting students for publishing the student's journals. College magazine is published annually which give opportunities to students to express their literary skills. In addition to this, a few school associations bring out their own school magazine which comprises topic relevant to latest development in those subjects.

- ✓ College Magazine-EPHRA'LE
- ✓ School of Civil Engineering - Krezetaz
- ✓ School of Electrical and Electronics Engineering – INNOVATI

5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.

Every class a representative and vice representative are elected by the students by voting. This is conducted by the students in the presence of the class-in-charge. The period of service of a representative is one year, after which the representatives are elected again. All the representatives in the School form the School student's council.

The objective is to train students in the duties and rights of citizenship. It also promotes opportunities for the development of their character, leadership abilities, camaraderie and spirit of service through various educational and cultural activities. The Students council consisting of Students and Faculty Advisory Team carry out student centric activities on campus. The activities of the Students Council are supported by the Management.

5.3.6 Give details of various academic and administrative bodies that have student representatives on them.

There are student representatives in the following academic bodies of the institution.

- ✓ Student Council
- ✓ Class Committee
- ✓ Department Associations
- ✓ Alumni Association
- ✓ IQAC
- ✓ College magazine editorial board
- ✓ Extension services.
- ✓ Entrepreneurial activities
- ✓ N.S.S
- ✓ R.R.C
- ✓ IEEE students chapter
- ✓ IET students chapter
- ✓ ISTE students chapter
- ✓ SAE students chapter
- ✓ Jesus Youth
- ✓ Mar Ephraem Manna

5.3.7 How does the institution network and collaborate with the Alumni and former faculty of the Institution. Any other relevant information regarding Student Support and Progression which the college would like to include.

Alumni visits to the campus and interactions with them are encouraged and facilitated by the college.

- ✓ Continued relationship with the alumni is maintained through Social Medias.
- ✓ Website with option for Alumni registration, social media groups, and e groups.
- ✓ Industry interfaces and fests by various departments are occasions when the Alumni in the vicinity are invited to interact with the students. This has proved very fruitful and motivating to students
- ✓ Feedback on various aspects of the college's functioning is taken during these interactions. The Alumni contributions are primarily in supporting the college in finding project/job placements for the students, instituting scholarships/endowments, Training support etc.

- ✓ The College invites faculty who have moved to other institutions and positions as Resource Persons for conferences and seminars.
- ✓ School fest/ National/International Seminars and Conferences/ College Day, etc. are occasions when the presence of Alumni and former faculty are solicited.
- ✓ A few Alumni are constantly supporting the school by donating a percentage of their salary for the development of their juniors.

There is separate page in website for Alumni to provide updates. There is a Facebook page over which updates are posted Regular Communications are sent over e-mail. Regular Annual meetings are conducted.

Criterion: VI

Governance, Leadership and Management

CRITERION VI

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?

The College has a well articulated vision and mission statements. They are

a. 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.

b. 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.

c. GOALS :

1.To provide value based engineering education that produces engineers who are innovative entrepreneurial, globally competitive and vested with high values and understanding of their professional social and ethical responsibilities.

2. To provide general, specific and soft skills to the engineers to advance the knowledge and competence of engineers for successful careers and life long learning.

3. To initiate research activities focused on need based areas in engineering and technology which enhances creative and innovative endeavors and promote social development.

4. To motivate the engineers to participate in community activities that will serve as avenues for lab to land application of knowledge in engineering and technology.

5. To establish linkages and MoUs with National, International Governments, Industries and other Institutions in the areas of engineering education, research and extension services.

Institutions Distinctive Characteristics:

The distinctive characters of Mar Ephraem are

- ➢ Excellence in Science and Technology.
- ➢ Holistic Development.

- Value Based Education.
- Inclusiveness.
- Community Orientation.

Addressing Needs of Society:

- The students and faculty identify the potential challenges of the society through social interaction.
- Creating innovative ideas for the challenges identified.
- Conducting need based research and evolving successful project and products to support the society.
- Focus the unprivileged people in the society, thus including them for their upliftment.
- Providing educational opportunity for economically weaker section in the society.
- No discrimination based on faith, religion, region and language.
- Providing ethical and moral sense to students.
- Inculcating the attitude of adopting environmentally sustainable practices in profession.

Institutions Tradition and Value Orientations:

- The acumen of Mar Ephraem is to focus and impart holistic development, excellence in science and technology, value based education, inclusiveness and community orientation.
- The fame of our sister institutions hold traditional reputation for their excellent service in education with promoting values among societies for more than an era.
- The prominence of our institution is that it contemplates on academic discipline with value based education.

Future

- To enact a skill centre for excellence
- Provide much more services to the unprivileged sector.
- To incubate and market ideas and products through Technology Development Centre.
- To make international collaboration with reputed institutions.

6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?

- The top management gives the vision, mission and goals to be achieved.
- The quality policies and plans for achieving the vision, mission and goals are

formulated by the functional positions that perform the activities to realize the vision of the institution.

➢ The academic plans for every class are developed by the class committees.

➢ In the school consultation committee, the Head of the School consolidates the plans of all classes with the inputs from the faculty and alumni.

➢ The academic planning council gathers the plans from every school and prepares the plans and policies for the entire intuition.

➢ The IQAC comprehend with necessary analysis for the alignment of the formulated plans and policies to be in accordance with the vision, mission and goals of the institution.

➢ The management supports the policies and plans for execution.

6.1.3 What is the involvement of the leadership in ensuring:

The policy statements and action plans for fulfilment of the stated mission

➢ The management double checks the action plans for its lean towards the institutions distinct features; holistic development, excellence in science and technology, value based education, inclusiveness and community orientation.

➢ The sustainability of the key points of the institution is actualized by competent teaching learning methodologies, skill oriented training, vigorous research and potent interaction with the community.

➢ Action plans at School level are scrutinized based on the goals of the institution. The college annual report is also prepared based on the achievements made goal-wise, so as to make all the stakeholders to realize the contributions made to achieve the stated mission.

Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan

The action plans for achieving the mission are formulated at different levels in

➢ Teaching and learning

   ✓ Conduction of peer learning through outcome based education
   ✓ Industrial gap identification, value added courses and content beyond syllabus
   ✓ Remedial training
   ✓ Co curricular and Extra-curricular activities.

➢ Process and product development through research and innovations.

➢ Including the exempted group in the society.

➢ Reaching the society through social, moral, NSS and RRC activities.

➢ Identifying and promoting the talents of the stakeholders.

➢ Based on the plans mentioned above, the semester plan and the year plan are formulated for the institution.

Interaction with stake holders:

➢ The action plan is displayed at strategic locations and communicated to the stakeholders.

➢ Regular interactions are made with the industries and alumni for updates in the plans.

➢ The action plan of the institution takes proper channel for a better reach out. i.e., students are informed formally by the institution, whereas parents are updated through electronic media when they pay a visit to the institution.

Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders:

➢ The need analysis is made orally and in written feedback from students, faculty and parents, so as to properly shape the college policies and plans. External / internal stakeholders are consulted on the basis of the seriousness and importance of the planning aspects.

➢ Student's performances in academic activities are analyzed and reviewed periodically through progress reports and mentoring profile.

➢ Social interactions and feedbacks are made with MIDS and tribal villages. Moreover, social activities like NSS, blood donations and Clean India movement are encouraged.

➢ All the above mentioned activities are incorporated in the institutional strategic plan and the resource for the execution is supported by the top management.

➢ The policies are framed according to the experiences from the past years. The top management fully supports new plans for the benefits of its stakeholders.

➢ The inputs from institutional inspections by regulatory bodies like AICET, University are welcomed and appropriate corrective measures were taken.

➢ Regular feedbacks from every stakeholder are obtained periodically and consolidated for the policy and planning.

Reinforcing the culture of excellence:

➢ On our way for the execution of formulated plans, the institution recognizes the achievement of every student by enthroning a 'star' system which means awarding

'stars' for their meticulous achievements in curricular, co-curricular and extra-curricular activities. The stars obtained are cumulated and at the end of every semester the students are appreciated.

➢ The faculties are encouraged to pursue research, participate & organize seminars, workshops, conferences to keep the faculty abreast of the recent trends in teaching, learning & evaluation, and to become expert in their specialized area of interest, thereby reinforcing a culture of excellence.

➢ They are encouraged and motivated to be a member of various academic bodies. Awards and incentives encourage the spirit of excellence in the endeavors of the faculty. Such practices create an ambience that is most conducive for academic excellence.

Mar Ephraem aims at excellence in the areas of

✓ Teaching and Learning,

✓ Skill Development,

✓ Research and Projects

✓ Social Involvement

✓ Collaboration with International and National Institutes.

Champion organizational change:

➢ Mar Ephraem march towards change by adapting 'outcome based teaching' methodology.

➢ The institution is very particular on sharpening the skills of the students which in turn would simulate the attributes of an 'engineer' in the student.

➢ The institution welcomes the inter-disciplinary research culture inside the campus thus steers the students towards a change.

➢ The institution scans the need of the society by persistent interaction with the society and thus we envision a change with our technology.

➢ The institution reiterates the process of lifelong learning to its students in all possible means thus the students realize that the learned values, skills and attitudes is a lifelong learning process.

➢ The institution strives to identify the potentially unsound section form the society and lends the hand of help via scholarships and extension services.

➢ The institution hears the challenges form the society by continuous interactions with the society and come up with ample products, services and solutions.

6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?

➤ A five-tier Plan-Implement-Monitor-Evaluate-Review approach is adopted by Mar Ephraem to monitor and evaluate policies and plans for effective implementation and improvement from time to time.

➤ At each level policy, plan and procedure are implemented and monitored by responsible incumbents.

➤ IQAC is responsible for monitoring and evaluating polices and reviews for improvements in it. These are evaluated with help of Interactions, Appraisals, Assessments and Feedback with the stakeholders.

➤ Academic audit is conducted at the end of every semester and the comments are rectified.

➤ They are then subsequently corrected and reviewed for effective development of policy and plans.

➤ Any improvements made from time to time on policies and plans are amended and circulated to the stakeholders.

6.1.5 Give details of the academic leadership provided to the faculty by the top management?

The management upholds leadership skills in faculty.

➤ The faculties are provided with autonomy to plan and conduct teaching and learning, which means the course plan can be drawn up by the faculty based on the expected outcomes, they can use any innovative methods and tools to reach their expected course outcomes.

➤ When certain innovative ideas are spotted, the top level management initiates the faculty to shape up the ideas and to progress on the appropriate execution of the ideas which gives a byproduct as a model for others.

➤ The top level management facilitates the identification of potential research areas by the faculty and thus after which, it lends all the needed facility for a faculty to become an expert in the identified research area.

➤ Once after a faculty gets specialized in a potential research area, they are networked with the industrial partners of the institution thus initiating potential research and collaborations in R&D arena.

➢ The faculties are opened up in a forum which triggers the professional development of the individual faculty through Inter-disciplinary research committee.

➢ Innovation Entrepreneurship Development cells and Technology Development Centre have been established to convert innovative ideas to products and solutions.

➢ Any events organized on the tag of the institution are led by the faculty and thus sharpening their leadership skills.

➢ All sort of professional societies pay host in the institution headed by the faculties which hone up their leadership skills.

6.1.6 How does the college groom leadership at various levels?

Internal

➢ The Principal plays a key-role in the administration of the institution. He is the sole controller of academic and non-academic activities.

➢ In the same way the Principal provides freedom to the HOS to act as leaders in their Schools.

➢ The staff members are given full freedom to share their opinions in School consultation committee meetings and organizes activities at various levels.

➢ The faculty members were assigned as conveners of various clubs, Associations, NSS, ISTE, IET, IEEE, SAE and as Program coordinators to take individual decisions in their role for the conduct of programmes.

➢ These members create leadership among students by training them to imbibe the spirit of leadership at various levels.

The leadership roles are entrusted to faculty at different levels in the campus as follows:

- College Academic Planning Council
- Training and Placement Cell
- Discipline and Anti-Ragging Committee
- Library Committee
- Examination Control Cell
- NSS Cell
- Public Relations
- Sports Committee
- Hostel Committee
- College Day Celebrations Committee
- Transport Committee

- Website Maintenance Committee
- Intranet and Network management committee
- Grievance Redressal Committee
- Women's Grievance Cell
- Staff welfare association
- Newsletter and magazine committee
- Interdisciplinary Research Committee
- IQAC
- School Consultation Committee
- Projects Review Committee (PRC)
- Funded Project management Committee
- Association of mar Ephraem Old Students (AMEOS)
- Competitive examinations preparation cell
- Soft Skills, Training and Career Guidance Cell
- Professional Societies

➢ Class Committee is formed at every school with representatives from the class and the Secretary is nominated by them.

➢ All classes have representatives who are helpful in organizing and conducting functions and activities in the college. Student leadership is groomed through clubs, associations, NSS, technical, cultural fest, and sports events.

➢ The students are encouraged to participate in Seminars, Conferences, Technical Fests, Inter Collegiate Tournaments and programmes.

➢ Every year the institution trains the students in leadership qualities through career Guidance & orientation programs.

➢ As a result of Entrepreneurship motivations and initiatives a few students have started their own companies.

➢ Mar Ephraem Manna an extension service, started by the students to identify and help the needy students, is functioning as an extension service among students.

➢ All the college events are conducted by the students. They are given representation in Academic Planning Council of the college, Library committee, IQAC and other important committees.

External Level

➢ Every faculty in the institution is motivated utmost to offer their best in 'knowledge sharing activities'. Thus they periodically participate in events organized by other organization as resource personalities.

➢ Faculty members who are in progress with consultancy projects from industry are provided with adequate facility on campus.

➢ The institution raises our collars for the research and development projects which we lead up with exclusively the support of our faculty. In addition, every faculty is encouraged to write up project proposals to external agencies which definitely includes government agencies on their specialized areas.

➢ The institution frequently organizes Government sponsored programs on campus during which every faculty is given equal opportunity to organize and lead the events.

➢ The institution believes in social transform from the campus. Thus it organizes several societal concerned programs which are leaded and monitored by the faculty.

6.1.7. How does the college delegate authority and provide operational autonomy to the departments/units of the institution and work towards decentralized governance system?

Mar Ephraem delegates authority and provides operational autonomy to each School/ Department/ Cells and Committee in a decentralized governance system. During the appointment of every position their roles, responsibilities and the reporting authorities are clearly stated in the induction program. Operational autonomy at different levels is as given below.

Autonomy at School Level:

➢ The faculties are given freedom to plan activities to attain the expected outcomes of the course. They also suggest additional contents beyond syllabus that have to be added along with the course.

➢ The planned activities are submitted by the faculty to the school consultancy committee, chaired by the HoS, who prioritizes and decides upon activities.

➢ The program outcomes which are formulated with the inputs from the stakeholders are taken into due consideration by the HoS in planning the curricular, co-curricular, extra–curricular activities, content beyond syllabus and value added courses.

➢ The Head of the School plans activities for the school, conducts regular school

consultation committee meetings, interacts with all stakeholders and prepares plan and schedule of activities.

Autonomy at Cells and Committee Level:

➢ Various committees are proposed and planned based on requirement, their responsibilities, functions, objectives and expected outcomes of activities are earmarked, the coordinators are taking responsibility for its successful functioning.

➢ Faculties from all schools volunteer themselves in these committees. The quantum of work and the nature of committee jobs are taken up by the staff.

➢ During the start of every year the cells and committees prepare an action plan, budget and schedule of events and the same is taken forward by the academic planning council. Budget requirements are approved by the Correspondent through the Principal's recommendations.

➢ Thus the college has decentralized the authority and provides operational autonomy to the cells and committees.

6.1.8 Does the college promote a culture of participative management? If 'yes', indicate the levels of participative management.

Yes, Mar Ephraem practices 100% participative management in all of its activities. Each and every decision, procedure and policy are taken by participatory management of related stakeholders. The management always focuses on achieving the mission of Mar Ephraem through participation of all of its stakeholders.

➢ The class committee, meets in a frequency of every working month, constitutes members from students with equality in gender, geographic locations, fast learners, slow learners. They list up their needs and necessities for their progress in academics and other activities.

➢ The needs which seek further assistance are consolidated by the school consultation committee which has its representatives as faculty, parents and alumni as well. This brings out a clarified notion on the need of the student level.

➢ Academic planning council is a well-structured one which constitutes representatives from all possible levels of the institution. Thus any decision made by the academic planning council reflects the notion of its concerned stakeholders.

➢ While conducting programs, the financial budget required for the execution of any

programs or plans is proposed by the program coordinators and supported by the top management.

➢ Any program on the tag of the institution is keenly formulated in the sense of theme, title and action plan is obtained from the stakeholder which reflects their need.

➢ The professional bodies, cells and committees inside the campus ensure diversity with stakeholders from every level to ensure participation of all the stakeholders.

6.2 Strategy Development and Deployment

6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?

Yes, Mar Ephraem has a formally stated quality policy involving various stakeholders.

Mar Ephraem Quality Policy: Mar Ephraem is committed to providing value and excellence in engineering profession and to share God's love.

➢ The quality policy got evolved from the vision and mission statements exemplifying the following

  ✓ Excellence in science and technology.

  ✓ Holistic development.

  ✓ Value based education.

  ✓ Inclusiveness.

  ✓ Community orientation.

➢ The quality policies are communicated to all stakeholders through different media as the underlying spirit which animates every aspect of the college.

➢ The quality policies are exercised in all activities in achievement of goals as mentioned below

  ✓ To provide value based engineering education that produces engineers who are innovative entrepreneurial, globally competitive and vested with high values and understanding of their professional social and ethical responsibilities.

  ✓ To provide general, specific and soft skills to the engineers to advance the knowledge and competence of engineers for successful careers and lifelong learning.

✓ To initiate research activities focused on need based areas in engineering and technology which enhances creative and innovative endeavors and promote social development.

✓ To motivate the engineers to participate in community activities that will serve as avenues for lab to land application of knowledge in engineering and technology.

✓ To establish linkages and MoUs with National, International Governments, Industries and other Institutions in the areas of engineering education, research and extension services

➢ A periodic review is made for the success rate in the curriculum delivery and new initiatives invoked by the schools. In addition, the student progress report is scrutinized periodically for monitoring students' progress. Also, the staff performance is rigorously scanned with the service register.

6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.
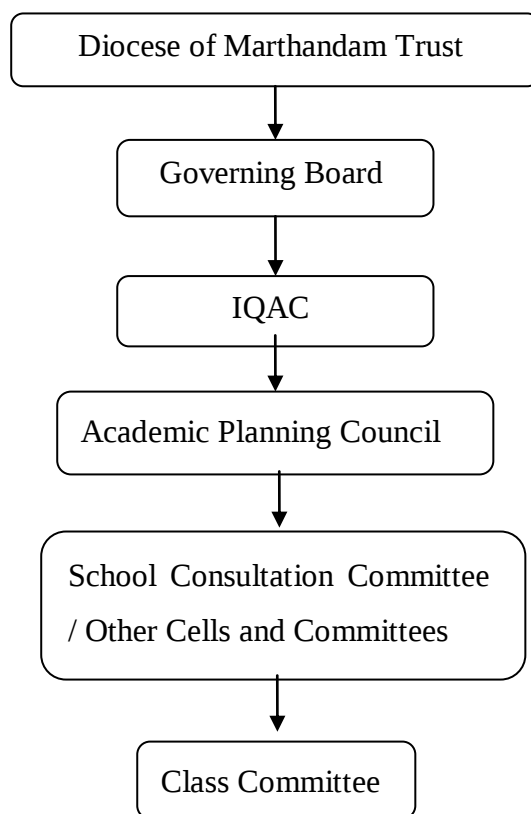
Yes, Mar Ephraem has a perspective plan for development. The following are the salient features of the developmental plan of Mar Ephraem.

1. Possibility of becoming an Autonomous College by the Year 2020
2. Initiating student exchange program with foreign Universities
3. Bringing Nobel laureates to campus
4. Collaborating with International organizations
5. Initiating Staff Exchange Programs with reputed institutes
6. Getting staff and students fellowships
7. Attracting international admissions
8. Conducting activities supporting digital India.
9. Work along with government projects
10. Attaining centum placement record including Tier 1 and Tier2 companies
11. Attracting Alumni contribution towards Alma mater
12. Adopting villages
13. Creating successful entrepreneurs
14. Alumni network in 20 countries
15. Placing students to get higher education in national reputed institutions through gate
16. Students in higher positions in government sectors
17. Securing 12(B) status from U.G.C
18. Securing NAAC Accreditation for Mar Ephraem
19. Getting all U.G Programs accredited by N.B.A

20. Getting recognition as research center by Anna University.

6.2.3 Describe the internal organizational structure and decision making processes. (flow chart)

Mar Ephraem is owned and run by the Catholic Diocese of Marthandam under Diocese of Marthandam Trust. The college is managed by the Governing Board with the Bishop, Diocese of Marthandam as the Chairman, and Correspondent as Secretary along with other members. The Governing Board has vested powers with the Correspondent as Competent Authority to undertake any activities in Mar Ephraem. Financial budget allocation and management of fund is done by the Bursar. The Principal is the head of the institution and looks into both academic and administrative matters and acts as a bridge between the Management, Staff and Students. The decision-making procedures are made at appropriate levels in the organizational hierarchy. An optimum level of decentralization through the autonomy and a participative decision making process are in practice. Various bodies listed below constitute the decision-making bodies:

```
┌─────────────────────────────────────┐
│      Diocese of Marthandam Trust     │
└─────────────────────────────────────┘
                   │
                   ▼
        ┌───────────────────────┐
        │    Governing Board     │
        └───────────────────────┘
                   │
                   ▼
          ┌─────────────────┐
          │      IQAC       │
          └─────────────────┘
                   │
                   ▼
       ┌──────────────────────────┐
       │ Academic Planning Council │
       └──────────────────────────┘
                   │
                   ▼
     ┌──────────────────────────────┐
     │ School Consultation Committee  │
     │ / Other Cells and Committees   │
     └──────────────────────────────┘
                   │
                   ▼
         ┌───────────────────┐
         │  Class Committee   │
         └───────────────────┘
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Flow Chart: Decision making process

- ✓ Governing Board
- ✓ IQAC
- ✓ Academic Planning Council
- ✓ School Consultation Committee / Other Cells and Committees

✓ Class Committee

Statutory bodies such as Staff Welfare Association, Anti Ragging Cell, N.S.S etc., functioning as per University/Government guidelines, are also included in the organizational structure of the institution. The organizational chart of Mar Ephraem is given below.
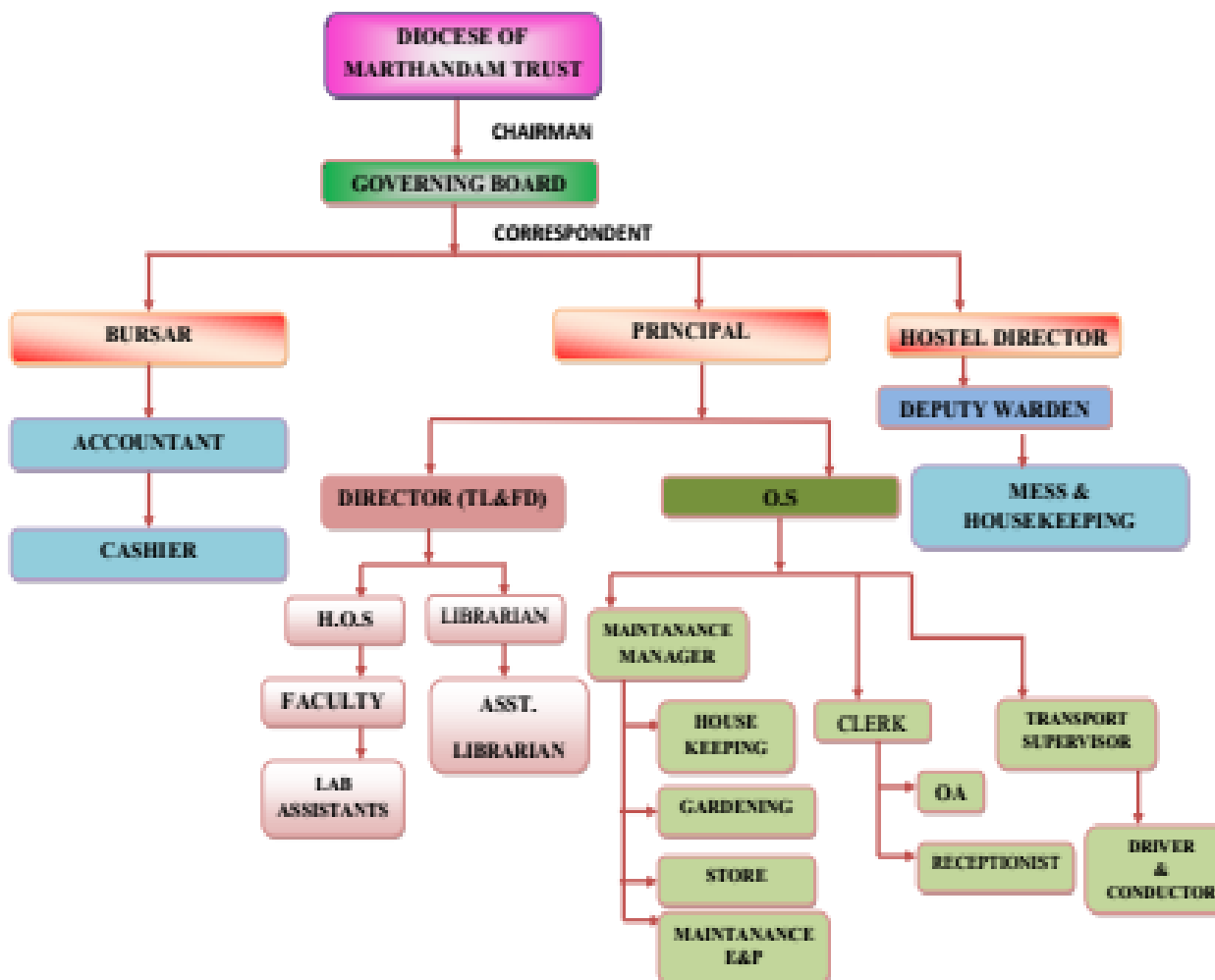
Chart: Organizational Structure

6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following

Teaching- Learning:

Course plan system is implemented to plan and deliver course contents effectively.

✓ Outcome based teaching and learning process is practiced.

✓ Course plan is prepared by the faculty and reviewed by the higher authorities before its delivery.

✓ Course industrial gap is obtained from industrial partners and delivered as Content Beyond Syllabus.

- ✓ Need analysis is conducted among students for planning teaching and learning contents.

- ✓ For applying the learnt concepts and principles, students are given micro projects at course level and mini projects at semester level.

- ✓ Every course outcomes is mapped with program outcomes.

- ✓ Frequent Faculty Development Programs are organized to train the faculty.

- ✓ Analysis of results and students feedbacks is obtained to monitor the progress of the student.

- ✓ Every student's profile is updated by the mentor to monitor the progress.

- ✓ Students performing outstandingly in academics are crowned with awards and appreciation.

- ✓ Leadership opportunities are given to polish their leadership skills.

- ✓ Online and blended mode of learning like NPTEL course platforms are laid on campus.

- ✓ The campus is enabled with necessary Information and Communication Technologies & infrastructure to use it.

Research and Development:

Research is considered as an important integral part of the academic endeavours in Mar Ephraem. Many Seminars and Workshops are organized by the College to provide expert information on technology.

- ✓ Community based products are developed based on the challenges obtained from the society.

- ✓ Numbers of ideas are impregnated by frequent idea competition on campus.

- ✓ Initiation of product oriented research

- ✓ The campus is imbound with a research culture rich in content and practical by implementation of Micro, Mini and Major Projects.

- ✓ To ensure the project's integrity, inter-disciplinary research approach is practiced in the campus which makes the developed product a complete one.

- ✓ Any problems addressed are analyzed through 'out of box' thinking approach.

- ✓ We get connected with reputed institutions for research and development purpose. To be specific, we join hands with Life Science and Medical Research Institutes.

- ✓ The Institution frequently updates the thrust areas in research, research facilities and trains the concerned faculty/expert periodically.

Community Engagement :

✓ The institution has adopted the 'Vazode' village in collaboration with Marthandam Intergraded Development Society (MIDS).

✓ The institution undertakes in community oriented programs akin NSS, RRC and also an integral part of clean India movement.

✓ The 'Puthur Pond' in Vazode village was cleaned by the students.

✓ The students have also conducted the social survey of the people in Vazode village.

✓ The challenges faced by the people of Vazode are identified and technological solutions for the challenges are in progress.

✓ In collaboration with MIDS, low cost buildings for the settlement of poor people are proposed.

Human Resource Management :

✓ The institution is a dome of self-containment, where all the stakeholders who are in association with the institution are contented utmost with a mood of happiness.

✓ The institution cheers up with Complementary growth wherein the dictum of 'Win-Win' policy is practiced.

✓ By the provision of autonomy at various levels, the stakeholders enjoy being associated with the institution.

✓ The transparency of the institution in policies and practices is ensured throughout the hierarchy through proper communication thus minimizing misunderstandings among stakeholders.

✓ Despite cornering the stakeholders with punishments the Institution tends to analyze the causes of the issues and supports them through corrective measures. This has increased the faculty retention rate on campus.

✓ To motivate the staff, the Institution provides Career Advancement Schemes for the staff.

Industry Interaction :

✓ Faculty to industry relation is encouraged at different levels. Every Course Coordinator will communicate with industrial experts to identify the Industry – Curriculum gap. The industrial expert is called 'Industrial Partner'.

✓ The institution on the whole also would seek an interaction with industries thus networking with the industry for better relationships.

✓ AMEOS – Association of Mar Ephraem Old Students plays a vital role in bridging the

gap between the curriculum needs and the industries through Alumni networks.

✓ The so-mentioned interactions with the industry at various level enhances the institution's relation with the industry ending up with Visits, Collaborative Publications, MoUs, Product Research and Development.

6.2.5 How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?

➢ At course level, the Course plan clearly depicts the teaching and learning process. The results and outcomes achieved are recorded and analyzed. Regular feedback from students are taken directly course-wise and through Class Committee meetings.

➢ Feedbacks and Review meetings are conducted after successful conduction of avery programs and events.

➢ The review of action plans is done and the success and deviation are reported to the management.

➢ Copies of all the circulars are provided to the top management.

➢ For immediate communication information is shared through institutional group email among staff.

6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

➢ When a new quality benchmark is initiated, it is forwarded to the Academic Planning Council to have a detailed plan on what to do and how to do.

➢ Interested members volunteers form a team thereby taking the plan forward for execution with ease.

➢ The staff members involve themselves through various committees such as Admission Committee, Women cell, Counseling and Placement Committee, Discipline Committee, Anti-ragging Committee, Sports Committee, etc.

➢ The representatives of each committee are free to give suggestions and opinions during the meetings with the Management. These suggestions are taken in to consideration before making decisions.

➢ The staffs involved in such activities are appreciated by the top management. They were given weightage in annual performance appraisal.

➤ To improve the efficiency of the adopted process all the staff are given representation in planning and execution of the process.

6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.

The Governing Board has its periodic meetings and in its last year's meeting it made the following resolutions:

Month & Year	Governing Board Resolutions	Status of Implementation
April 2016	Budgets for the next financial year were approved and the utilization of Last Financial Year's Budget is reviewed.	Implemented
	Any bill settlement by staff without attachment of original bill will not be paid by the management.	Implemented
	PMKVY scheme under AICTE has to be submitted to help the unemployed youths in our society	Implemented
July 2016	Decided to apply for NAAC Accreditation within this academic year.	Implemented
	Increasing the number of Institutional Scholarships to Circuit Programs	Implemented
	Entrepreneurship activities will be given priority by the management this year. Application for New Gen IEDC by NSTEDB has to be done this year.	Implemented
	IQAC has to be formulated as per NAAC guidelines.	Implemented
October 2016	Admission Status analysis is done, measures to reach more SC&ST students are finalized.	Implemented
	Play Ground extension has to be completed before sports day celebrations.	Implemented
	From the feedback analysis of Science Inspire Program conducted last year, this year also it is decided to send the proposal for the next year also.	Implemented
	Any one district level program has to be planned to	Implemented

	guide plus two students to secure good marks.	
January 2017	Performance appraisal is to be done mandate from this academic year onwards.	Implemented
	Academic audit has to be conducted mandatorily from this semester onwards.	Implemented
	Official information about transfer of Correspondent is to be sent to banks.	Implemented
	Programs to reachout the students community with our expertise has to be implemented	Implemented
	Memorial Statue of First Bishop of Marthandam His Grace Most Rev Lawrence Mar Ephraem has to be installed	Implemented

These resolutions have been implemented in the college.

6.2.8 Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If 'yes', what are the efforts made by the institution in obtaining autonomy?

Yes; the affiliating university makes provision for according the status of autonomy to an affiliated Institution. Our Institution has planned to apply for the autonomous status after duly fulfilling the preconditions of the process.

6.2.9 How does the Institution ensure that grievances/ complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder relationship?

For promoting better stakeholder relationship, the institution has setted up Grievance Redressal Cell to attend to each and every grievance/ complaint. The Institution immediately addresses the problems and solves effectively.

The Cell is constituted by involving the following members.

1. Principal
2. Director (TL&FD)
3. All Heads of Schools
4. Faculty coordinator from concerned School
5. Class representative

6. Girls Representative

➢ Adequate publicity of the existence of the cell is given through the college Website, calendar, etc. The stakeholders – staff/students - can approach any of the grievance redressal cell members to air their grievances/complaints orally or in writing which will be placed before the cell, examined thoroughly and verified.

➢ The students approach the Cell for their grievances regarding academic matters, financial matters, health services, library and other central services.

➢ The complaint, assessments of the grievance redressal cell and possible solutions and suggestions are forwarded to the appropriate decision making authority for necessary action.

➢ Students/faculty can also bring their grievances to the notice of the Grievance redressal cell by writing it and putting it in the Complaints and Suggestion Box.

Few of the examples of grievances resolved are

➢ Change in college working time – the college working time was from 9A.M to 4.40 P.M previously. The day scholar students expressed their inconvenience in late arrival to their homes. After rising of this issue, the college working timing has been altered with 9 A.M -4 P.M.

➢ Uniform change – previously the institution had mandated the dress code of tie and over-coat for male students which were addressed to the grievance committee, the weather condition of our locality was considered and the male students were exempted from wearing over coat and tie.

➢ Since, most the hostel students are from a distant area, they were unable to reach their home and return within one or two days holidays. Thus after hearing the issue, the institution has organized the academic calendar with periodic leaves in continuous fashions.

6.2.10 During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?

No, there have not been any Court cases by the College or against the College during the last four years.

6.2.11 Does the Institution have a mechanism for analysing student feedback on institutional performance? If 'yes', what was the outcome and response of the institution to such an effort?

Yes, Mar Ephraem has a mechanism for analysing student feedback on institutional performance.

➢ The students present their feedback regarding curriculum, facility and other concerned feedback in the Class Committee Meetings which are held frequently. The feedbacks of class committee are forwarded to the HoS for consideration.

➢ The performance of students in academics through results are tabulated for individual students and considered for remedial measures.

➢ A course exit feedback is obtained from every student at the end of the semester which portrays the usefulness of the particular course.

➢ In addition, the institution gets feedback on Institutions distinct character thereby analyzing the institutional performance.

➢ The feedback process is evaluated by IQAC and the comments are forwarded to the management for their consideration.

6.3 Faculty Empowerment Strategies

6.3.1. What are the efforts made by the institution to enhance the professional development of its teaching and non teaching staff?

Many efforts are made to enhance the professional development of teaching and non-teaching staff.

➢ Every faculty is permitted to avail On Duty on request for attending professional development activities.

➢ Necessary guidance and support is given to faculty for conducting research, industrial and research networking is made, also specialized training in their opted area of expertise is supported by the management.

➢ Non-teaching staff are provided with trainings on communicational skills, computer skills, trainings on handling latest equipment and instruments, effective administration and upkeeping of laboratories and motivational training.

➢ The Institution allots fund to be utilized for professional development, enabling staff to organize seminars, conferences and workshops.

➢ Faculty members of the institution encouraged to participate in National and International seminars and conferences.

➢ Faculty members are motivated to conduct research activities and encouraged to publish papers and file patents.

➢ The institution encourages faculty members to enroll for required training programs and to be resource person for training programmes and workshops offered by other affiliated colleges.

➢ Most of the members of the teaching faculty are members of national and international professional bodies like IEEE, ISTE, SAE,IET etc.

➢ For non-teaching staff training is arranged for strengthening the knowledge of using latest facilities and equipment.

➢ Training and access to Internet, audio-visual aids, software packages, ICT tools, new Teaching and learning methodologies etc., are provided as required.

➢ Facilitating faculty growth by upgrading institutional infrastructure, learning resources for effective curriculum transaction.

➢ Teaching and non-teaching staff are encouraged to work on innovative research oriented projects.

➢ Induction training for new Teachers to plan their activities.

➢ Mentorship training is given for all faculty on mentoring skills, to mentor the students effectively.

➢ Opportunities are given to faculty to expose their research findings and developments to International community through International Conferences.

6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

➢ Once after every appointment of a faculty, they are trained through an induction program wherein the institution's vision, mission, goals, policies, roles and responsibilities of their position were elaborated.

➢ The need of every faculty is collected in terms of skill enhancement, research and new facilities at school level through School Consultation Committee, which is consolidated and accordingly the faculty are given training.

➢ Application or skill orientated training is initiated and provided to the faculty at their need.

➢ The institution provides a path for getting trained on new technologies and teaching learning methodologies and thus the essence is tasted by every faculty.

➢ Once after training, if the faculty feels addition training is adequate, the institution

opens up an option for a retraining with a time bound of six months.

➢ The institution intermittently finds time to appreciate every faculty on their achievements.

➢ Based on the skills of the faculty, the institution creates opportunities for the career advancement of the faculty.

➢ The institution creates a platform wherein experts from various discipline assemble and thus forming an interdisciplinary team of experts where the faculty experience a complete development of products.

➢ The institution supports a 'peer learning' methodology among faculty also.

➢ Faculties are entitled to be sponsored for training programs, paper presentations in conferences, attend seminars, workshops, quality improvement programs etc. The college also organizes motivational and teamwork training programs. Skill-sharing across schools are also encouraged.

➢ The management protects the freedom of individuals, appreciates their innovations and ideas, and thereby motivates them.

➢ Formulation of various committees with faculty in various cadres as members with proper allocation of work, assigning responsibility and grant of adequate authority and autonomy.

6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.

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

6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?

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 nap to appreciate and honor the achieved staff thus motivating and formulating a detailed plan to horn up their skills
- ➤ The so achieved faculties are promoted to higher responsibilities

6.3.5 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

- ➤ Staff Welfare Association is functioning effectively
- ➤ The seed money for development is supported from the top management.
- ➤ Management is contributing in Provident Fund Scheme for staff.
- ➤ Funds are also facilitated to individual member of the staff during His/er emergency/crisis.
- ➤ Family get-together and picnics for teaching and non-teaching staffs along with their family are arranged regularly.
- ➤ Group Accident/Health insurance Scheme is being implemented in the College
- ➤ Management is contributing towards ESIC scheme for staff

➢ Scholarships are given for children of staff members studying in the campus.

➢ Career Advancement Scheme is available for faculty showing good performance in their roles and responsibility.

6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

➢ Recruitment process for faculty is purely objective and based on the interview process of Mar Ephraem.

➢ Peaceful working atmosphere with adequate facilities, effective teaching-learning practices, quality culture and smooth employer-employee relationship make the eminent, talented faculty to continue their services in this institution.

➢ Attractive salary package is offered well comparatively in the region, especially to eminent faculty based on their qualification, experience and performance.

➢ Feedback and performance appraisal is made in order to give incentives and appreciation to the faculty.

➢ Faculties are encouraged to work along with funded research projects and consultancy projects.

➢ No agreements or contracts are made with faculty on any ground for their service.

➢ Management takes decisions based on participatory approach consulting representatives of all groups..

➢ Women faculty is provided with maternity leave for three months.

➢ Publicizing faculty achievements through notices, mails and website, this encourages the faculty and motivates others.

➢ Effective grievance redressal mechanism to solve any grievance faced by the faculty.

➢ Sufficient winter and summer vacations to enhance their skills.

➢ Freedom is given to faculty to contribute in their area of interest.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of available financial resources?

Financial monitoring mechanism involves the following:

➢ The staff submit a duly formulated financial proposal and submits to the top level management.

➢ The top level management after due consideration supports the financial proposals.

➢ Transparency in all transactions are maintained through bills and vouchers.

- ➢ Single point transaction of all money transactions through the cashier
- ➢ All major payments are done through Bank.
- ➢ External audit is done annually by a registered Chartered Accountant and the internal audit done by the internal auditing team set up within the college.
- ➢ The faculty has the privilege to take up an advance on requirements by adopting the following procedures:
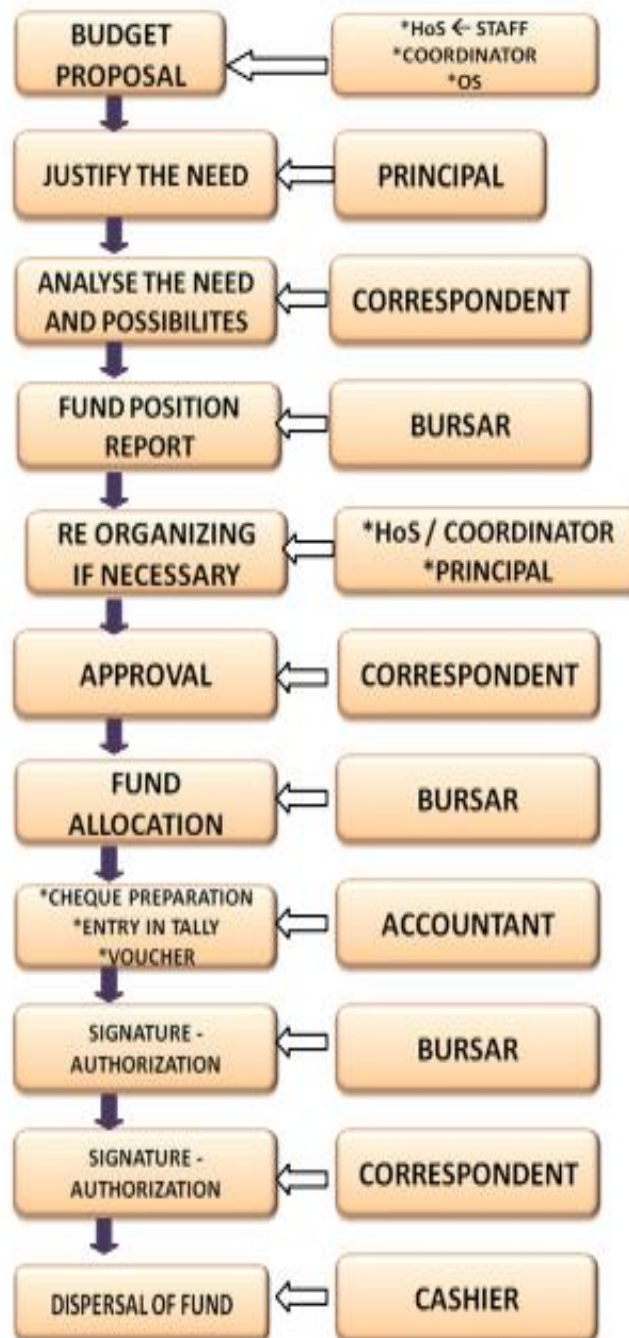
Chart: Budget Approval

Mar Ephraem

After the spending the sanctioned amount the bill settling process is as shown below
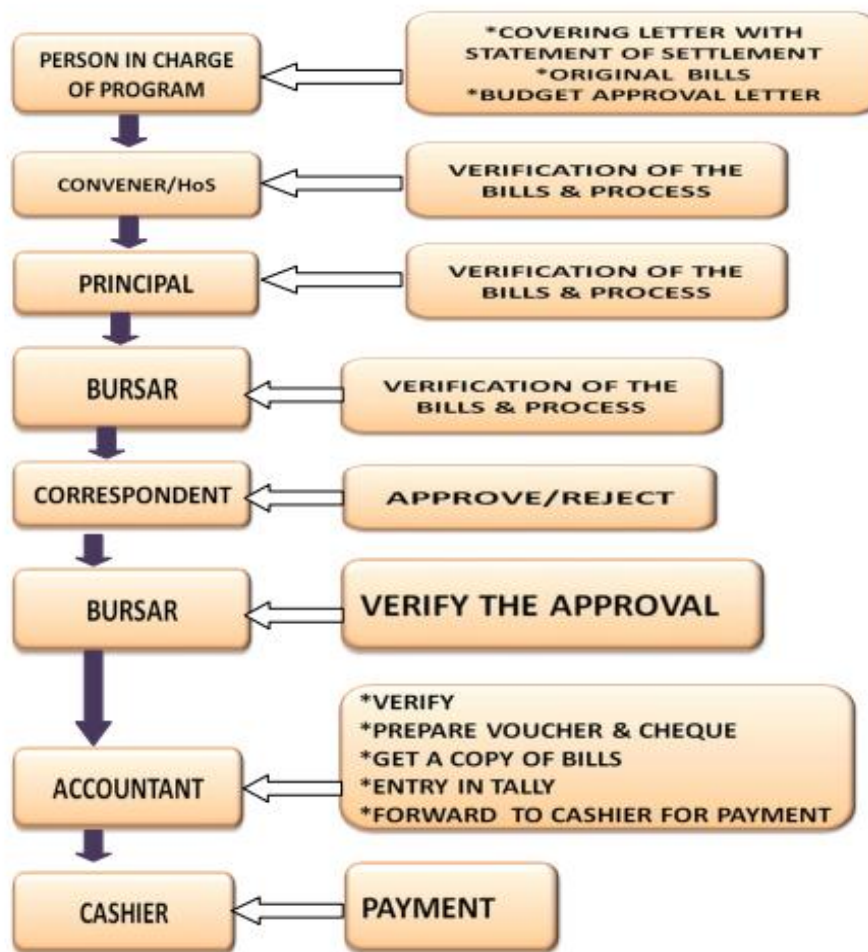
Chart: Bill settlement

6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audited one and what are the major audit objections? Provide the details on compliance.

Internal Audit has the following aspect:

➢ For internal accounts keeping and auditing, a full time Accountant and a cashier are appointed by the management.

➢ The cashier and accountant are monitered by the Office Superintendent and the Bursar.

➢ The auditor referred to by the management conducts internal audit annually at the end of every financial year.

➢ They verify all accounts provided by the Institution including scholarship and research accounts.

Mar Ephraem

External Audit has the following aspect :

• Management level Audit is done annually by an auditor during which all the assets are verified and the deviations are noted.

Major Audit Objections and compliance details:

• No major objections have been raised so far.

•The last external audit was done in the month of July 2016 for the financial year 2015-2016

6.4.3 What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.

Major sources of institutional receipts / fund include fees collected from the students towards college tuition, bus and hostel fees. Fund deficit is managed through bank loans and Diocesan contributions. Sufficient funds are available as corpus funds for tackling situations of emergencies. Audited Statements for all years are available in the institution. The audited income and expenditure statement of academic and administrative activities of the previous four years are given below.

Year	Income	Expense	Reserve fund/Corpus
2015-16	11,98,34,447	8,36,46,779	6,46,08,432
2014-15	11,62,69,584	8,78,48,820	4,32,59,350
2013-14	9,75,43,080	8,27,04,494	2,53,09,790
2012-13	8,55,57,355	7,50,86,149	1,10,50,260

Table: Audited Income Expenditure statement

6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

Miscellaneous income includes income from college stores and Food Court, infrastructure charges received by conducting offline/online external examinations and add-on courses. The institution makes earnest efforts to attract funds by way of external projects. The Institution also supports consultation, Research and Development services to the public to attract additional findings. They are utilized for facility upgradation.

6.5 Internal Quality Assurance System (IQAS)

6.5.1 Internal Quality Assurance Cell (IQAC)

a. Has the institution established an Internal Quality Assurance Cell (IQAC)? If 'yes', what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?

An IQAC is functioning effectively in Mar Ephraem from 2011 onwards; however, the effective functioning as per NAAC guidelines started after 3rd October 2016.

Strategies of IQAC:

IQAC has evolved mechanisms and procedures for

a) Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks.

b) The relevance and quality of academic and research programmes

c) Equitable access to and affordability of academic programmes for various sections of society

d) Optimization and integration of modern methods of teaching and learning

e) The credibility of evaluation procedures

f) Ensuring the adequacy, maintenance and proper allocation of support structure and services

g) Sharing of research findings and networking with other institutions in India and abroad

Composition of the IQAC:

Sl no	Role	Name	Designation
1	Patron	His Grace Most Rev. Dr. Vincent Mar Paulos	Chairman
2	Member - Senior Administrative Officer	Very Rev.Fr. Josephin Raj	Correspondent
2	Chairperson	Dr. A. Lenin Fred	Principal
4	Member - Faculty	Dr. N. Austin	Director (TL & FD)
5	Member - Faculty	Mr. Anand Rejilin	Head, Civil
6	Member - Faculty	Mr. Ashwin Singerji	Head, CSE
7	Member -Faculty	Mr. Suresh	Head, ECE

8	Member - Faculty	Mr. Anish John Paul	Head, EEE
9	Member - Faculty	Mr. Rajeev	Head, Mech
10	Member - Faculty	Ms. Jeba Priya	Head, H&S
11	Member - Faculty	Ms. Bindhu	Senior Faculty
12	Member – Parent	Mrs. Marshalandco	Educationalist
13	Member – Local Society	Mr. Rajesh Kumar	M.L.A, Killyoor Constituency
14	Member - Industry	Mr. Anbu Thomas Samuel	Director, STUP Consultancy
15	Member - Alumni	Ms.Divya Merin Abraham	Engineer, Environ Constructions
16	Member - Student	Mr.Navin Felix	IIIrd Year ECE
17	Coordinator	Mr. Bright Brabin Winsley J	Asst Prof, Civil

Institutional Policy regarding Quality Assurance

- ➢ The management has a clear policy regarding Quality Assurance. The quality of all academic and administrative process of the college is assured through scientific management tools, which monitors, evaluate, project and benchmark the standards.

- ➢ All the academic, administrative, infrastructural and maintenance activities are presented to the management through IQAC.

- ➢ Development of new methodologies and practices in course plan for teaching and learning is made.

- ➢ Analyze the quality parameters for Continuous Improvement.

- ➢ Making the stakeholders conscious about the quality practices on campus.

- ➢ Monitors the infrastructure, facilities and its function and updates for its effective utilization.

- ➢ Ensuring the activities and functions of all the Academic, cells, committees and functional units and activities to monitor any deviation in achieving the Vision, Mission and Goals by the quality policy.

- ➢ The evaluation and feedback of the process are analyzed and the quality assurance processes are realigned.

b. How many decisions of the IQAC have been approved by the management/authorities for implementation and how many of them were actually implemented?

All the decisions of the IQAC have been approved by the management for implementation. A few of the decisions implemented are listed below.

➤ Conduction of Induction training to newly inducted faculty.

➤ Annual appraisal of staff performance and suggestions for Career Advancement.

➤ Conduction of assessment of outcomes using SPSS and suggesting preventive and corrective measures.

➤ Purchase process initiated for selecting quality suppliers.

➤ Review of course plan and assessment of course outcomes.

➤ Communication with staff through institutional mail.

➤ Management Information System to record, track and analyze the quality of activities.

➤ Recommendations for updates in infrastructure and facilities.

➤ Instituting awards to teachers for securing good results in their courses.

➤ Appreciating faculty for their achievements by showcasing their achievements in circulars, emails, posters and printed materials.

➤ Scholarships to meritorious and needy students.

➤ Semester toppers and university rank holders are rewarded with cash prize and awards.

➤ Instituting best outgoing student award, best ambassador award, best class in charge award, best mentor award best innovator award and best researcher awards.

➤ Communicating new possibilities in research projects, career advancement and learning methodologies among stakeholders.

➤ Promoting new concepts and methodology through training programs by eminent experts.

c. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.

Yes, IQAC has external members on its committee and they have provided good platform for networking with industries. Through them we are able to get

➤ Internships for students

➤ Industrial updates and expectations in the curriculum.

➤ Implant trainings for students

➢ Research and development activities on challenges faced by the industries.

➢ Consultancy projects from industry and public sectors.

d. How do students and alumni contribute to the effective functioning of the IQAC?

IQAC has students and alumni representation on its committee. Alumni provide the feedbacks and suggestions in making new strategies on teaching and learning, infrastructure and facility. They are also networking with industries they are in relation with.

e. How does the IQAC communicate and engage staff from different constituents of the institution?

➢ Representation for all the stakeholders are given in the IQAC

➢ IQAC communicates with the stakeholders through institutional emails, trainings and updates are made at regular intervals.

➢ The information from IQAC is communicated to the Academic Planning Council where faculties are engaged from different constituents of college. They are further communicated to the School Consultation committee and Class Committees.

6.5.2 Does the institution have an integrated frame work for Quality assurance of the academic and administrative activities? If 'yes', give details on its operationalisation.

Yes. The institution has integrated framework for quality assurance

➢ Benchmarks for academic and administrative activities are discussed and framed.
  • The framed benchmarks are communicated to the persons concerned.
  • The process for the benchmarks is monitored and evaluated with the help of automated software.
  • The benchmarks and the process are renewed and executed.

The framework and its operationalization of academic course planning and delivery is given below

✓ Course allocation Procedure

✓ Timetable preparation including all Teaching and learning activities.

✓ Preparation of Course plan as per the guidelines with course objective, course outcome, lesson plan, Content beyond syllabus, Industrial visits, guest lectures, learning resources, interdisciplinary linkage, course outcome program outcome mapping, tutorial plan, remedial plan, micro projects, assignments and seminars.

✓ Feedback collection and corrective measures.

✓ Academic performance analysis

- ✓ Innovative teaching and participatory learning methods
- ✓ Conduction of Class Committee meetings
- ✓ Analysis of results and assessment of outcome attainment.
- ✓ School Consultation Committee meetings
- ✓ Academic Audit
- ✓ Cocurricular and Extra curricular activities.

The feedback collected from students on teachers along with the self-appraisal reports prepared by teachers themselves prove to be very useful measures for the Management to analyze teaching effectiveness and faculty excellence. Different faculty development programmes, add-on courses arranged for students, regular tracking of lab facilities and up gradation, enhancement of student support services like Placement, Counselling, Mentorship, Project guidance etc help in boosting the internal quality of the institute.

6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If 'yes', give details enumerating its impact.

An induction program is incorporated at entry level of all staff. The policies are conveyed in a detailed manner. In addition, after obtaining proper feedback from the stakeholders, the amendments are changed which would be communicated to all the stakeholders.

When the institution feels there is a need for new learning and teaching methodologies, an expert in the particular methodologies are invited to the campus and his expertise is used utmost to train all our stakeholders.

6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?

Yes, academic audit is conducted every semester and thus verifying the adherence to the policies and procedures of the institution and the bottleneck problems are analysed and sorted out. In addition, the documentation works are ensured.

6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

IQAC is responsible for managing and conducting academic, administrative and financial audits/inspections and it provides technical expertise to define and resolve Quality

Assurance issues. This assures that the institution is in compliance with the rules and regulations of the Government, University, UGC, NAAC, AICTE etc

6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Teaching learning processes are reviewed in structured format as detailed below.

➢ Course plan is prepared by the faculty which is reviewed and refurbished with contents before commencement of class.

➢ During delivery of lessons the plans are reviewed by the Director (TL&FD) monthly.

➢ After delivery of the course, the outcomes achieved and feedbacks from stakeholders are assessed and reviewed.

➢ New concepts and methodologies are evolved and added in the next plan.

6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

The major methods for communicating the quality assurance policies, mechanisms and outcomes to the internal and external stakeholders are the following:

✓ Staff meetings (College/ School wise and individual)

✓ Periodic Academic Audit

✓ PTA meetings

✓ Alumni meetings

✓ Industry interactions

✓ Feedbacks during evaluation

✓ College website, e-publications

✓ Social interaction programs

Any other relevant information regarding Governance Leadership and Management which the college would like to include.

Criterion: VII

Innovations and Best Practices

CRITERION VII

INNOVATIONS AND BEST PRACTICES

7.1 Environmental Consequences

7.1.1 Does the institute conduct a Green Audit of its campus and facilities?

Yes, our institution has conducted Green Audit at three levels; energy audit, water audit and bio-diversity audit internally as given below. External audit is then conducted and the suggestions are implemented.

1. Energy Audit.

Energy audit revealed the energy consumption pattern in the institution. This was done with a meticulous data collection by the School of Electrical & Electronics Engineering. A team of faculty members and students, headed by Mr.Anish John Paul, inspected each power equipment and sent the consumption data to the expert group. Abiding by the suggestions of the experts, the institute took constructive steps to change a few fans, lights, switchboards, and panel boards. In the next stage, a solar power unit is commissioned to supplement the power supply in the college.

2. Water Audit

The water audit is done by the team of faculty members and students headed by the Head of the School of Civil Engineering. The team collected the data on the total length of water pipe laid on the campus, the length of damaged pipe and the number of faulty taps that require replacement or repair, the per capita water-consumption of the hostellers (140 liters a day), the total consumption on the campus, the quantity of water wasted on account of leakage (especially in the toilets, bathrooms and the canteen) and suggested remedial measures like re-flooring of some toilets and the provision of dual flushes. A committee consisting of the faculty and the students is entrusted to monitor the effective and judicious usage of water on the campus.

3. Bio-diversity Audit

Bio-diversity audit is carried out by the team headed by the Mr. John Thankam, of our institution to identify the species of the trees and plants on the campus and to gather data on species richness, species even and species abundance. The nurturing of the newly planted saplings has been entrusted with the team and the campus is expected to be more bio-rich in the coming years.

7.1.2 What are the initiatives taken by the college to make the campus eco- friendly?

Energy Conservation: The institution believes in conservation of energy and ensures usage of electrical equipment on a need basis. Energy saving attitude has been cultivated among students and staff through awareness programs, discussions and environment related campaigns and exhibitions. Renewable energy sources are utilized to add with conventional Electricity.

Rain Water harvesting: The College harvests the rain water by collecting it in the natural pond. The excess water which overflows from the pond during rainy season is effectively harvested in wells in the campus

Efforts for carbon neutrality: The College has been nurturing a large number of plants and trees, which absorbs carbon-dioxide and neutralize the amount of carbon in the atmosphere.

Plantation: Our Institution is a green campus with lot of trees and different varieties of plants. We have a vast number of flowering plants of all seasons. Almost more than 80% of open space is covered with a large number of trees and flowering plants

Hazardous waste management: No hazardous waste is generated on campus by any activities. The college takes special care in handling and storing chemicals. The chemicals used by students in the laboratory are in dilute form, and the waste water is drained out to the underground sump specially designed for the purpose. Dust bins in two colors are made available for the deposition of waste by the student on campus. The waste from the Civil Engineering labs are reused while the waste produced from the workshop and other mechanical labs as well as all the stationary wastes are sold to scrap dealers every semester.

E-waste management: Some of the computer parts and components are reused (mother board, processor, chip, capacitor etc.). Hardware is given to students for study purpose. Some of them are used to present in IT exhibitions. The remaining old devices are returned to the authorized company to reduce e-waste through suitable methods.

Reuse and recycle of waste generated: Food waste and other canteen waste is utilized for biogas plant. We have a vermi composting unit too for the disposal of food waste and other bio waste which serves us to provide bio fertilizer for the entire trees & plants inside the campus.

Use of renewable energy: Aiming at the energy conservation and to supplement the power supply in the college a solar power unit is commissioned.

7.2 Innovations

7.**2.1. Give details of innovations introduced during the last four years, which have created a positive impact on the functioning of the college**.

Though constrained by the limited academic freedom of an affiliated institution, the college has introduced during the last four years a spectrum of transformative, innovative options, to respond to the multiple and complex needs of the contemporary community of its stakeholders. Innovations that Created a Positive Impact on the Functioning of the College. The institution has introduced a number of innovations in infrastructure, teaching and learning, administration, student support and progression. They are mentioned below:

Administration Automation: The office is partially automated with appropriate software. All administrative work is made easier through computers. Computerization of the office helps in students' services like issue of course, conduct and transfer certificates, Exam registration, Hall ticket downloading, uploading internal grades and applying for scholarships etc. All our administrative staff are well adapted to the new technology and soft skills. Quick and better services are thus being rendered to the satisfaction of one and all.

Innovation in Teaching & Learning

a. Research oriented Training: The students of our college have to undergo a three tier activity on research, from the first semester to the last semester namely Micro project, Mini Project & Major Project. The First year students have to do micro projects in both the semesters on various Science topics while they have to do a mini project in their second Semester. From third semester onwards they undertake micro projects at course level and mini project consolidating the ideas gathered. This innovative project oriented programme provides enough space & time for the students to come up with genuine major projects successfully.

b. Automated course file preparation & review: Course file for all the courses are prepared well in advance before every semester by the faculty members in an automated system MIS (Mar Ephraem Information system) and is reviewed by the expert committee headed by the Correspondent, the Principal and the Director of teaching, learning and faculty development, in the presence of respective HOS and faculty members for the effective progress of teaching learning process.

c. Continuous evaluation: Continuous evaluation of the students is carried out through oral tests, home assignments, project work, seminars, paper presentation and internal test papers.

It improves the performance of students in the University exams and other competitive examinations. An MIS software is used to record the details and performance of the students.

d. Internal Assessment: Internal assessment takes into account mainly their Knowledge and also discipline, communication skills, readiness to take initiatives, good behavior, etc. Innovative efforts are introduced in the internal tests to ensure the best learning outcomes. Students are informed about the components that make up the division of the internal assessment

e. Students and Technology: Introduction of the Semester System brought with it many changes. Handling the new curriculum involved a shift from the lecture mode to the teacher-as-facilitator of learning mode. It focuses on the presentation skills of the students as manifested in seminars, with its endeavor to equip the student with greater exposure to critical thinking and communication skills. It aims at moulding the students into citizens of the new technology driven world order. LCD projectors, internet connectivity etc., have been made available to the students of all departments. Students are facilitated with wide a range of open access resources in the library for improving the quality of the students and to make them technically sound.

f. Remedial Teaching: The College has made it a practice to conduct remedial classes for slow learning students to help them in their quest for knowledge. Generally, the classes are arranged from 4.00P.M to 5.30 P.M on working days and at other times on holidays. The teachers as well as the students are actively involved in maximizing the benefits of the classes. Additional study aids are also given to help the students learn and revise what they have learnt.

7.3 Best Practices:

7.3.1. Elaborate on any two best practices in the given format at page no. 98, which have contributed to the achievement of the Institutional Objectives and/or contributed to the Quality improvement of the core activities of the college.

Best Practice 1

1. **Title of the Practice:** Decentralized approach for Academic & Administrative function

2. **Objective of the Practice:**
    - ➢ To imbibe transparency in all academic and administrative activities.
    - ➢ To have a faster and smoother decision making procedure.

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➢ To ensure speedy implementation of the decisions made.

Expected outcome: To develop accountability and responsibility of all stake holders

The Context

All academic institutions have to undergo a variety of academic and administrative activities every year and so there arise more number of problems which need quick decisions to solve it out. We have a decentralized, faster and smoother decision making procedure in a well established way which ensures maximum transparency and accountability. It also ensures the awareness to all the faculty members regarding the complexities of such decisions and their importance. The participative decision making procedure leads to ownership of the decisions and this makes realistic, meaningful and attainable decisions.

The Practice:

The Class Committee consists of representatives from the Class, plans their activities. They are then reviewed and Considered by the School Consultation Committee, where the Stake holders of the Schools plan and execute activities. The recommendations of the school Consultation Committee is reviewed by the Academic Planning Council. The Academic planning council constitute of the Principal, the Director of teaching, learning and faculty development, HoS of all the schools, Office Superintendent, IQAC Coordinator, Public relation officer, Staff Secretary, Student representative, hostel representative, alumni representative and the Librarian. They meet at least once in a month to analyze various issues regarding academic and administrative functions. Various committees will be formed in order to address the issues after discussions. The academic issues will be addressed by the committee members constituting of HoS, Staff representatives and Student representatives and the administrative issues will be sorted out by the committee members constituting the Office Superintendent and administrative staff representatives. The Academic planning council prepares the academic calendar for the academic year and monitors the execution. The School exam cells which are headed by the college examination Control cell look after all the issues regarding the examinations while the student's attendance and other student related activities are monitored by various departmental committees. The student's hostel and mess are monitored by the committee headed by the Hostel Director.

The Plans, activities, achievements and outcomes are analyzed by the IQAC Periodically and reported to the Governing board. The Governing board supports activities for implementation. The committees are given full independence for working within the

framework as approved by their bodies. They take decisions at their level and suggests positive methods and alternatives.

3. Evidence of Success

It is seen over the last few years that the practice as above has provided satisfaction to all stake holders of all the schools. It also led to a healthy competition among various schools that resulted in saving precious time of higher authorities as they are not involved directly in majority of the issues. In addition to this, the faculty members are getting a good exposure and made them capable of taking up greater challenges in future. The healthy practices followed by one school are analyzed and shared by other schools aswell.

4. Problems Encountered and Resources

Since this is a well planned practice no major issues has been traced so far.

Best Practice 2:

1. Title of the Practice: Tutorial Learning

2. Objective of the Practice: Make students to perform better in the academics through timely tutorials.

Intended outcome: Peer Learning & Effective team work

3. The Context

To compete with an ever changing globalized world our students need an education that meets their individual needs and opportunities that connect them to what is happening around the globe. Therefore, it is the whole responsibility of the college to set an appropriate learning environment which is more exciting, challenging as well as rewarding. New generation students inhabit a borderless world offering boundless link, data and mobility. They need education delivered in ways that are compatible and support their world view. In view of these special circumstances, our college charts this practice of tutorial learning.

In a busy academic schedule, to avoid the mental stress of the students and to keep them focused on the achievement of better marks during their internal as well as external examinations, the tutorial learning gives a long way in helping the students.

4. The Practice:

Students who are categorized as slow learners, average learners and fast learners are to be exposed to fine use of technology in the conventional classroom, to thrive in this competitive world. Aiming this, after taking the class on a particular

topic the student of the whole class will be given a set of questions and answers in advance to seek the solution without any compulsion. After evaluating the solution, the students of the whole class is divided into various groups each consisting of 4– 5 members. Each group consists of students from slow learners', average learners' and Fast learners'. The students who are identified as good in the topic of each group are asked to teach the other members of the group. Here the teacher becomes a facilitator and the student becomes the master, and thus the methodology of peer learning is practiced successfully, for improving the problem solving, analytical & presentation skills of the students.

5. **Evidence of Success**

    It is seen over the last few years that the practice as above has provided satisfaction to all stakeholders of all the Schools. This has helped the School to improve on academic results, and to provide trainings to students on need basis.

6. **Problems Encountered and Resources**

    This system has been practiced for the last two semesters. No serious problems have been observed so far.

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Evaluative Reports

School of Civil Engineering

1. **Name of the Department : Civil Engineering**

2. **Year of Establishment :** 2009

3. **Names of Programmes / Courses Offered:**

Courses Offered	Name of the Course	Specialization
UG	B.E.	Civil Engineering

Table: Programmes / Courses Offered

4. **Names of Interdisciplinary courses and the departments / units involved:**

SI.No	Names of Interdisciplinary Courses	Department Involved
1.	MA6351 Transforms and Partial Differential Equations	S&H
2.	GE6351 Environmental Science and Engineering	S&H
3.	MA6459 Numerical Methods	S&H

Table: Interdisciplinary Courses

5. **Annual / Semester / choice based credit system (programme wise):**

B.E (UG Program)	
Civil Engineering	Semester based Credit System

Table: Annual / Semester System

6. **Participation of the department in the courses offered by other departments:**

SI.No	Course Name	Offered to (Dept. Name)
1.	Basic Civil and Mechanical Engineering	EEE

Table: Courses Offered by Other Departments

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.**
   : Nil

8. **Details of courses / programmes discontinued (if any) with reasons :** Nil

9. **Number of Teaching posts :**

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Position	Sanctioned	Filled
Professors	NA	2
Associate Professors	NA	0
Asst. Professors	NA	24

Table: Teaching Post

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) :

SI.No	Name	Qualification	Designation	Specialization	No. of Years of Experience
1.	Dr.Balamurugan .R	Ph.D.	Professor	Structural Engg	15 Years
2.	Mr.Japa Raj J	M.E	Professor	Structural Engineering With Computer Application	13.3 Years
3.	Mr.Anand Rejilin D.R	M.E	Assistant Professor	Structural Engineering	7.4 Years
4.	Mr. Bright BrabinWinsily J	M.E	Assistant Professor	Structural Engineering	5.5 Years
5.	Mr. Lin G	M.E	Assistant Professor	Transportation Engineering	5.5 Years
6.	Mrs. Sonia Vini Parrot M.V	M.E	Assistant Professor	Construction Engineering And Management	5.4 Years
7.	Mr. Charles Dyson D	M.E	Assistant Professor	Structural Engineering	5.3 Years
8.	Mr. John ThangamP	M.E	Assistant Professor	Structural Engineering	5.3 Years
9.	Mr. Praveen J	M.E	Assistant Professor	Construction Management	5.3 Years
10.	Mr.Babin T Prase	M.E	Assistant Professor	Remote Sensing	4.5 Years
11.	Mr.Abishek G.L.	M.E	Assistant Professor	Structural Engineering	4.3 Years
12.	Mr.Prabin R	M.E	Assistant Professor	Structural Engineering	3.5 Years
13.	Mrs.Manjuram D.S	M.E	Assistant Professor	Structural Engineering (Part Time)	7 Years
14.	Mr. Justin Raj D.R	M.E	Assistant Professor	Structural Engineering	3.5 Years
15.	Mr.Jeron R	M.E	Assistant Professor	Structural Engineering	1.6 Years
16.	Mrs. Anne Chandra J	M.E	Assistant Professor	Structural Engineering	1.2 Years

17.	Mr.Jyothis J.P.	M.E	Assistant Professor	Construction Engineering And Management	1 Years
18.	Mr.Neeraj Rd	M.E	Assistant Professor	Structural Engineering	1 Years
19.	Ms. Pamela Jennifer	M.E	Assistant Professor	Structural Engineering	1 Years
20.	Mr. Job Geo Jacob J	M.E	Assistant Professor	Structural Engineering	1 Years
21.	Mr.Riyo Jose J	M.E	Assistant Professor	Structural Engineering	1 Years
22.	Ms.Shermi S	M.E	Assistant Professor	Structural Engineering	0.5 Years
23.	Mr.Jein Jenish	M.E	Assistant Professor	Structural Engineering	0.5 Years
24.	Mr.Bravin Ebanesh V	M.E	Assistant Professor	Structural Engineering	0.5 Years
25.	Mrs.Paulin JiniManohar	M.E	Assistant Professor	Structural Engineering	0.5 Years
26.	Ms.Ancy V S	M.E	Assistant Professor	Structural Engineering	0.1 Years

Table: Faculty Profile

11. List of senior visiting faculty : Nil

12. Percentage of lectures delivered and practical classes handled(programme wise) by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :

SI.No	Programme	No. of students	No. of staffs	Students staff ratio
1	UG	356	26	1:15

Table: Student- Teacher ratio

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	Sanctioned	Filled
Lab Assistant	NA	2

Table: Supporting Staff sanctioned and filled

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.

Qualifications of teaching faculty	Number
M.E./M.Tech	25
Ph.D	1

Table: Faculty qualification

16. **Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :**Nil

17. **Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received** : Nil

18. **Research Centre /facility recognized by the University:** Nil

19. **Publications: Papers Publications in Journals/Conferences**

Academic Year 2016-2017			
Sl. No	Name	Paper Title	Journals / Conference
1	Abishek. G.L	Experimental Investigation of High – Strength Characteristics of Self Curing Concrete, 2016	International Journal for Modern Trends in Science and Technology (IJMTST), Volume: 2, Issue: 07, Page: 61-65, 1.56
2	Abishek. G.L	Experimental Investigation in Effect of Low-Calcium Flyash Geopolymer Concrete, 2016	International Journal of Engineering Research (IJER), Volume: 5, Issue: 09, Page: 762-767, 1.81.

Academic Year 2015-2016			
Sl. No	Name	Paper Title	Journals / Conference
1	Manjuram D.S	Experimental Investigation On Composite Flexural Member On Geopolymer And Conventional Concrete	International Journal of Science, Technology & Management www.ijstm.com Volume No.04, Issue No. 04, April 2015

Table: Faculty publication

20. **Areas of consultancy and income generated:**

Sl. No	Name of the company/Agency	Type/Consultancy	Amount in Rs
1.	PWD, Valliyoor	Contouring	29,000
2.	Ideal Construction Company, Nagercoil	Mix Design, Compression Strength of Concrete	24,750
3.	Southern Railways, Trivandrum	Mix Design, Tests On Steel, Cement, Sieve Analysis, Water Quality, Compression Strength Of Concrete, Bricks, Mortar	82,350
4.	J.J. Paveres, Elavuvilai	Compression Strength of Concrete	450

5.	S.K.Pavers, Elavuvilai	Compression Strength of Concrete	250
6.	Green Build Shelter Solutions, Nagercoil	Compression Strength of Concrete	150
7.	MIDS, Marthandam	Low cost Green building – Design & Cost Analysis	Nil(Social Concern)
8.	Highways Dept. Nagercoil.	CBR Test	Nil(Social Concern)

Table: Consultancy Details

21. Faculty as members in a) National Committees b) International Committees c) Editorial Boards: NIL

22. Student projects

a) **Percentage of students who have done in-house projects including interdepartmental/programme**

Program	2012-16		2011-15		2010-14		2009-13	
	In	Out	In	Out	In	Out	In	Out
B.E	93%	7%	91	9%	88	12%	90%	10%

*In=In-house *Out=outside the organization

b) **Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies**

SI.No	Program	Batch/Year	Name of organization	Percentage
1	B.E	2012-16	National Transportation Planning and Research Centre (NATPAC), Banglore	7%
2	B.E	2011-15	National Transportation Planning and Research Centre (NATPAC), Banglore	9%
3	B.E	2010-14	RMC,Coachin	12%
4	B.E	2009-13	STUP consultancy pvt ltd, Banglore	10%

Table: Student Projects

23. Awards/ Recognitions received by faculty and students: NIL

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24. List of eminent academicians and scientists/ visitors to the department

	Academic Year 2012 – 2013			
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Mr.Shajan P B	Architect and Joint Director, Costford	23.04.2012	Seminar
2	Mr.ManavalanJoseph	Director, Aditya Birla Group of Ultratech Cement	09.10.2012	Workshop
3	Er. Anbu Thomas Samuel	Director, STUP Consultants Pvt Ltd	02.11.2012	Industry Institute Interaction Program
4	Richard Cheng	Director, Environ Constructions,Singapore	05.04.2013 & 06.04.2013	Industry Institution interaction

	Academic Year 2013 – 2014			
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Er. Anbu Thomas Samuel	Director, STUP Consultants Pvt Ltd	29.07.2013	Industry Institute Interaction Program
2	Er. Anbu Thomas Samuel	Director, STUP Consultants Pvt Ltd	30.08.2013	Seminar
3	Dr.Sekaran.V	Principal, CI College Of Engineering And Technology	10-04-2013	National Conference On Recent Advancement In Civil Engineering

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Academic Year 2014 – 2015				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Er. Anbu Thomas Samuel	Director, STUP Consultants Pvt Ltd	01-09-2014	Industry Institute Interaction Program
2	Mr.P.Baskaran	Project Manager , Global Petro Project Service, Switzerland,	09-01-2014	Industry Institute Interaction Program
3	Mr.Satheesh Gopi	Marine Surveyor, Hydrographic Survey Wing Of Kerala Port Department	26-09-2015	Technical Symposium
4	Er. Manavalan Joseph	Regional Head Technical Service, Ultratech Cement Limited, Trivandrum	27-03-2015	Workshop On Concrete Mix Proportion

Academic Year 2015 – 2016				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	MR. S.Parameswaran	Project Manager , Unique Roof Private Limited, Coimbatore	30-07-2016	Industry Institute Interaction Program
2	Mr.Reji Zachariah	CEO, S&R Consultants, Structural & Geotechnical Consultants, Elamkulam, Kerala	19-08-2016	Technical Symposium
3	Dr.SomnathDasgupta	Vice Chancellor, Assam University & Professor, Indian Institute of Science Education and Research (IISER), Silchar – 788 011, Assam, India	26-08-2016	INSPIRE CAMP
4	Dr.Rajapriyan	Professor, Malankara Catholic College, Mariagiri	05.10.2016	Interaction Program

Table: Eminent academicians and scientists/ visitors to the department

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25. Seminars/ Conferences/Workshops organized & the source of funding:

Date	Name Of The Programme	Source Of Funding
30-07-2016	Industry Institute Interaction Program	School Association
19-08-2016	Technical Symposium	School Association
26-09-2015	A National Level Technical Symposium	School Association
27-03-2015	Workshop On Concrete Mix Proportion	School Association
01-09-2014	Industry Institute Interaction Program	School Association
09-01-2014	Industrial Instituitional Interaction Programme-2014	School Association
08-04-2013 & 09-04-2013	International Collaborative Industrial Interaction Program	School Association
29-07-2013	Industry Institute Interaction Program	School Association
10-04-2013	Recent Advancement In Civil Engineering 2013(Ace-T13)	School Association
02-11-2012	Industry Institute Interaction Program	School Association
19-10-2012	Workshop On Concrete Mix Design- Civionix '12	School Association
23-04-2012	Sustinable Architecture	School Association
27/10/2010	Inaugural Function Of Acme – Association Of Civil Engineers For Modern Era	School Association

Table: Seminars/ Conference/Workshops organized & the source of funding

26. Student profile programme/course wise:

Name of the Course/programme (refer question no. 4)	Batch/ Year	Year of passout	Applications received	Selected	Enrolled		Pass percentage
					*M	*F	
UG	2015-16	2019	129	129	66	34	-
	2014-15	2018	128	127	65	35	-
	2013-14	2017	100	97	63	37	-
	2012-13	2016	70	66	46	20	55%
	2011-12	2015	60	52	42	10	40%
	2010-11	2014	72	72	63	9	45%
	2010-09	2013	63	63	52	11	75%

Table: Student Profile

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27. Diversity of Students

Name of the Course	% of students from the same State	% of students from other state
B.E.	40.1%	59.9%

Table: Diversity of students

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?:

Name	Competitive Examinations	Year
Sujin P S	Air Force	2015
Benson Babu V	Defence service	2016

29. Student progression (Previous year)

Student Progression	Against % enrolled
UG to PG	10
PG to Ph.D	Nil
Ph.D. to Post-Doctoral	Nil
Employed (Campus selection)	7
Employed (Other than Campus selection)	70
Entrepreneurship/Self-employment	10

Table: Student Progression.

30. Details of Infrastructural facilities

Library

SI.No	Library	No. of books
1	Department library	300
2	Reports of Students Project Work	450

Internet facilities for Staff & Students

- Computers with high bandwidth internet connectivity available for students and staffs usage.
- 24/7 internet access with Wi-Fi connectivity
- Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

Class rooms with ICT facility

- All class rooms are ergonomically designed to reinforce a student-centered style of instruction.
- All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from a centralized UPS.
- Usage of Power Point and other computer programs to improve the presentation of material to class
- Presentation of IIT videos for each course helps the students in learning and clear with the concept.
- ICT facility encourages independent and active learning, and students' responsibility for their own learning.
- It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment.

Laboratories

SI.No	Laboratories	Major Equipment's
1	Concrete Laboratory	CBR Testing Machine, Flexural Testing Machine, Marshall Stability Testing Machine
2	Environmental Laboratory	BOD,COD, Jar test Apparatus, Turbidity meter, PH meter, Muffil Furnace ,hot air Oven spectrometer,Iron selective electrode
3	Survey Laboratory	Total Station, Theodolite, Dumpy Level, Plane Table
4	Soil Laboratory	Direct Shear Apparatus,Triaxial, Consolidation,Unconfined Reinforced meter, Air oven , Relative density apparatus,sieve shaker
5	CAD Laboratory	Computers - 34

Table: Laboratory Details

31. Number of students receiving financial assistance from college, university, government or other agencies.

Category	No. of Students			
	2016-17	**2015-16**	**2014-15**	**2013-14**
SC/ST		3	2	5
OBC	85	101	56	77
Minority		5	1	1
Institutional Scholarship	11	60	82	-

Table: Student Financial Assistance

32. Details on student enrichment programme (special lectures / workshops / seminar) with external experts.

SI.No	Events	Conducted
1.	Symposium	2
2.	Work shop	2
3.	Seminar	2
4.	Industrial Visit	12
5.	Conference	2
6.	Value Added courses	4
7.	Online training	-
8.	Internship program	5

Table: Student Enrichment Programme

More detail-Refer annexure-1

33. Teaching methods adopted to improve student learning

- ➢ Real-time projects at industries are undergone by the students to improve their industrial expertise.
- ➢ Students are involved in the consultancy activities to promote technical skills
- ➢ Students are directed to take seminar, based on reputed Journals/ Transaction
- ➢ Micro project was incorporated to increase student interest towards their core area.

➢ Advanced instruments like Total stations and CBR apparatus are used by the students to update their skills to recent trends.

34. Participation in Institutional Social Responsibility (ISR)and Extension activities-

➢ School of civil engineering in collaboration with MIDS, provided technical expertise to construct low cost energy efficient house.

➢ School of civil engineering in collaboration with MIDS, provided technical expertise, analysed and designed houses for the poor.

➢ Students of the school of civil engineering actively participate in NSS activities for maintaining water bodies.

➢ Students of the school of civil engineering actively participate in Blood donation camps and on need basis.

35. SWOC analysis of the department and Future plans

Strength	Opportunities
• Placement oriented skill training • Technical consultant for Government and Non-Governmental organizations. • Frequent Interaction with alumni • Ability to address the social challenges through our technical expertise • Good relationship with reputed industries(National and International)	• Chance for getting more industrial placements. • Development in infrastructural facilities & faculties expertise • Demand for skilled Civil Engineering professionals • Projects can be developed which addresses the social challenges
Weakness	**Challenges**
• Temporary setback in International placements • Research interest among the graduates is less • Rate of students appearing the competitive exams are very less	• Developing the research program • Fluctuation in job market

Future plans

➢ Apply for Post-Graduation program in the Structural Engineering.

➢ Encourage and take steps to increase PhD registration of Faculty.

➢ To send project proposals to pursue research.

➢ Up gradation of lab facilities for effective learning.

➢ Extension of consultancy activities in the field of Soil Mechanics and Surveying.

➢ Achieving NBA accreditation for B.E. Civil Engineering.

➢ Improve the result percentage.

➢ Improve the placement through internship.

Annexure-1

A. Workshops

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1	Workshop on concrete mix proportion - 2015	Er. Manavalan Joseph, Regional head ,ultratech cement limited, trivandrum	1	To design concrete mix for any grade	180
2	Workshop on concrete mix design- civionix '12	Team of Ultra Tech Cement	1	To design concrete mix for any grade	120

B. Off Campus Field Oriented Survey Camp

YEAR/BATCH	PLACE	DAYS OF VISIT
2015/B5	KANYAKUMARI	10
2015/B4	COURTALLAM	10
2014/B3	COURTALLAM	10
2013/B2	COURTALLAM	10
2011/B1	COURTALLAM	10

The survey camp provides an opportunity for civil engineering graduates to use industry standard sophisticated instruments like total station and GPS on a real time field situation. At the end of the camp, the students will have the required skills and knowledge to operate the instruments and measure various field parameters.

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C. Symposium/Conference

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1	A national level technical symposium	Mr.SatheeshGopiMarine surveyor, hydrographic survey wing of kerala port	1	To describe advanced surveying techniques	300

D. Seminar

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	Sustainable Architecture	Mr.Sajan.P.B Architect and Joint Director Costfort	1	To describe the sustainable architecture	180
2.	Eco Friendly Building	Mr.Sajan.P.B Architect and Joint Director Costfort	1	To describe the concepts of Eco friendly building	120

E. Certificate Value Added Courses

Sl no	Program	Duration	Trainers	Outcomes	No of Beneficiaries
1	Primavera	60hrs	G-Tech Computer Education and CAD Training Institute.	To plan any project using primavera software	48
2	Revit	60hrs	Intercad (CAD Training Institute.)	To model structures using arch cad	45
3	Primavera	60hrs	Intercad (CAD Training Institute.)	To plan any project using primavera software	30
4	Revit	60hrs	Intercad (CAD Training Institute.)	To model structures using arch cad	45

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F. Industrial Visit

SI.NO	DATE	TITLE	COMPANY NAME & DESCRIPTION
1.	13/10/ 2010	Industrial Visit [II Year Civil]	Road construction site, Manakudy
2.	29/07/2011	Industrial Visit [II Year Civil]	Water treatment plant , Cochin
3.	03/03/2012	Industrial Visit [II Year Civil]	Sankar Cement factory, Thirunelveli, Sankarnagar
4.	11/03/2012-12/03/2012	Industrial Visit [III Year Civil]	Construction Site of Metro Rail, Chennai
5.	15/03/2013-16/03/2013	Industrial Visit [III Year Civil]	Metro Rail Construction& MNC Construction Site , Banglore,
6.	14/03/2014-26/03/2014	Industrial Visit [IV Year Civil]	Delhi Metro Rail Constructions, Delhi
7.	13/08/2014-15/08/2014	Industrial Visit [III Year Civil]	Geo Technical Lab, Simar Construction, Cochin
8.	14/08/2014-15/08/2014	Industrial Visit [II Year Civil]	CCCL Apartment Building Construction , Banglore
9.	05/01/2015-15/01/2015	Industrial Visit [IV Year Civil]	Delhi Metro Rail Constructions, Delhi
10.	19/08/2015-21/08/2015	Industrial Visit [III Year Civil]	Riverscape Construction, HirangiDam, Coorg
11.	20/08/2015-21/08/2015	Industrial Visit [II Year Civil]	Hill Retaining walls, Koaikanal
12.	03/03/2016-09/03/2016	Industrial Visit [IV Year Civil]	Pune Railway Station Construction

G. Student Enrichment Programmes

SI.No	Student enrichment programmes	Period
1	Workshop On Concrete Mix Proportion	2014-2015
2	Industry Institute Interaction Program	2014-2015
3	Industrial Instituitional Interaction Programme	2013-2014
4	International Collaborative Industrial Interaction Program	2012-2013
5	Industry Institute Interaction Program	2011-2012
6	Workshop On Concrete Mix Design- Civionix '12	2012-2013
7	Sustinable Architecture	2011-2012

H. Research publications in national/ international journals/ conferences by faculty

Sl. No	Academic Year	No. of Papers
1.	2016-2017	2
2.	2015-2016	1
3.	2014-2015	-
4.	2013-2014	-
5.	2012-2013	-
6.	2011-2012	-

Table: Research publications by faculty

I. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses attended by faculty

Sl. No	Name	Workshop / Seminar Attended	Organized by University / College	Year
1	Mr.JohnThangam	Revit	Noorul Islam university,Kumaracoil	2013-2014
2	Mr.JohnThangam,	Staadpro	Mar Baselios College of Engineering and Technology, Nalanchira	2014-2015
3	Mr.JohnThangam, Mrs.Anne Chandra	Latest techniques in concrete technology	Peace Social Welfare, Nagercoil	2015-2016

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses attended by faculty

J. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses organized by faculty

Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	19-08-2016	Technical Symposium	Mr. John Thangam	500
2.	30-07-2016	Industry Institute Interaction Program	Mr.Abishek	120
3.	26-09-2015	A National Level Technical Symposium	Mr.Anand Rejilin	180

4.	27-03-2015	Workshop On Concrete Mix Proportion	Mr.Anand Rejilin	120
5.	01-09-2014	Industry Institute Interaction Program	Mr.Abishek	115
6.	09-01-2014	Industrial Instituitional Interaction Programme-2014	Mr.Lin G	135
7.	08-04-2013& 09-04-2013	International Collaborative Industrial Interaction Program	Mr.Bright BrabinWinsley	100
8.	29-07-2013	Industry Institute Interaction Program	Mr.John Thankam	112
9.	10-04-2013	Recent Advancement In Civil Engineering 2013(Ace-T13)	Mr.Charles Dyson	100
10.	02-11-2012	Industry Institute Interaction Program	Mr.Abishek	135
11.	19-10-2012	Workshop On Concrete Mix Design- Civionix '12	Mr.Anand Rejilin	158
12.	23-04-2012	Sustinable Architecture	Mr.Anand Rejilin	130
13.	27/10/2010	Inaugural Function Of Acme – Association Of Civil Engineers For Modern Era	Mr.Anand Rejilin	120

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses organized by faculty

K. Guest lecturers organized:

Sl. No	Dates	Name	Organized by	Targeted audience
1	02-09-14	Prestressed Concrete by Er.Anbu Thomas Samuel, Director, STUP Consultants Bangalore.	Mr.Anand Rejilin	**60**
2	09-04-13	Scope of Civil Engineering by Er.Richard Cheng, Director, Environ Construction Co. (Pte) Ltd,Singapore.	Mr.Bright Brabin Winsley	**120**
3	26-09-15	Advanced Surveying instruments by Sri SatheeshGopi, Deputy Chief Hydrographer at Hydrographic Survey Wing of Kerala Port Department	Mr.Anand Rejilin	180

L. Details of values added courses / seminars/ symposium/ workshops organized for students

Sl. No	Dates	Name	Organized by	Targeted audience
1.	19-08-2016	Technical Symposium	Mr. John Thangam	500
2.	30-07-2016	Industry Institute Interaction Program	Mr.Abishek	120
3.	26-09-2015	A National Level Technical Symposium	Department Assosiation	180
4.	27-03-2015	Workshop On Concrete Mix Proportion	Department Assosiation	120
5.	01-09-2014	Industry Institute Interaction Program	Department Association	115
6.	09-01-2014	Industrial Institutional Interaction Programme-2014	Department Association	135
7.	08-04-2013	International Collaborative Industrial Interaction Program	Department Association	100
8.	29-07-2013	Industry Institute Interaction Program	Department Association	112
9.	10-04-2013	Recent Advancement In Civil Engineering 2013(Ace-T13)	Department Association	100
10.	02-11-2012	Industry Institute Interaction Program	Department Association	135
11.	19-10-2012	Workshop On Concrete Mix Design- Civionix '12	Department Association	158
12.	23-04-2012	Sustainable Architecture	Department Association	130
13.	27/10/2010	Inaugural Function Of Acme – Association Of Civil Engineers For Modern Era	Department Association	120

Table: Values added courses / Seminars/ Symposium/ Workshops organized for students

M. The details of student's achievements & workshops attended by students at various places for the three academic years.

Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Year
Academic Year 2016 – 17				
1.	Siji V V	Paper presentation	CSI Institute of Technology, Thovalai	2016
		Paper presentation	Ponjesly College of Engineering & Technology	2017
2.	Stefyshaji	Paper presentation	Ponjesly College of Engineering & Technology	2017
		Paper presentation	CSI Institute of Technology, Thovalai	2016
3.	Sneha thresa charles	Group dance	Vins College of Engineering – First Prize	2013
		Group dance	Lal Bahadur Shasthri College of Engineering & Technology	2016
		Adaptune	Mar Baselios College of Engineering & Technology	2014
		Paper presentation	CSI Institute of Technology, Thovalai	2016
		Paper presentation	Shivaji College of Engineering & Technology	2016
		Paper presentation	Shivaji College of Engineering & Technology	2017
4.	Thushara Abraham	Paper presentation	Mar Ephraem College of Engineering And Technology, Elavuvilai	2015
		Paper presentation	Mar Ephraem College of Engineering And Technology, Elavuvilai	2016
		Paper presentation	CSI Institute of Technology, Thovalai	2016
		Paper presentation	Ponjesly College of Engineering & Technology	2017
5.	Tintu Rose Thomas	Paper presentation	Mar Ephraem College of Engineering and Technology, Elavuvilai	2015
		Paper presentation	Mar Ephraem College of Engineering and Technology, Elavuvilai	2016
		Paper presentation	Ponjesly College of Engineering & Technology	2017

		IET	Mar Ephraem College of Engineering and Technology, Elavuvilai	2016
		IET	Mar Ephraem College of Engineering and Technology, Elavuvilai	2017
		Poster presentation	Mar Ephraem College of Engineering and Technology, Elavuvilai	2017
		Elecaution	Vins College Of Engineering	2013
6.	Rebekah A Jolly	Symposium	Mar Ephraem College of Engineering and Technology, Elavuvilai	2016
		Symposium	CSI Institute of Technology, Thovalai	2016
		Symposium	Ponjesly College of Engineering & Technology	2017
		IET	Mar Ephraem College of Engineering And Technology, Elavuvilai	2016
		IET	Mar Ephraem College of Engineering And Technology, Elavuvilai	2016
7.	NishaShaji	Symposium	Mar Ephraem College of Engineering and Technology, Elavuvilai	2016
		Symposium	CSI Institute of Technology, Thovalai	2016
		Symposium	Ponjesly College of Engineering & Technology	2017
8.	Rakhi G.R	Symposium	CSI Institute of Technology, Thovalai	2016
		Symposium	Shivaji College of Engineering & Technology	2017
		Sports 1500m race	Loyola College, Aralvaimozhi	2016
9.	Sherin Varghese	Poster presentation	St Xaviers College of Engineering & Technology	2016
		elocution	Vins College of Engineering & Technology	2013
		Debate	LBS College of Engineering & Technology	2013
10.	Jibin Thomas	Poster presentation	St Xaviers College of Engineering & Technology	2016
11.	Sonia f	Paper presentation	V V College of Engineering	2017
12.	Pavithra p	Paper presentation	V V College of Engineering	2017
13.	Remya RR	Paper presentation	V V College of Engineering	2017
14.	Shilbha SL	Paper presentation	V V College of Engineering	2017
15.	Priyanka KA	Paper presentation	V V College of Engineering	2017

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16.	Neha GS	Paper presentation	V V College of Engineering	2017
17.	Reni Wills RL	Paper presentation	V V College of Engineering	2017
18.	Jincy S	Paper presentation	V V College of Engineering	2017
19.	Achu Susan Mathew	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
20.	Devikagopal	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
21.	Greeshma p chanchal	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
22.	Jameela john	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
23.	Ann maryamelu	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
24.	Anjali mohan	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
25.	Athiraramesh	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
26.	Abina v	National Level Conference	Shivaji College of Engineering & Technology	2017
27.	Bismi V K	National Level Conference	Shivaji College of Engineering & Technology	2017
28.	Asha p	National Level Conference	Shivaji College of Engineering & Technology	2017

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Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Year
29.	Priya S L	National Level Conference	Shivaji College of Engineering &Technology	2017
30.	Ancilin Julie	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
31.	AfflinTeeto	National Level Conference	Shivaji College of Engineering & Technology	2017
		Symposium	CSI Institute of Technology, Thovalai	2016
32.	Jerald Subin	National Level Conference	Shivaji College of Engineering & Technology	2017
33.	Jebin J	National Level Conference	Shivaji College of Engineering & Technology	2017
34.	Jeyagopan S	Symposium	CSI Institute of Technology, Thovalai	2016
35.	Abinesh A M	Symposium	CSI Institute of Technology, Thovalai	2016
36.	Fermin Paul S	Symposium	CSI Institute of Technology, Thovalai	2016

Academic Year 2014 – 15				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Year
1	Justin Alex	Workshop	Cape Institute of Technology, Levengipuram	2015
2	Joju Jacob	Workshop	Cape Institute of Technology	2015
3	Babu Raj	Workshop	Cape Institute of Technology	2015
4	Febinfrancy	Workshop	Cape Institute of Technology	2015
5	Naveen christoninan	Workshop	Cape Institute of Technology	2015
6	Johns Daniel	Workshop	Cape Institute of Technology	2015
7	Nandhu	Workshop	Cape Institute of Technology	2015
8	Jacob	Workshop	Cape Institute of Technology	2015
9	Jackson	Workshop	Cape Institute of Technology	2015

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Academic Year 2013 – 14				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Year
1	Jaculin	Conference	Sivaji College of Engineering,	2014
2	JeejaJenith	Conference	Sivaji College of Engineering	2014
3	Iren Jeniba	Conference	Sivaji College of Engineering	2014
4	Joel jeberson	Conference	Sivaji College of Engineering	2014
5	Kabiriel	Conference	Sivaji College of Engineering	2014
6	Nixon	Conference	Sivaji College of Engineering	2014

Academic Year 2012 – 13				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Year
1	BravinEbanesh	Conference	Kalasalingam University, Virudhunagar	2013
2	Libin Raj	Conference	Kalasalingam University, Virudhunagar	2013
3	BravinEbanesh	Conference	Sivaji College of Engineering & Technology, Manivilaimanivilai	2013
4	Libin Raj	Conference	Sivaji College of Engineering & Technology, Manivilaimanivilai	2013

Table : Student's Achievements & Workshops Attended by students

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Evaluative Reports

School of Computer Science and Engineering

1. **Name of the Department : Computer Science and Engineering**

2. **Year of Establishment   : 2009**

3. **Names of Programmes / Courses Offered :**

Courses Offered	Name of the Course	Specialization
UG	B.E.	Computer Science and Engineering
PG	M.E.	Computer Science and Engineering

Table: Programmes / Courses offered

4. **Names of Interdisciplinary courses and the departments / units involved:**

SI.No	Course Name / Code	Offered to (Dept. Name)
1.	Digital Principles and system Design (DPSD) - CS6201	ECE
1.	Environmental science & Engineering(EVS) - GE6351	ECE
2.	Analog & Digital Communication(ADC) - CS6304	ECE
3.	Transforms and Partial Differential Equations - MA6351	S & H
4.	Probability and Queuing Theory(PQT) - MA6453	S & H
5.	Discrete Mathematics - MA6566	S & H
6.	Digital Signal Processing - IT6502	ECE
7.	Resource Management Techniques - CS6704	S & H
8.	Image Processing and Analysis – CP7004	ECE
9.	Applied Probability and Statistics – MA7155	S & H
10.	Total Quality Management - GE6757	MECH

Table: Interdisciplinary courses

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5. **Annual / Semester / choice based credit system (programme wise) :**

B.E. Computer Science and Engineering (UG Program)	M.E. Computer Science and Engineering (PG Program)
Semester Based Credit System	Semester Based Credit System

Table 3: Annual / Semester systems

6. **Participation of the department in the courses offered by other departments:**

SI.No	Names of Interdisciplinary Courses	Department Involved
1.	Computer Programming(CP) – GE6151	CIVIL,MECH,ECE,EEE
2.	Object Oriented Programming(OOPS) – EC6301	ECE
3.	Object Oriented Programming(OOPS) – CS6456	EEE
4.	Computer Architecture(CA) - CS6303	ECE
5.	Computer Networks - CS6551	ECE

Table: Courses offered by other departments

7. **Courses in collaboration with other universities, industries, foreign institutions, etc. :** Nil

8. **Details of courses / programmes discontinued (if any) with reasons :** Nil

9. **Number of Teaching posts :**

Position	Sanctioned	Filled
Professors	NA	2
Associate Professors	NA	Nil
Asst. Professors	NA	13

Table: Teaching Post

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) :**

SI.No	Name	Qualification	Designation	Specialization	No. of Years of Experience
1.	Dr.A.Lenin Fred	M.E. Ph.D.	Principal	Medical Image Processing	17.5 years
2.	Dr.L.C.Manikandan	M.E. Ph.D.	Professor	Networking	1.5 years

3.	Mr.Ashwin G Singergi	M.E	H.O.S	Networking	1.5 year s
4.	Mrs P..InnasiLineta	M.E	Asst.Prof	Data Mining	1.5 years
5.	Mrs.Austy B Evangeline	M.E	Asst.Prof	Data Mining	5.5 years
6.	Mr.Babu R	M.E	Asst.Prof	Data Mining	7.5 years
7.	Mrs.Lincy C.T	M.E	Asst.Prof	Image Processing	5.5 years
8.	Mrs.Herlin L.T	M.E	Asst.Prof	Image Processing	8 years
9.	Mrs.Benisha Janice J	M.E	Asst.Prof	Image Processing	4.5 years
10.	Mrs.D. Dhanya	M.E.(Ph.D)	Asst.Prof	Cloud Computing	3.6 years
11.	Mrs.D.S.Renu	M.E	Asst.Prof	Algorithm Analysis	3.6 years
12.	Mrs.J. Janila	M.E	Asst.Prof	Networking	3.6 years
13.	Ms.Shobhana.S	M.E	Asst.Prof	Image Processing	2.7 years
14.	Mrs.Ashy.V.Daniel	M.E	Asst.Prof	Image Processing	1.11 years
15.	Mr.Jino Singh	M.E	Asst.Prof	Web Programming.	11 months

Table 6: Faculty Profile

11. List of senior visiting faculty :

SI.No	Name
1.	Mr. Sanil G.Dhas Senior Project Manager-Mobility Infosys Limited Trivandrum

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :

SI.No	Programme	No. of students	No. of staffs	Students staff ratio
1	UG	124	10	1:15
2	PG	17	5	1:12

Table 8: Student- Teacher ratio

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14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	Sanctioned	Filled
System Administrator	NA	1
Lab Assistant	NA	2
Office Assistant	NA	1

Table 9: Supporting Staff sanctioned and filled

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.

Qualifications of teaching faculty	Number
M.E./M.Tech	13
Ph.D	2

Table 10: Faculty qualification

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :

Sl. No	Project name	Funded by	Total grant received	Faculty	Status
1.	Development of a portable instrument for medical image analysing, compression & transmission compatible for CT/MRI low slice thickness images	DST (IDP)	34,38,400/-	Dr.A.Lenin Fred	Ongoing
2.	Development of Automated rubber tapping machine to improve the socio-economic Status of rubber growers in rural areas	DST (SSTP)	37,69,651/-	Dr.A.Lenin Fred	Ongoing
3.	Development of customized software for the Data Management related to integration of	ISRO (Respond)	10,85,000/-	Dr.A.Lenin Fred Mrs.D. Dhanya Mrs.Austy Evangeline	Ongoing

	Cryo Upper Stage(CUS-SOFT)				
4.	"Management Information System" for Wolkite University	Wolkite University , Ethiopia.	6,30,000/-	Dr.A.Lenin Fred Mrs.R.K.Shanmugha Priya	Ongoing
5.	Development of Dynamic Website for Wolkite University	Wolkite University , Ethiopia.	2,10,000/-	Dr.A.Lenin Fred Mrs.R.K.Shanmugha Priya	Ongoing

Table: Internal funded ongoing projects

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received :

SI.No	Name of faculty	No. of ongoing project	Funding Agency	Grants Received
1	Dr.A.Lenin Fred	1	DST (IDP)	34,38,400/-
2	Dr.A.Lenin Fred	1	DST (SSTP)	37,69,651/-
3	Dr.A.Lenin Fred Mrs.D. Dhanya Mrs.Austy Evangeline	1	ISRO (Respond)	10,85,000/-
4	Dr.A.Lenin Fred Mrs.R.K.Shanmugha Priya	1	Wolkite University, Ethiopia.	6,30,000/-
5	Dr.A.Lenin Fred Mrs.R.K.Shanmugha Priya	1	Wolkite University, Ethiopia.	2,10,000/-

18. Research Centre /facility recognized by the University:

- University recognized supervisor working in the department.
- Approval for University recognized research centre is in progress.

19. Publications: Papers Publications in Journals/Conferences

Academic Year 2016-2017 Journals			
Sl. No	Name	Paper Title	Journals
1.	Dr. A.Lenin Fred	Retinal Blood Vessel Extraction using Wavelet Transform and Morphological Operations	Research Journal of Pharmaceutical, Biological and Chemical Sciences
2.	Dr. A.Lenin Fred	Biologically Inspired Feature Extraction for Human Face Recognition using Multi Angle Movement	Asian Journal of Research in Social Sciences and Humanities
3.	Dr. A.Lenin Fred	Feature Level Two –Dimensional Arrays Based Fusion in the Personal Authentication system using Physiological Biometric traits.	Brazilian Archives of Biology and Technology
4.	Dr. A.Lenin Fred	Segmentation of abdominal organs using min cut/max flow algorithm – An application of Graph theory	International Journal of Engineering Research
5.	Mrs. D. Dhanya	Security Analysis On Cloud Data Search Using Order Preserving Encryption	International Journal of Innovative Works in Engineering and Technology
6.	Mrs. Ashy V. Daniel	Feature Level Two –Dimensional Arrays Based Fusion in the Personal Authentication system using Physiological Biometric traits.	Brazilian Archives of Biology and Technology

Academic Year 2016-2017 Conferences			
Sl. No	Name	Paper Title	Place
1.	Mrs.P.Innasi Lineta	Android based smart device directory.	Christ the king Engineering college
2.	Mrs.Austy B Evangelin	Secure and flexible offline micro payments	Christ the king Engineering college
3.	Mrs. L.T.Herlin	Retinal Blood Vessel Extraction Using Isodata Clustering And Morphological Operations.	Christ The king Engineering College

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4.	Mrs. D. Dhanya	An Efficient Retrieval of Multiple Color Images Using Visual Secret Sharing	Conference
5.	Ms.J.Janila	Location tracking in Smart Dobhi App.	Christ The king Engineering College
6.	Ms. S. Shobhana	Smart Phone based wound assessment system for patients with diabetes.	Christ The king Engineering College
7.	Ms. S. Shobhana	Glaucoma Screening in CDR with sparse dissimilarity constrained coding.	Christ The king Engineering College
8.	Mrs. A. Ayana	API service based CDA document and integration in cloud	Christ the king Engineering college
9.	Mrs. Shanmugha Priya	Technique to generate passwords using text colors and images for authentication :An Overview	Christ The king Engineering College
10	Mrs. Shanmugha Priya	Voice call communication through WiFi : An alternative for intercom systems	Christ The king Engineering College

Sl. No	Name	Paper Title	Reference of journal
1.	Dr.A.Lenin Fred	SFCM For Efficient Brain Tumor Segmentation	International Journal of Advanced Engineering Technology E-ISSN 0976-3945
2.	Dr.A.Lenin Fred	Video Key frame extraction through Wavelet information scheme	VOL. 11, NO. 7, APRIL 2016 ISSN 1819-6608 ARPN Journal of Engineering and Applied Sciences
3.	Dr.A.Lenin Fred	Segmentation Of Abdominal Organs On CT Images Using Distance Regularized Level Set Model – A Semi Automatic Approach	International Journal of Engineering Research ISSN:2319-6890 Volume No.5, Issue No.4, pp. 244-248 1 April 2016
4.	Dr.A.Lenin Fred	Security Analysis on Multi keyword Data Search in Cloud using Encryption Techniques	International Journal of Engineering Research ISSN:2319-6890)(online),2347-5013(print) Volume No.5, Issue No.2, pp : 137- 140 1 Feb. 2016
5.	Dr.A.Lenin Fred	Diabetic classification by blood vessel analysis of fundus images	International Journal of Engineering Research ISSN:2319-6890)(online),2347-5013

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6.	Dr.A.Lenin Fred	Fingerprint Template Secrecy Safeguard System Through Generation Of Combined Template	VOL. 10, NO. 16, SEPTEMBER 2015 ISSN 1819-6608 ARPN Journal of Engineering and Applied Sciences
7.	Dr.A.Lenin Fred	Color Image Enhancement Based on Depth Order Minimization	ISSN 0973-4562 Vol. 10 No.59 (2015), International Journal of Applied Engineering Research
8.	Dr.A.Lenin Fred	Implementation Of Cloud Computing Systems Using Multi Resource Fair Allocation	ISSN: 2455-5797 International Journal of Innovative Works in Engineering and Technology (IJIWET)
9.	Mrs. Austy B. Evangeline	Construction of decision tree and classification rules from Medical data of diabetis Mellitus	International journal of science technology & management
10.	Mr. Ashwin G Singerji	Smart cloud using atmega controller and rasberry pi processor	International journal of Advanced research in Management, Architecture, Technology and Engineering (IJARMATE) ISSN : 2454-9762 Vol. 2 - Issue 4, April – 2016.
11.	Mr. Ashwin G Singerji	An improved authenticated key exchange protocols to enhance the security for parallel network file system.	International journal of Advanced research in Management, Architecture, Technology and Engineering (IJARMATE) ISSN : 2454-9762 Vol. 2 - Issue 4, April – 2016.
12.	Mr. Ashwin G Singerji	Improved technique survey of security attacks in information-centric networking	International Journal of Advanced Research in Management, Architecture, Technology and Engineering
13.	Mrs. D. Dhanya	Security Analysis on Multi keyword Data Search in Cloud using Encryption Techniques	International Journal of Engineering Research
14.	Mrs. D. Dhanya	Secure and efficient Multi keyword top- K retrieval over encrypted cloud data	International Journal of Science, Technology & Management
15.	Mrs. D. Dhanya	Implementation Of Cloud Computing Systems Using Multi Resource Fair Allocation	International Journal of Innovative Works in Engineering and Technology (IJIWET

16.	Mrs. D. Dhanya	Towards Operational Cost Minimization in Hybrid Clouds for Dynamic Resource Provisioning with Delay-Aware Optimization using minimizing communication cost algorithm.	International Journal of Innovative Works in Engineering and Technology (IJIWET)
17.	Mrs. D.S.Renu	Diabetic classification by blood vessel analysis of fundus images	International Journal of Engineering Research
18.	Mrs. D.S.Renu	Allignment free local minutiae descriptor based latent fingerprint matching.	International Journal of Science, Technology & Management
19.	Mrs. J. Janila	Ensuring data integrity and data availability in distributed cloud storage.	International Journal of Science, Technology & Management
20.	Mrs. Ashy V. Daniel	SFCM For Efficient Brain Tumor Segmentation	International Journal of Advanced Engineering Technology
21.	Mrs. Ashy V. Daniel	Computer Aided System Based On Spatially Coherent FCM For Efficient Brain Tumor Segmentation And Classification	International Journal of Innovative Works in Engineering and Technology (IJIWET)

Academic Year 2015-2016 Conferences			
Sl. No	Name	Paper Title	Conference
1.	Dr.A.Lenin Fred	Robust Alzheimer's Disease Classification based on Multimodal Neuroimaging	ieeexplore.ieee.org/document/7569348/
2.	Dr.A.Lenin Fred	A semi automatic Geometric Active Contour model using distance regularized term for Segmentation of Abdominal organs on CT images	ieeexplore.ieee.org/document/7569349/
3.	Dr.A.Lenin Fred	An improved color Segmentation algorithm for the analysis of liver anomalies in CT/PET images	ieeexplore.ieee.org/document/7569431/
4.	Ms. S. Shobhana	Robust Alzheimer's disease Classification Based on Multimodal Neuroimaging	ieeexplore.ieee.org/document/7569348/

5.	Ms. S. Shobhana	Adaptive global maximum clustering assisted sparse coding technique for glaucoma screening	National Conference on Recent innovation in Emerging trends, 18th march 2016
6.	Mrs. Ashy V. Daniel	An automated strategy for synthesizing VW based image for Iris biometrics	International Conference Proceedings

Table: Faculty publication

20. Areas of consultancy and income generated: NIL

21. Faculty as members in a) National committees b) International Committees c) Editorial Boards

Faculty Name	Name of the Committee
Dr.A.Lenin Fred	1. Reviewer of reputed Journals PLUS ONE & KSII transactions on Internet and Information systems 2.Vice-Chairman of IET-KKLN

22. Student projects

a) Percentage of students who have done in-house projects including interdepartmental/ programme

Program	2012-16		2011-15		2010-14		2009-13	
	In	Out	In	Out	In	Out	In	Out
B.E	13%	86%	-	100%	-	100%	14%	78%

Program	2014-16		2013-15		2012-14	
	In	Out	In	Out	In	Out
M.E	100%	-	100%	-	100%	-

*In=In-house *Out=outside the organization

b) **Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies**

SI.No	Program	Batch/Year	Name of organization	Percentage
1	B.E	2015-16	B-Soft,USA	86%
2	B.E	2011-15	Brains trust	100%

			Technology, Trivandrum	
3	B.E	2010-14	Thasor Infotech, Nagercoil	100%

Table: Student Projects

23. Awards/ Recognitions received by faculty and students

Prof.Dr.A.Lenin Fred received "A.P.J. Abdul Kalam best Researcher Award" from IET (National Level)

24. List of eminent academicians and scientists/ visitors to the department

Academic Year 2016 – 2017				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1.	Prof. Dr. John Jose,	Asst. Prof., IIT, Guwahati	20/3/2017	Seminar
2.	Prof.Dr. Chitra,	Professor, Thiyagaraja Engg. College, Madurai	2/02/2017	Seminar
3.	Mr.Jerry Rajamony	VISA India Bangalore	2.2.2017 3.2.2017	Workshop
4.	Mr.R.ChandraMohan	Placement officer Kongu Engg college, Erode	10/8/2016	National level Techinical Symposium

Academic Year 2015 – 2016				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1.	Mr.Somu Shanmughavel	Manger-IT, Training & Development, Chennai	12.5.2016 13.5.2016	FDP on IBM Bluemix

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Academic Year 2014 – 2015				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1.	Captain S.K.Thakur	Director-projects, DIPAC, MoD,New Delhi	14//03/2014 to 15/03/2014	Recent advancement in computer and communication Engineering (RACCE'14)

Table: Eminent academicians and scientists/ visitors to the department

25. Seminars/ Conferences/Workshops organized & the source of funding: Nil

26. Student profile programme/course wise:

Name of the Course/programme (refer question no. 4)	Batch/Year	Year of pass out	Applications received	Selected	Enrolled		Pass percentage
					*M	*F	
UG	2015-16	2019	46	44	22	22	-
	2014-15	2018	48	45	21	24	-
	2013-14	2017	35	34	11	23	-
	2012-13	2016	44	43	20	23	70%
	2011-12	2015	40	38	20	17	79%
	2010-11	2014	52	50	24	26	82%
	2010-09	2013	16	14	7	7	78.5%
PG	2015-16	2017	9	8	-	8	-
	2014-15	2016	17	17	5	12	100%
	2013-14	2015	12	11	3	8	100%
	2012-13	2014	18	16	2	14	100%

Table: Student Profile

27. Diversity of Students

Name of the Course	% of students from the same State	% of students from other state
B.E.	34.6%	65.3%
M.E.	87.5%	12.5%

Table : Diversity of students

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?

Competitive Exam	Qualified No. of Students
TANCET	3

Table : Student Competitive examinations details

29. Student progression (Previous year)

Student Progression	Against % enrolled
UG to PG	11%
PG to Ph.D	Nil
Ph.D. to Post-Doctoral	Nil
Employed (Campus selection)	Nil
Entrepreneurship / Self-employment	22%

Table : Student Progression.

30. Details of Infrastructural facilities

Library

SI.No	Library	No. of books
1	Department library	181

Internet facilities for Staff & Students

- Computers with high bandwidth internet connectivity available for students and staffs usage.
- 24/7 internet access with Wi-Fi connectivity

- Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

Class rooms with ICT facility

- All class rooms are ergonomically designed to reinforce a student-centered style of instruction.
- All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from a centralized UPS.
- Usage of Power Point and other computer programs to improve the presentation of material to class
- Presentation of IIT videos for each course helps the students in learning and clear with the concept.
- ICT facility encourages independent and active learning, and students' responsibility for their own learning.
- It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment.

Laboratories

SI.No	Laboratories	No. of systems
1	Common computer Lab	66
2	Advanced Computing lab	25
3	Image processing Lab	26
4	Computer Centre Lab	50

31. Number of students receiving financial assistance from college, university, government or other agencies:

Category	No. of Students			
	2016-17	2015-16	2014-15	2013-14
SC/ST		1	2	2
OBC	21	31	8	40
Minority	-	-	-	-
Institutional Scholarship	38	32	40	-

Table: Student Financial Assistance

32. Details on student enrichment programme (special lectures / workshops / seminar) with external experts.

SI. No	Student enrichment programmes	Period
Academic Year 2016 – 17		
1.	Architecture for next generation Multicore systems	1 day
2.	Recent trends in Multicore architectures & Programming	1 day
3.	Campus to Corporate	1 day
4.	National level Technical Symposium EPIC '16	1 day
Academic Year 2015 – 16		
1.	Seminar on "Research Methodology	2 days

Table : Student Enrichment Programme

SI.No	Events	Conducted
1.	Symposium	2
2.	Workshop	5
3.	Seminar	9
4.	Industrial Visit	12
5.	Conference	4
6.	Value Added courses	3
7.	Online training	1
8.	Internship program	42

More detail-Refer annexure-1

33. Teaching methods adopted to improve student learning

> ➢ Students are directed to take seminar, based on reputed Journals/ Transaction
> ➢ Micro project was incorporated to increase student interest towards their core area.
> ➢ Propagation of technical topics of current interest to students.

34. Participation in Institutional Social Responsibility (ISR)and Extension activities-

> ➢ Our team has interacted with MIDS (Marthandam Integrated Development Society) and identified various challenges.
> ➢ Visiting Tribal Village people and given basic education.

- ➤ Real time projects are done by our students based on these Challenges.
- ➤ Our students donated blood in various critical conditions and saved many valuable lives.

Extension activity	Year	Amount
House Construction for E. Arun (CSE)	2014-15	1,00,000
Treatment of Kidney Stone for Jithu (CSE)	2015-16	25,000

35. SWOC analysis of the department and Future plans

Strength	Opportunities
• Expertise of Faculty in various inter-disciplinary areas. • Ongoing live funded research projects. • Research tie-up and collaboration with International research centers. • Ability of the faculty to adopt the latest technology. • Well qualified faculty member with high retention rate.	• Current national thrust on Digital India. • International thrust on Internet of Things. • Students and Faculty have opportunities to register free online certificate courses. • Best source to inculcate research culture since there is live ongoing funded projects. • As there is International collaborations, there is opportunity for patent filing, product development, and publications.
Weakness	**Challenges**
• Lack of communication skill in students due to their rural background. • Less number of faculty with industrial experience. • Less number of students attending competitive exams. • Less number of students in technically decision making position.	• Less number of students in creamy layer opt for the course because of the lack of interest in IT field. • Students are showing less interest to adapt new advancements in technology. • As there are more number of IT professionals in the market, the competition for employment is more.

Future plans

- ➤ Interaction with industries
- ➤ To offer best consultancy services.
- ➤ To upgrade the department as research Centre.
- ➤ To procure more funded projects.
- ➤ Signing MOU with core companies

Annexure-1

A. Workshops Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	A training program on "Matlab for Image Processing"	Prof. R.K.SelvaKumar HOD/IT, Agni College of Engg.	20.10.2016 21.10.2016	Students got the skill of implementing image processing concepts using MatLab.	20
2	Workshop on C programming	Prof.Dr.A.LeninFred (Principal.MarEphrae m college of Engg. & Tech)	10.11.2014 to 18.11.2014	Students are able to understand the importance of C in Placement drives and competitive exam	280
3.	Computer hardware and networking (Trigger -13)	Prof.R.P.Anto Kumar Head/IT, St. Xavier's Catholic College of Engg&Team	19/02/2013 to 26/02/2013	Students are capable enough to assemble the computer as well as to solve the hardware related problems of their own	324
4.	Research Methodology in Image Processing through Sci-Lab	1.Prof.Dr.A.Lenin Fred(principal.MarEp hraem college of Engg. & Tech) 2.Dr.R.K. Selva Kumar, Vice – Principal, Cape Institute of Tech	11/10/2012 - 13/10/2012	Students are capable of understanding image processing concepts and got the skill of implementing image processing concepts using Sci-Lab.	10
5.	Java Programmin g	Mr. Saravanan, Professor and Head of Software Engineering department in Narayanaguru College of Engineering, Manchalumood	21/7/2011	Students are able to write their lab programs of their own and shown interest in knowing advanced topics.	13

B. Symposium/Conference Organized

Sl no	Title	Resource Person	Duration	Outcomes
1	EPIC-16	Mr.R.ChandraMohan,Placementofficer,Kongu Engineering college,Erode.	10/08/2016	Students are capable of understanding the importance of presenting the paper and got motivated to publish their real work.
2	ICTMI '16	Prof.David Townsend, A*STAR-NUS Clinical Imaging Research Centre, Singapore Dr.Ramasamy Paulmurugan, Stanford University,USA	4.2.2016 & 5.2.2016	Students are able to participate and present their innovative ideas in international conferences.
3	Recent advancement in computer and communication Engineering (RACCE'14)	Captain S.K.Thakur (Director -projects, DIPAC,MoD,New Delhi)	14//03/2014 to 15/03/2014	Students are capable of understanding the importance of presenting the paper and the current trends and issues in the field of Computer and Communication and got motivated to publish their real work.
4	EPIC-14	Captain S.K.Thakur (Director -projects, DIPAC,MoD,New Delhi)	14//03/2014 to 15/03/2014	Students are capable of understanding the importance of presenting the paper and the current trends and issues in the field of Computer and Communication and got motivated to publish their real work.
5	Recent Advancement in Computer and Communication Engineering(RACCE '13)	Prof. Dr. S. ThamaraiSelvi M.E.,Ph.D (Dean, MIT Campus, Anna University-Chennai.)	15/03/2013	Students are capable of understanding the importance of presenting the paper, and the current trends and issues in the field of Computer and Communication and got motivated to publish their real work.

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C. Seminar Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	Architecture for next generation Multicore systems	Prof. Dr. John Jose, Asst. Prof., IIT, Guwahati	20/3/2017	Students were able to compare the efficiency of latest processor architecture with the previous ones.	90
2.	Multicore architectures & Operating system	Prof.Dr. Chitra, Professor, Thiyagaraja Engg. College, Madurai	2/02/2017	Students were able to compare the various architectures in multicore systems.	90
3.	Recent challenges in Information & communication technology	1.Dr.S.G.prakash Vincent,(Associate prof.& Coordinator(ICN),M S University)	13/2/2014 to 14/2/2014	Students got ignited due to the flame of our resource persons and they were able to know the various thrust areas and got themselves involved in doing research	29
4.	Molecular Imaging	Mr.Parasuraman Padmanabhan	1/10/2012	Students are capable of understanding the concepts in imaging system and got motivated to involve in research activities.	40
5.	career Guidance	Mr.JustinJose,SystemsEngineer,TCS,Chennai	14/8/2012	Students are able to find an optimal career path based on their ability,desire and the opportunities available.	101
6.	Training Program on "Soft Skills for Employability"	Dr.R.Mohan Kumar, Director ,Sri Krishna Institute of Management	1/10/2011	Students confidence level has increased and the attitude of students has changed.	56
7.	Cyber Crimes: Challenges and Issues	Mr.N.VinayaKumaran Nair, AC of Police-HTCEC,Trivandrum	24/9/2011	Students are able to use the right website and protecting their confidential documents	125
8.	Computer Networks	Mr.Robinson, Senior Engineer of System Admin at Computer Science Corporation,	8/7/2011 FN	Students easily understand the network concepts	113

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		Bangalore			
9.	I phone Customer Application Development	Mr.NalanChakaravarthy, Senior software Engineer of Zylog system Limited, Chennai	8/7/2011 AN	Students showed their interest in knowing the current technologies.	55

D. Certificate Value Added Courses Organized

Sl no	Program	Duration	Trainers	Outcomes	No of Beneficiaries
1	.Net	January 2016 to april 2016	B-Soft,USA	Students are able to get additional IT skills	42
2	.Net,php, ava and android	January to April 2015	Brainstrust Technology	Students are able to get additional IT skills	37
3	.Net	July 2012 to Nov 2012	ThasorInfotech, Nagercoil	Students are able to get additional IT skills	47

E. Industries Visited

Sl. No	Date	Title	Company Name & Description
1.	22/0712016	Industrial Visit (III yr & III CSE)	BSNL,Marthandam
2.	12/08/2016 to 15/08/2016	Industrial Visit (II yr CSE)	Vishweswaraya Technical Museum, Bangalore
3.	11/08/2016 to 15/08/2016	Industrial Visit (III yr CSE)	Syntel Limited, Hyderabad
4.	12/08/2015 to 15/08/2015	Industrial Visit (II yr CSE)	Vishweswaraya Technical Museum,Bangalore
5.	12/08/2015 to 14/08/2015	Industrial Visit (III yr CSE)	Vishweswaraya Technical Museum,Bangalore,High Voltage(India),
6.	3/09/2015 to 6/09/2015	Industrial Visit (IV yr CSE)	Bhoruka Power Corporation limited,, Bangalore
7.	12/08/2016 to 15/08/2016	Industrial Visit (II yr CSE)	Vishweswaraya Technical Museum,Bangalore
8.	25/07/2014 & 26/07/2014	Industrial Visit (II yr CSE)	Kaynes Technology, Mysore.

9.	13/08/2014 to 16/08/2014	Industrial Visit (III yr CSE)	Kaynes Technology, Mysore.
10.	15/08/2012 to 18/08/2012	Industrial Visit (III yr CSE)	Radio Astronomy Centre, Ooty
11.	06/09/2012 to 09/09/2012	Industrial Visit (II yr CSE)	Infosys Technologies Ltd, Chennai
12.	04/08/2011 to 07/08/2011	Industrial Visit (III yr CSE)	Infosys Technologies Ltd, Chennai

F. Research publications in national/ international journals/ conferences by Students

Sl. No	Name	Title	Year	Organized by	Achievement
1.	Jiji J.S	A New Modified Fast Fractal Image Compression Algorithm in DCT Domain.	2017	Maria College of Engg Marthandam	Presented paper in International Conference
2.	Sonal Wilson Pillai	Retinal Blood Vessel Extraction Using Isodata Clustering And Morphological Operations.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
3.	Anuja Titus	Smart Phone based wound assessment system for patients with diabetes.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
4.	Deepa D Raj	Glaucoma Screening in CDR with sparse dissimilarity constrained coding.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy

					(NCRTSE 2K'17)
5.	Hitha P Thoshib	Location tracking in Smart Dobhi App.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
6.	Teena P Thomas	Location tracking in Smart Dobhi App.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
7.	Jessin James	Location tracking in Smart Dobhi App.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
8.	Shajithri R.S	Technique to generate passwords using text colors and images for authentication :An Overview	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
9.	Chinju E.P	Technique to generate passwords using text colors and images for authentication :An Overview	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
10.	Abel Jacob	Secure and flexible offline micro payments	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
11.	Roshan Thomas	Secure and flexible offline micro payments	2017	Christ The King Engineering College,	National Conference in Recent trends

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				Coimbatore	in Science and Technolgy (NCRTSE 2K'17)
12.	Wince W.S	Secure and flexible offline micro payments	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
13.	Delenta V.S	API service based CDA document and integration in cloud	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
14.	Greeshma Vijayan A	API service based CDA document and integration in cloud	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
15.	Vinod B	API service based CDA document and integration in cloud	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
16.	Flower Judi	Voice call communication through WiFi : An alternative for intercom systems	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
17.	Treesa Eucharist	Voice call communication through WiFi : An alternative for intercom systems	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
18.	Reeba Varughese	Voice call communication through WiFi : An alternative for	2017	Christ The King Engineering College,	National Conference in Recent trends

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		intercom systems		Coimbatore	in Science and Technolgy (NCRTSE 2K'17)
19.	Anju K Saji	Android based smart device directory.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
20.	Josy Jose	Android based smart device directory.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
21.	Arpitha Merin Raj	Android based smart device directory.	2017	Christ The King Engineering College, Coimbatore	National Conference in Recent trends in Science and Technolgy (NCRTSE 2K'17)
22.	Veena	Computer Aided System Based On Spatially Coherent Fcm For Efficient BrainTumor Segmentation And Classification	2016	IJIWET	Journal
23.	Samini Mol	Diabetic Classification by Blood Vessel Analysis of Fundus image.	2016	International Journal of Engg research	Journal
24.	Ashforn Hermina	Diabetic Classification by Blood Vessel Analysis of Fundus image.	2016	International Journal of Engg research	Journal
25.	Anchalo Bensiger	"Segmentation Of Abdominal Organs On CT Images Using Distance Regularized Level Set Model – A Semi Automatic	2016	International Journal of Engg research	Journal

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Sl. No	Name	Title	Year	Publisher	Type
		Approach"			
26.	Helen Mary	Security Analysis on Multi keyword Data Search in Cloud using Encryption Techniques	2016	International Journal of Engg research	Journal
27.	Shibi	Security Analysis on Multi keyword Data Search in Cloud using Encryption Techniques	2016	International Journal of Engg research	Journal
28.	Indhu V.S	Segmentation of liver Using classification of Regression tree	2016	Tamizhan college of Engineering and Technology	International conference on trends in computational Engg and technology
29.	Anisha Issac	Fingerprint Template Secrecy Safeguard System Through Generation Of Combined Template	2015	ARPN Journal of Engineering and Applied Sciences,	Journal
30.	Akhila D.B	Robust Alzheimer's disease classification based on Multimodal Neuro imaging	2016		Paper presented in ICETECH'16

Table: Research publications by students

G. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses attended by faculty

Academic Year 2016-2017					
Sl. No	Name	Workshop / Seminar Attended	Date		Organized by University / College
			From	To	
1.	Mrs. P.Innasi Lineta	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
2.	Mrs.Austy B Evangeline	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
3.	Mrs.Austy B Evangeline	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai

4.	Mr.Babu R	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
5.	Mr.Babu R	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
6.	Mrs.Lincy C.T	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
7.	Mrs.Lincy C.T	FDP on Oracle : Database Design and Programming with SQL	28.11.2016	2.12.2016.	St.Xavier's Catholic College of Engineering, Chunkankadai
8.	Mrs.Lincy C.T	Workshop on Agile software development using Scrum	02.02.2016	03.02.2016	Mar Ephraem college of Engineering, Elavuvilai
9.	Mrs.Herlin L.T	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
10.	Mrs.Herlin L.T	FDP on Oracle : Database Design and Programming with SQL	28.11.2016	2.12.2016.	St.Xavier's Catholic College of Engineering, Chunkankadai
11.	Mrs.Herlin L.T	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
12.	Mrs.J. Janila	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
13.	Mrs.J. Janila	FDP on Skilledge : Web designing and developing	14.11.2016	18.11.2016	St.Xavier's Catholic College of Engineering, Chunkankadai
14.	Mrs.J. Janila	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
15.	Ms.Shobhana.S	Workshop on R Software for Statistical Computing in Research	11.11.2016	11.11.2016	Thiagarajar College of Engineering(TCE) Madurai
16.	Ms.Shobhana.S	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
17.	Ms.Shobhana.S	Training program	12.11.2016	19.11.2016	B-cube solution,

		on Digital Marketing	13.11.2016	20.11.2016	Bangalore
18.	Ms.Shobhana.S	Workshop in Theme Centered Interaction	17.1.2017	21.1.2017	St. Mary's College, Thoothukudi.
19.	Mrs.Ashy.V. Daniel	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
20.	Mrs.Ashy.V. Daniel	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
21.	Mrs. A. Ayana	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
22.	Mrs.Shanmugha Priya	Workshop on Latex	19.12.2016	20.12..2016	Noorul Islam University, Kumaracoil
23.	Mrs.Shanmugha Priya	Workshop on Agile software development using Scrum	02.02.2017	03.02.2017	Mar Ephraem college of Engineering, Elavuvilai
24.	Mrs.Shanmugha Priya	Workshop on R Software for Statistical Computing in Research	11.11.2016	11.11.2016	Thiagarajar College of Engineering(TCE) Madurai
25.	Mrs.Shanmugha Priya	Training program on Digital Marketing	12.11.2016 13.11.2016	19.11.2016 20.11.2016	B-cube solution, Bangalore

Academic Year 2015-2016					
Sl. No	**Name**	**Workshop / Seminar Attended**	**Date**		**Organized by University / College**
			From	**To**	
1.	Mrs. P.Innasi Lineta	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
2.	Mrs.Austy B Evangeline	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
3.	Mrs.Lincy C.T	Workshop on Digital Image Processing	6.6.2016	10.6.2016	Mar Ephraem college of Engineering,

		using MATLAB			Elavuvilai
4.	Mrs.Herlin L.T	Workshop on Digital Image Processing using MATLAB	6.6.2016	10.6.2016	Mar Ephraem college of Engineering, Elavuvilai
5.	Mrs.Herlin L.T	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
6.	Mr.Ashwin G Singergi	FDP on Computer Networks	15.06.2015	23.06.2015	St.Xavier's Catholic College of Engineering, Chunkankadai
7.	Mrs.Benisha Janice J	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
8.	Mrs.D. Dhanya	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
9.	Mrs.D.S.Renu	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
10.	Mrs.J. Janila	FDP on Computer Networks	15.06.2015	23.06.2015	St.Xavier's Catholic College of Engineering, Chunkankadai
11.	Mrs.J. Janila	FDP on IBM Bluemix	12.5.2016	13.5.2016	Mar Ephraem college of Engineering, Elavuvilai
12.	Ms.Shobhana.S	FDP on Computer Networks	15.06.2015	23.06.2015	St.Xavier's Catholic College of Engineering, Chunkankadai
13.	Ms.Shobhana.S	Workshop on	1.4.2015	1.4.2015	St.Xavier's Catholic

		Matlab Using Simulink			College of Engineering, Chunkankadai
14.	Ms.Shobhana.S	Workshop on Digital Image Processing using MATLAB	6.6.2016	10.6.2016	Mar Ephraem college of Engineering, Elavuvilai
15.	Mrs.Ashy.V.Daniel	Workshop on Digital Image Processing using MATLAB	6.6.2016	10.6.2016	Mar Ephraem college of Engineering, Elavuvilai
16.	Mrs.Ashy.V.Daniel	FDP on Computer Networks	15.06.2015	23.06.2015	St.Xavier's Catholic College of Engineering, Chunkankadai
17.	Mrs.Ashy.V.Daniel	Hands on Training Programme on Soft Computing Using Matlab	09.10.2015	11.10.2015	Anna University, Chennai
18.	Mrs.Ashy.V.Daniel	Workshop on Matlab Using Simulink	1.4.2015	1.4.2015	St.Xavier's Catholic College of Engineering, Chunkankadai

Academic Year 2014-2015					
Sl. No	**Name**	**Workshop / Seminar Attended**	**Date**		**Organized by University / College**
			From	**To**	
1.	Mr.L.C.Manikandan	National Seminar on Soft Computing and Real Time Applications	11.9.2014	11.9.2014	Agni College of Technology, Chennai.

2.	J.S.Jijila Rose	FDP on Software Engineering	12.12.2014	19.12.2014	St.Xavier's Catholic College of Engineering, Chunkankadai
3.	Mrs. P.Innasi Lineta	FDP on Database Design & programming with SQL	10.11.2014	14.11.2014	Sethu Institute of Technology, Kariyapatti
4.	Mrs.Austy B. Evangeline	Workshop on Image Processing Using MATLAB	7.7.2014	8.7.2014	Mar Ephraem college of Engineering, Elavuvilai
5.	Mr. R.Babu	FDP on "Introduction to PHP & MySQL	10.11.2014	14.11.2014	St.Xavier's Catholic College of Engineering, Chunkankadai
6.	Mrs.Lincy C.T	Workshop on Image Processing Using MATLAB	7.7.2014	8.7.2014	Mar Ephraem college of Engineering, Elavuvilai
7.	Mrs.Herlin L.T	Workshop on Image Processing Using MATLAB	7.7.2014	8.7.2014	Mar Ephraem college of Engineering, Elavuvilai
8.	Mrs.Benisha Janice J	National Seminar on Soft Computing and Real Time Applications	11.9.2014	11.9.2014	Agni College of Technology, Chennai.
9.	Mrs.D. Dhanya	FDP on Software Engineering	12.12.2014	19.12.2014	St.Xavier's Catholic College of Engineering, Chunkankadai
10.	Mrs.D.S.Renu	Workshop on Image Processing Using MATLAB	7.7.2014	8.7.2014	Mar Ephraem college of Engineering, Elavuvilai

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses attended by faculty

H. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses organized by faculty

Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	20.3.2017	Architecture for next generation Multicore systems	Mrs.J.Janila	78 - UG CSE students
2.	2.2.2017	Recent trends in Multicore architectures & Programming	Mrs.J.Janila	72 - UG CSE students
3.	2.2.2017	Campus to Corporate	Mrs.P.Innasi Lineta	35 - UG final year students
4.	2.2.2017 2.3.2017	Workshop on Agile Software development using Scrum	Mrs.P.Innasi Lineta	30 - CSE Staff PG students
5.	10.8.2016	National level Technical Symposium EPIC '16	Mrs.L.T.Herlin	120 - National level participants

Academic Year 2015-2016				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	20.10.2016 21.10.2016	Seminar on "Research Methodology	Mrs. Lincy C.T	PG students
2.	6.6.2016 To 10.6.2016	A training program on "Matlab for Image Processing"	Mrs.Ashy V Daniel	PG students Research scholars Staff

Academic Year 2014-2015			
Dates	Workshop Name	Organized by	Targeted audience
10.11.2014 To 18.11.2014	Workshop on C programming	Ms. S. Shobhana	First year students

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses organized by faculty

I. Guest lecturers organized

Sl. No	Dates of Lecture	Title of the Lecture	Guest	Event	Beneficiary
1.	2.3.2017	PPI - 8255	Mrs. Anbu Shamini AP/ECE	Seminar	UG 4th sem students
2.	10.3.2017	DAC & ADC	Mrs. Anbu Shamini AP/ECE	Seminar	UG 4th sem students
3.	2.2.2017	Synchronization in operating systems	Dr. Chitra, Professor, Thiyagaraja Engg. College, Madurai.	Seminar	UG 4th sem students
4.	5.8.2016	Design flows of system development	Mrs. T.S.Akhila AP/ECE	Seminar	UG 7th sem students

Table 18: Guest Lectures Organized

J. Details of values added courses / seminars/ symposium/ workshops organized for students

Academic Year 2016-2017				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	20.3.2017	Architecture for next generation Multicore systems	Mrs.J.Janila	UG CSE students
2.	2.2.2017	Recent trends in Multicore architectures & Programming	Mrs.J.Janila	UG CSE students
3.	2.2.2017	Campus to Corporate	Mrs.P.Innasi Lineta	UG final year students
4.	10.8.2016	National level Technical Symposium EPIC '16	Mrs.L.T.Herlin	National level participants

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Academic Year 2015-2016				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	20.10.2016 21.10.2016	Seminar on "Research Methodology	Mrs. Lincy C.T	PG students
2.	6.6.2016 To 10.6.2016	A training program on "Matlab for Image Processing"	Mrs.Ashy V Daniel	PG students Research scholars Staff

Academic Year 2014-2015				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	10.11.2014 To 18.11.2014	Workshop on C programming	Ms. S. Shobhana	First year students

Table : Values added courses / Seminars/ Symposium/ Workshops organized for students

K. The details of student's achievements & workshops attended by students at various places for the three academic years.

Academic Year 2016 – 17				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Month & Year
1.	Varghese Sunny (III CSE)	IEEE Computer Society Indian Symposium	IIIT Allahabad	March-2017
2.	Nijin P Mathews (III CSE)	IEEE Computer Society Indian Symposium	IIIT Allahabad	March-2017
3.	Libin C.Mathews (III CSE)	RC Aircraft Workshop	Mar Baselious college of Engineering and Technology, Trivandrum	Feb-2017
4	Syed Ali A (IV CSE)	Entrepreneurship-Presentation Competition	Oliver G.Foundation, Nagercoil	Sep-2016

5	Immanuvel Nesakumar (IV CSE)	Entrepreneurship-Presentation Competition	Oliver G.Foundation, Nagercoil	Sep-2016
6.	Anuruth (IV CSE)	Entrepreneurship-Presentation Competition	Oliver G.Foundation, Nagercoil	Sep-2016
7.	Benish J (IV CSE)	Entrepreneurship-Presentation Competition	Oliver G.Foundation, Nagercoil	Sep-2016

Academic Year 2015 – 16				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Month & Year
1.	Gibin Punnose (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
2.	Fredin A. Givo (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
3.	Nijin P Mathews (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
4.	Libin C.Mathew (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
5.	ShibinMariyan Stanley (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
6.	Agil Mathews (III CSE)	Workshop on I-SMART	IEEE Computer Society Student Branch Chapter of NEC	Feb-2016
7.	Varghese Sunny (III CSE)	IEEE Computer Society INDIA Symposium	College of Engineering, Trivandrum	Feb-2016
8.	Abin T John (III CSE)	IEEE Computer Society INDIA	College of Engineering,	Feb-2016

			Symposium	Trivandrum	
9.	Anand Mohan (III CSE)	International Conference	Mar Ephraem and Rajiv Gandhi Centre for Bio-Technology	Jan 2016
10.	Varghese Sunny (III CSE)	Category: Best Demonstration and presentation No parking area clearing robot eYS-2016,IIT Mumbai	IIT Mumbai	Mar-2016
11.	Jerin George (III CSE)	Category: Judges choice Intelligent car parking robot eYS-2016,IIT Mumbai	IIT Mumbai	Mar-2016
12.	Shejin A Vaidyan (III CSE)	Best Demo,e-yantra Mumbai	IIT Mumbai	Mar-2016
13.	Joseph Paulose (III CSE)	Best Demo,e-yantra Mumbai	IIT Mumbai	Mar-2016
14.	Abel Jacob (IV CSE)	Judges'sChoice,e-yantra Mumbai	IIT Mumbai	Mar-2016
15.	Abin T John (III CSE)	Judges'sChoice,e-yantra Mumbai	IIT Mumbai	Mar-2016
16.	Libin C. Mathew (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
17.	Jerin George (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
18.	JithuP.Iype (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
19.	Shiju Johnson (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
20.	Nijin P.Mathews (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
21.	Agil Mathews (III CSE)	MIME	Nesamony Memorial College, Marthandam	Mar-2016
22.	Reeba Varghese (IV CSE)	Debugging	St.Xavier's Catholic College of	Mar-2016

			Engineering	
23.	Meenu Rajan (IV CSE)	Turncoat	St.Xavier's Catholic College of Engineering	Mar-2016
24.	Treesa Eucharist (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016
25.	Arpitha Merin Raj (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016
26.	Anju K.Saji (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016
27.	Syed Ali A. (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016
28.	Benish J. (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016
29.	Anuruth V.S. (IV CSE)	Workshop on 'Personality Development'	Noorul Islam University	Mar-2016

Table: Student's Achievements & Workshops Attended by students

L. List of Institute visit by our Faculty

Academic Year 2016 – 2017				
Sl. No	Name	Institute	Place	Purpose of Visit
1.	Prof.Dr.A.Lenin Fred	Stup Consultants	Bangalore	Internship
2.	Prof.Dr.A.Lenin Fred	L&T	Chennai	Internship
3.	Prof.Dr.A.Lenin Fred	Shapoorji Pallonji Co. Ltd.	Bangalore	Placement
4.	Prof.Dr.A.Lenin Fred	Powerica	Bangalore	Placement
5.	Prof.Dr.A.Lenin Fred	Simplex Infra Pvt. Ltd.	Bangalore	Placement
6.	Prof.Dr.A.Lenin Fred	JMC	Bangalore	Internship
7.	Prof.Dr.A.Lenin Fred	Kongovi Electronics Pvt. Ltd.	Bangalore	Placement

Evaluative Reports

School of Electronics and Communication Engineering

1. **Name of the Department :**Electronics and Communication Engineering

2. **Year of Establishment :**2009

3. **Names of Programmes / Courses Offered:**

Courses Offered	Name of the Course	Specialization
UG	B.E.	Electronics and Communication Engineering
PG	M.E.	Applied Electronics

Table : Programs / Courses offered

4. **Names of Interdisciplinary courses and the departments / units involved:**

SI.No	Course Name	Offered to (Dept. Name)	Name of the faculty	Expertise
1.	MA6351 - Transforms and Partial Differential Equations	S & H	Ms.Johnwin Beaula	Differential equations
2.	EE6352 - Electrical Engineering and Instrumentation	EEE	Ms.Dayana V John	Motors
3.	EC6301- Object Oriented Programming and Data Structure	CSE	Ms.InnasiLinita	C/C++/C#
4.	MA6451 - Probability and Random Processes	S & H	Dr.BinuSelin	Probability theory
5.	CS6303 - Computer Architecture	CSE	Ms.Herlin	System Architecture
6.	CS6551 - Computer Networks	CSE	Ms.Ayana	Networks

Table: Interdisciplinary Courses

5. **Annual / Semester / choice based credit system (program wise):**

B.E. Electronics and Communication Engineering (UG Program)	M.E. Applied Electronics (PG Program)
Semester Based Credit System	Semester Based Credit System

Table: Annual / Semester systems

6. Participation of the department in the courses offered by other departments:

SI.No	Names of Interdisciplinary Courses	Department Involved	Name of the faculty	Area of Expertise
1.	CS6304 - Analog and Digital Communication	CSE	Mr.Edwin Dhas	Digital Communication
2.	IT6502 - Digital Signal Processing	CSE	Mr. J.M Aravind	Signal processing
3.	EE6403 - Discrete Time Systems and Signal Processing	EEE	Ms.Jonisha Miriam L R	Signal Processing

Table: Courses offered by other departments

7. Courses in collaboration with other universities, industries, foreign institutions, etc. : Nil

8. Details of courses / programmes discontinued (if any) with reasons : Nil

9. Number of Teaching posts :

Position	Sanctioned	Filled
Professors	NA	1
Associate Professors	NA	1
Asst. Professors	NA	25

Table: Teaching Post

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) :

Sl. No	Name	Qualification	Designation	Specialization	No. of Years of Experience
1	Dr.Ramanathan	B.E.,Msc(engg), Phd	Professor	Applied Electronics	24 years
2	Mr.Suresh V	B.E.,M.E.	Asso. Prof	Applied Electronics	14 years
3	Ms. Reeba Rex	B.E.,M.E.	Asst. Prof	VLSI Design	8 years

4	Ms.Jeba P S	B.E.,M.E.	Asst. Prof	Communication Systems	11 years
5	Ms. Brenda G	B.E.,M.E.	Asst. Prof	Communication Systems	7 years
6	Ms. Akhila T S	B.E.,M.E.	Asst. Prof	Embedded System Technologies	5 years
7	Mr. Kumar S N	B.E.,M.E.	Asst. Prof	Applied Electronics	8.5 years
8	Ms. AnbuShamini G N	B.E.,M.E.	Asst. Prof	Applied Electronics	4 years
9	Mr.Aravind J M	B.E.,M.E.	Asst. Prof	Communication Systems	6 years
10	Mr. John Pradeep	B.E.,M.E.	Asst. Prof	Applied Electronics	1 years
11	Mr. Benschwartz	B.E.,M.E.	Asst. Prof	VLSI Design	6 years
12.	Ms. Jonisha Miriam L R	B.E.,M.E.	Asst. Prof	Communication Systems	1 years
13	Mr. Lalin L Laudis	B.E.,M.E.	Asst. Prof	VLSI Design	6 months
14	Ms. Anishiya John	B.E.,M.Tech.	Asst. Prof	Applied Electronics	2 years
15	Ms. Sindhuja	B.E.,M.E.	Asst. Prof	Applied electronics	9 months
16	Ms. Benisha	B.E.,M.E.	Asst. Prof	Applied Electronics	9 months
17	Ms. Dhanya	B.E.,M.E.	Asst. Prof	Applied Electronics	9 months
18	Ms. AnugaSimcy	B.E.,M.E.	Asst. Prof	Applied Electronics	9 months
19	Ms.Ancy	B.E.,M.E.	Asst. Prof	Applied Electronics	9 months
20	Ms.Angel Sherin R L	B.E.,M.E.	Asst. Prof	Communication Systems	1 month
21	Mr. Gana Jose Merlin	B.E.,M.E.	Asst. Prof	Communication Systems	5 years
22	Mr.Anand V J	B.E.,M.E.	Asst. Prof	Applied Electronics	2 months

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23	Mr.EdwinDhas	B.E.,M.E.	Asst. Prof	Communication Systems	5 years
24	Ms. DevaponSudha	B.E.,M.E.	Asst. Prof	VLSI Design	4 months
25	Ms.ChristalRamya	B.E.,M.E.	Asst. Prof	Applied Electronics	1month
26	Ms.Karthiga	B.E.,M.E.	Asst. Prof	Communication Systems	9 months
27	Ms.Anu G John	B.E.,M.E.	Asst. Prof	Applied Electronics	9 months

Table: Faculty profile

11. List of senior visiting faculty : Nil

12. Percentage of lectures delivered and practical classes handled(programme wise)

   by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :

SI.No	Programme	No. of students	No. of staffs	Students staff ratio
1	UG	360	24	1:15
2	PG	18	3	1:12

Table: Student- Teacher ratio

14. Number of academic support staff (technical) and administrative staff;

   sanctioned and filled

Supporting Staff	Sanctioned	Filled
Lab Assistant	NA	2
Office Assistant	NA	1

Table: Supporting Staff sanctioned and filled

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.

Qualifications of teaching faculty	Number
M.E./M.Tech	26
Ph.D	1

Table : Faculty qualification

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :

Name of the faculty	Funding Agency	Title of the Project	Amount	Status
S.N. Kumar (Co-Principal Investigator)	Department of Science and Technology (IDP Scheme)	Development of a portable Instrument for medical Image Analyzing, compression and Transmission compatible for CT/MRI low slice thickness image.	Rs. 3,43,800	Ongoing (May 2016 to May 2019)

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received : Nil

18. Research Centre /facility recognized by the University:

- Research groups with various emerging areas are initiated to promote the intellectual ideas to practice
- Mar Ephraem center for Medical Image Processing to do research in imaging and to meet the challenges in medical field.

19. Publications: Papers Publications in Journals/Conferences

Academic Year 2016-2017			
Sl. No	Name	Paper Title	Journals / Conference
1.	AKHILA T.S	An efficient adaptive routing algorithim for asynchronousNOC design	International Conference on Sustainable Aspects in Engineering, Technology, Management and Science-2017, Udaya school of Engg., KanyaKumari, TN, India. 23 Feb 2017
2.	AKHILA T.S	Automated shopping robot	4th National conference on Advanced Communication &Electronic Systems, Rohini College of Engg. & Tech., KanyaKumari, TN, India. 23rd March 2017

3.	S.N.KUMAR	Medical Image Edge detection using Hybrid Entropy Multi-thresholding approach	Research Journal of Pharmaceutical, Biological and Chemical Sciences Volume 8, Issue 2, 2017
4.	S.N.KUMAR	Localized Region Based Active Contour Algorithm for Segmentation of Abdominal Organs and Tumors in Computer Tomography Images	Asian Journal of Information Technology Volume: 15, Issue: 23, Page No.: 4783-4789, ISSN : 1993-5994 2016
5.	S.N.KUMAR	Segmentation of Abdominal Organs Using Min cut/Max flow algorithm- An application of Graph Theory	Global Journal of Pure and Applied Mathematics (GJPAM) ISSN 0973-1768 Volume 12,Number 4 (2016)
6.	G.N.ANBU SHAMINI	Error correction codes and parseval checks for fault tolerant parallel FFTs	International Conference on Sustainable Aspects in Engineering, Technology, Management and Science-2017, Udaya school of Engg., KanyaKumari, TN, India. 23 Feb 2017
7.	S.N KUMAR & JONISHA MIRIAM L R	Retinal Blood Vessel Extraction using Wavelet Transform and Morphological Operations	Research Journal of Pharmaceutical, Biological and Chemical Sciences Volume 7, Issue 5, 2016
8.	S.N KUMAR	A Semi-Automatic Geometric Active Contour Model Using Distance Regularized Term for Segmentation of Abdominal Organs on CT Images	2nd IEEE International Conference on Engineering and Technology (ICETECH), Rathinam Technical Campus, Coimbatore, TN, India. 17th& 18thMarch 2016.
9.	S.N KUMAR	An Improved Color Segmentation Algorithm for the Analysis Of Liver Anomalies in CT/PET Images	2nd IEEE International Conference on Engineering and Technology (ICETECH), Rathinam Technical Campus, Coimbatore, TN, India. 17th& 18thMarch 2016
10.	S.N KUMAR	Robust Alzheimer's disease Classification Based on Multimodal Neuroimaging	2nd IEEE International Conference on Engineering and Technology (ICETECH), Rathinam Technical Campus, Coimbatore, TN, India. 17th& 18thMarch 2016.

11.	JEBA P.S	Retinal blood vessel extraction	4th National conference on Advanced Communication &Electronic Systems, Rohini College of Engg. & Tech., KanyaKumari, TN, India. 23 march 2017
12.	SURESH.V	A novel drive for BLDC motor with bidirectional switch module powered by photo voltaic source with battery storage	International Journal of Printing,Packaging&Allied science, Vol. 4, No.5, December 2016
13.	SURESH.V	Modelling and control of interleaved parallel boost converter using fuel cell energy generation system	International Journal of Soft Computing, Vol.1, No.1, April 2016
14.	SURESH.V	Speed control of BLDC motor ANFB Over conventional fuzzy logic technique	International Journal of Soft Computing, Vol.1, No.1, April 2016

Academic Year 2015-2016			
Sl. No	**Name**	**Paper Title**	**Journals / Conference**
1.	AKHILA T.S	Multiple optical receivers in indoor position tracking	National Conference on Sustainable Aspects in Engineering, Technology, Management, Udaya school of Engg., KanyaKumari, TN, India. 18 Mar 2016
2.	REEBA REX	Modeling and Design of Boost Converter Controller	2015 International Conference on Control, Instrumentation, Communication and Computational Technologies, NI University, Kumaracoil,18,19 Dec 2015
3.	REEBA REX	Invention of a Suitable Controller for a Non-Linear Chemical Process	2014 International Conference on Control, Instrumentation, Communication and Computational Technologies, NI University, Kumaracoil,10-11 July 2014
4.	REEBA REX	FPGA Implementation of multiple fault detection and correction using filters	First International Conference on Emerging Technologies in Computing, Control, Communications & Construction Technologies,Arunachala college of engineering for womens, 12-13TH APRIL 2016

5.	S.N.KUMAR	Smart cloud Robot using ATMega Controller and Raspberry Pi Processor	International journal of Advanced research in Management, Architecture, Technology and Engineering (IJARMATE) ISSN : 2454-9762 Vol. 2 - Issue 4, April – 2016.
6.	S.N.KUMAR	Segmentation of abdominal organs on CT images using distance regularized Level set Model – A Semi-automatic approach	International Journal of Engineering Research ISSN:2319-6890 Volume No.5, Issue No.4, pp. 244-248 1 April 2016
7.	S.N.KUMAR	Feed Forward Neural Network Based Automatic Detection of Liver in Computer Tomography Images	International Journal of PharmTech Research ISSN: 0974-4304, ISSN(Online): 2455-9563 Vol.9, No.5, pp. 231-239, 2016
8.	S.N KUMAR	Segmentation of Abdominal Organs Using Min cut/Max flow algorithm-An application of Graph Theory	National Conference on Advances in Mathematics and its Applications to Science and Engineering (AMASE-2016)
9.	S.N KUMAR	Segmentation of Liver and Liver anomalies using Improved Region Growing algorithm	International Conference on Trends in Computational Engineering and Technology Tamizhan College of Engineering and Technology 18 & 19 Feb 2016.
10.	S.N KUMAR	Computer Aided System based on Efficient Brain Tumor Segmentation and Classification	International Conference on Technical Innovation in Electrical, Electronics, Computer & Communications (ICTIEECC 2016) PET Engineering College 23rd March 2016

Table: Faculty publication

20. Areas of consultancy and income generated: NIL

21. Faculty as members in a) National committees b) International Committees c) Editorial Boards: NIL

22. Student projects

a) Percentage of students who have done in-house projects including interdepartmental/programme

Program	2012-16		2011-15		2010-14		2009-13	
	In	Out	In	Out	In	Out	In	Out
B.E	76.5%	23.5%	80%	20%	75%	25%	67%	33%

Program	2014-16		2013-15	
	In	Out	In	Out
M.E	100%	-	100%	-

*In=In-house *Out=outside the organization

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

SI.No	Program	Batch/Year	Name of organization	Percentage
1	B.E	2012-16	ISRO, KELTRON, IHRD Trivandrum	23.5%
2	B.E	2011-15	IHRD ,Trivandrum	20%
3	B.E	2010-14	Vi Microsystems, Chennai KELTRON,Trivandrum	25%
4	B.E	2009 -13	ISRO, KELTRON, IHRD Trivandrum	33%

Table: Student Projects

23. Awards/ Recognitions received by faculty and students

Mr.S.N.Kumar, Assistant professor, received the best paper award for the paper "Soft computing based segmentation of Anomalus on Abdomen CT image" in IEEE international conference on Information communication and Embedded system (ICICES 14) hosted by S.A Engineering college, Chennai.

24 .List of eminent academicians and scientists/ visitors to the department

Academic Year 2016 – 2017				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Mr.S.Gavaskar	Asst. prof., Xavier's Catholic College of	13-3-2017	Workshop

		Engg, Nagercoil		
2	Mr.N.Nandaku mar	Bio Medical Engineer / Research Scholarm/s.prime bio medical systems	10/02/2017	Workshop

Academic Year 2015 – 2016				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Mr. Gavaskar	Asst. prof, St. Xavier's Catholic College of Engg, Nagercoil	19/09/2015	Workshop

Academic Year 2015 – 2016				
Sl. No	Name of the Student	Place of work / Designation	Date of Visit	Purpose of Visit
1	Er.Tomsy Thomas	QA Engineer E&I At Asyad International Co. Ltd.	02/09/2014	Design of PCB board, soldering, testing the circuit
2	Er.Sanju Abrahmam	Network Engineer at Double Tree Suites by Hilton , Bangalore	02/09/2014	Design of PCB board, soldering, testing the circuit

Academic Year 2014 – 2015				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1.	Er.Sheik Abdullah	Alaa Technologies, pudukkottai	27/08/2014 & 28/08/2014	Workshop on Nuvoton Microcontroller
2.	Er.M.Vijay Ganesh	Software EngineerIII,Paxterra software solution Private Limited, Bengaluru.	17/02/2014	Guest Lecture
3.	Er.L.Jinlal	Er.L.Jinlal, Controls Engineer	27/09/2014	Embedded

		JLR,TataElxsi, Technopark Campus. 27/09/2014		systems and Real time applications

Academic Year 2014 – 2015				
Sl. No	**Name of the Student**	**Place of work / Designation**	**Date of Visit**	**Purpose of Visit**
1	Er.Tomsy Thomas	QA Engineer E&I At Asyad International Co. Ltd.	02/09/2014	Design of PCB board, soldering, testing the circuit
2	Er.SanjuAbrahmam	Network Engineer at Double Tree Suites by Hilton, Bangalore	02/09/2014	Design of PCB board, soldering, testing the circuit
Academic Year 2013 – 2014				
Sl. No	**Name**	**Place of work / Designation**	**Date of Visit**	**Purpose of Visit**
1	Mr.S.Gavaskar	Asst. prof, St. Xavier's Catholic College of Engg, Nagercoil	31/07/2013	Programming in C language
2	Mr. Arun V Aloshious	(IIT Madras, Research scholar)	24/07/2013	Advancements in signal processing
3	Dr. V.Vetrivel	IIT Madras.	20/3/2013	National Conference
4	Dr. Vinsely	Principal, (Lourd Mount College of Engineering)	20/3/2013	National Conference

Table : Eminent academicians and scientists/ visitors to the department

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25. Seminars/ Conferences/Workshops organized & the source of funding: Nil

26. Student profile programme/course wise:

Name of the Course/programm (refer question no. 4)	Batch / Year	Year of pass out	Applications received	Selected	Enrolled		Pass percentage
					*M	*F	
UG	2015-16	2019	31	31	15	16	-
	2014-15	2018	46	46	22	24	-
	2013-14	2017	55	55	20	35	-
	2012-13	2016	52	52	16	36	82.6%
	2011-12	2015	50	50	19	31	68%
	2010-11	2014	62	62	29	33	54.8%
	2010-09	2013	57	57	31	26	54.38%
PG	2015-16	2017	12	12	1	11	-
	2014-15	2016	14	14	3	11	100%
	2013-14	2015	17	17	7	10	100%
	2012-13	2014	NA	NA	NA	NA	NA

Table : Student Profile

27. Diversity of Students

Name of the Course	% of students from the same State	% of students from other state
B.E.	58.6%	41.4%
M.E.	75.1%	24.9%

Table: Diversity of students

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.? NIL

29. Student progression (Previous year)

Student Progression	Against % enrolled
UG to PG	13.4%
PG to Ph.D	-
Ph.D. to Post-Doctoral	-
Employed (Campus selection)	48%

Entrepreneurship/Self-employment	-

Table: Student Progression.

30. Details of Infrastructural facilities

Library

SI.No	Library	No. of books
1	Department library	181

Internet facilities for Staff & Students

- Computers with high bandwidth internet connectivity available for students and staffs usage.
- 24/7 internet access with Wi-Fi connectivity.
- Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

Class rooms with ICT facility

- All class rooms are ergonomically designed to reinforce a student-centered style of instruction.
- All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from a centralized UPS.
- Usage of Power Point and other computer programs to improve the presentation of material to class
- Presentation of IIT videos (NPTEL) for each course helps the students in learning and clear with the concept.
- ICT facility encourages independent and active learning, and students' responsibility for their own learning.

- It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment.

Laboratories

Sl.No	Name of the lab	Major Equipments
1	Electronics lab	Cathode ray oscilloscope, function generators, power supplies, trainer kits, measuring instruments.
2	Linear integrated circuits lab	Cathode ray oscilloscope, function generators, power supplies, trainer kits, measuring instruments.
3	Microprocessor lab	Microprocessor kits
4	DSP Lab	DSP Kits
5	VLSI Lab	Trainer Kits
6	Networks Lab	Trainer Kits
7	Communication system Lab	Trainer Kits
8	Optical and Microwave Lab	Optical Trainer Kits and Microwave test benches

31. Number of students receiving financial assistance from college, university, government or other agencies:

Category	No. of Students			
	2016-17	2015-16	2014-15	2013-14
SC/ST		3	1	1
OBC	33	51	37	53
Minority	-	1	-	-
Institutional Scholarship	16	20	33	12

32. Details on student enrichment programme (special lectures / workshops / seminar) with external experts.

SI.No	Student enrichment programmes	Period
Academic Year 2016 – 17		
1	Workshop on Cyber Security	13-3-2017
2	Two day workshop on Raspberry Pi using Python and Matlab	09-03-2017, 10-03-2017
3	Seminar on Recent Advancements in Medical Electronics for Human Safety	10-03-2017
Academic Year 2015 – 16		
1	Seminar on Applications in Computer hardware and networking	17/02/2016
2	Workshop on Programming in C language	19/09/2015
Academic Year 2014 – 15		
1	Seminar on Embedded systems and Real time applications	27/09/2014
2	Workshop on Nuvoton Microcontroller	27/08/2014 & 28/08/2014

Table: Student Enrichment Programme

SI.No	Events	Conducted
1.	Symposium	-
2.	Work shop	4
3.	Seminar	3
4.	Industrial Visit	7
5.	Conference/symposium	1
6.	Value Added courses	-
7.	Online training	1

8.	Internship program	-

More detail-Refer annexure-1

33. Teaching methods adopted to improve student learning

➢ Students are directed to take seminar, based on reputed Journals/ Transaction

➢ Micro project was incorporated to increase student interest towards their core area.

➢ Propagation of technical topics of current interest to students.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

➢ The school of electronics and communication engineering is however, has its deepest concern for the society and thus it realizes its social responsibility.

➢ In this accord, our students actively involve themselves in donating 'life liquid' for the medical emergencies twice in a year.

➢ The school of electronics and communication engineering, to hear from the society frequently organizes   interactions with the self help groups of Marthandam Integrated Development Society which happens to be our parent organization in a span of six months.

➢ This interaction paves the way to listen to the practical problems from diverse group of people whom includes farmers, small scale industry personalities and so as them once in a year.

➢ Once after interaction, the faculty of the school and the students tend to sort out the issues and observe the specific problems that could be solved by the school of electronics and communication engineering.

➢ The school is crystal clear about a 'green world' and that too a biotic green world. Thusly, to initiate the process of 'home farming'; the school maintains a roof top garden where in only organic fertilizers are encouraged.

➢ Also, in house projects are encouraged and incorporated in the roof top garden which falls under agricultural domain.

➢ The school generously supports "Mar Ephraem Manna" by the institution to feed the poor, once in a year.

➢ To support the students who are in need and deserves a support in case of finance; the faculty join hands together for an aid, periodically in every semester.

35. SWOC analysis of the department and Future plans

Strength	Opportunities
• Expert faculty for diverse research areas in the school. • Good placement records in archives. • An exclusively dedicated research laboratory endowed by MHRD for Robotics. • We develop projects for potential challenges identified from society. • Vibrant participation of faculty and students in professional societies like IEEE and IET.	• Highly potential place for carrying out research and development programs in the school. • We have opportunities of catering the help to nearby rural society in their academic growth. • Since, the ground is clear with a robotic lab, possibility of robotic research. • Capabilities for developing products which address social challenges. • Students get leadership skills and thuly the opportunity for a professional learning is clear. • A scope for interdisciplinary research.
Weakness	**Challenges**
• Less preference in students for higher degrees like post-graduation and doctoral studies. • No consultancy works by faculty. • Due to poor communication skills, the students struggle to get a job • The competitiveness of students to attend in civil service examinations standard is fairly low.	• Attraction of students towards the course is confined. • Less number of core companies in reachable distance. • Alumni are not in a decision making position in the society. • Confined awareness for civil and defense standards.

Future plans

➢ Interaction with core industries and MoUs with at least ten companies which are in global competency.

➢ To offer best consultancy services in electronics domain thereby initiate the faculty to engage with core electronics companies.

➢ To implant a dedicated research centre to facilitate research in soft computing and image processing in a time bound of three years.

➢ To procure five funded projects from several R&D funding agencies in next five years.

➢ Strengthening of Research & Development laboratory with the advances tools and equipment's.

➢ To make the students to clear national and state competitive examinations such as GATE, Civil services, Defense services, GRE, TANCET

Annexure-1

A. Workshops Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1	Workshop on Cyber security	Mr.S.Gavaskar, Asst. prof., Xavier's Catholic College of Engg, Nagercoil	13-3-2017	Students are able to use the right website and protecting their confidential documents	55
2	Workshop on Raspberry Pi using Python and Matlab)	Mr.Moorthi.K, Mr.Kesavan.P Enthu Technology Solutions India Pvt Ltd	09-03-2017 & 10-03-2017	Students are capable enough to write program using Raspberry Pi	46
3	Workshop on Programming in C language	Mr.S.Gavaskar, Asst. prof., Xavier's Catholic College of Engg, Nagercoil	19/09/2015	Students are able to write their lab programs of their own and shown interest in knowing advanced topics.	55
4	Workshop on Nuvoton Microcontroller	Er.Sheik Abdullah, Alaa Technologies, pudukkottai	27/08/2014 & 28/08/2014	Students are able to do interfacing programs using Nuvoton Microcontroller	52

B. Symposium/Conference Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1	NCETC'13	Dr. V.Vetrivel, IIT Madras. Dr. Vinsely, Principal,(Lourd Mount College of Engineering)	20/3/2013	Students are capable of understanding the importance of presenting the paper and got motivated to publish their real work.	120

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C. Seminar Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	Seminar on Recent Advancements in Medical Electronics for Human Safety	N.Nandakumar Managing Director, Prime Bio Medical Systems, Tirupur	10-03-2017	Students were able to understand theRecent Advancements in Medical Electronics for Human Safety.	46
2.	Seminar on Applications in Computer hardware and networking	Software Engineer III,Paxterra software solution Private Limited,	17/02/2014	Students were able to compare the various architectures and networking used in systems	52
3.	Seminar on Embedded systems and Real time applications	Er.L.Jinlal, Controls Engineer JLR,Tata Elxsi, Technopark Campus.	27/09/2014	Students were able to understand and assimilate the basics of Embedded systems and Real time applications	54

D. Industries Visited

S.no	Date	Title	Company name & description
1.	20/08/2014	Industrial Visit III ECE	Indian Telephone Industry, Begaluru.
2.	20/09/2014	Industrial Visit II ECE	Tranformers and Electricals kerala Ltd., Ernakulam
3.	04/09/2014	Industrial Visit III ECE & IV ECE	Nuclear power plant, Koodankulam
4.	10/03/15	Industrial Visit III ECE & IV ECE	Darangadara chemical Works in Tuticorin
5.	21-8-2015to 22-8-2015	Industrial Visit II ECE	Premier Equipments& Tools, Coimbature

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| 6. | 12-8-2016 to 14-8-2016 | Industrial Visit II ECE | Accent TechnoSoft,NehruStreet,Coimbature |
| 7. | 12-8-2016 to 15-8-2016 | Industrial Visit III ECE | High Voltage Engineering Works,Bangalore |

E. Research publications in national/ international journals/ conferences by faculty

Sl. No	Academic Year	No. of Papers
1.	2016-2017	14
2.	2015-2016	15
3.	2014-2015	04
4.	2013-2014	02

Table: Research publications by faculty

F. Research publications in national/ international journals/ conferences by Students

Sl. No	Name	Title	Year	Organized by
1.	MARIA CHACKO VARGHESE, SNEHA ELIZABETH THOMAS, CHRISTEENA MARIAM	Self Regulating Waste Sensing and Segregation Robot	2017	National Conference at Udaya School of Engineering and Technology
2.	AKISHA MARY RANJANI, MARY SHERIN	Automated Shopping Robot	2017	4th National Conference at Rohini College of Engineering and Technology
3.	ANJU ANNIYAN, LINI AJI ASHMIN , ELIZABETH GEORGE	Design of Low Power Level Shifter with Sleep Transistors	2017	4th National Conference at Rohini College of Engineering and Technology
4.	JABHIRKHAN, VISHNU.K, SUJIN S	Image compression using Wavelet Packet Algorithm	2017	National Conference at Shivaji College of Engineering and Technology

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5.	MANIKUTTAN V, AJIN S, ANTO S	Ingenious Porter In Railway Station	2017	National Conference at Shivaji College of Engineering and Technology
6.	RESHMA SARA REJI, SHARON ELSA MATHEW	Analysis of Various Edge Detectors for Medical Images	2017	National Conference at St.Xavier's College of Engg& Tech
7.	ANULAKSHMI, ROSHINI GRACE VIJAYAN, NIKITHA MATHEW,	Role of Denoising by Preprocessing Techniques in Medical Images	2017	National Conference at St.Xavier's College of Engg& Tech
8.	STEFFI K, ANUJA J.L, ASHA .E	Retinal Blood Vessel Extraction Using ISODATA Clustering Method	2017	4th National Conference at Rohini College of Engineering and Technology
9.	REETHU.S, ARYA SURESH, REJI MOL	Fast Dehazing Application for Foggy Images	2017	4th National Conference at Rohini College of Engineering and Technology
10.	JOVINA GILBERT.J, REMYA.S, ASHA F	Region based active contour Model for diagnoising cancer in Maligant Tumor	2017	National Conference at St.Xavier'sCatholicCollege of Engineering & Technology
11.	BEHILIN.P, BASHMA.T.J, BENCY JEBALIN.B.K	Medical Image Segmentation Using Fuzzy Thresholding Algorithm	2017	4th National Conference at Rohini College of Engineering and Technology
12.	ABHIMON.R.L, ASBIN RAJ, AJITH KUMAR	Tri sensed Irrigation System Using Intelligent Control	2017	National Conference at Shivaji College of Engineering and Technology
13.	ANSU ACHANKUNJU, ASHLY ANN JOSPEH, SNEHA SABU	Low Power Analysis of Various Families of Flip Flop	2017	4th National Conference at Rohini College of Engineering and Technology
14.	JERLI S, ABSARA A, JENITA THERESE	A Reformed Bio Inspired SOS algorithm for VLSI floor planning	2017	6th International Conference at ImmmanuelArasar College of Engineering and Technology
15.	BABY PAUL P.J, CINLA K , PAPPACHAN, DINU D	Search and Rescue Robot	2016	St.Xavier's Catholic College of Engineering

16.	JAIN MARY S K, REENU ELIZABETH SAMUEL, SREENIDHI A	FPGA Implentation Of Multiple Fault Detection And Correction In Parellel Filters	2016	Rohini College Of Engineering And Technology
17.	R .ADLIN LYDIA, P.AJITHA, JENIS VARGHESE	Retinal Fundus Image Classification Algorithm Using Detection Of Eye Diseases	2016	Udaya School Of Engineering
18.	ELIZABETH, SHIJIN RAJ, SUJITHA .P	Waste Segregation Robot	2016	Rohini College Of Engineering And Technology
19.	DIVYA GEORGE, JAISONKURUVIL A, PRETTY ANN SAMUEL	Milk Adulteration Detecting Device	2016	Rohini College Of Engineering And Technology
20.	SRUTHI B KRISHNAN , SUSAN ALEX , THARAKAN TOLIN RAJ	Under Water Robot For Coral Conservation	2016	Arunachala College Of Engineering For Women
21.	ARYA PRASAD, RAHUL R.U, SRUTI ALPHONSE	Development Of Pizza Delivery Robot	2016	Rohini College Of Engineering And Technologhy
22.	S.P AARLINJINCY, S.ADLINSWEETY, G.ANUPRIYA	Optimal Power Allocation Scheme For Energy Efficiency Maximization In Distributed Antenna Systems	2016	Rohini College Of Engineering And Technology
23.	BABY PAUL P.J, CINLA K PAPPACHAN, DINU D	Search and Rescue Robot	2016	St.Xavier's Catholic College of Engineering
24.	NEHA VARGHESE, RESHMA R CHANDRAN, SONY THOMAS	E-Life Saver	2016	Arunachala College Of Engineering For Women

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25.	ANJITHA KRISHNAN, JAICY ELSA GEORGE, SAUMYA THOMAS	Finger print based Voting machine	2015	IETE Sponsored Second National Conference On advanced Communication and Electronics Systems, Dept. of ECE,Rohini College of Engineering and Technology
26.	SHELJA.S, SINCHU S PRINCE, SRINGA C S	Data Hiding in Encrypted H.264/AVC Video streams.	2015	Second National Conference on Advances in Computing Technologies , Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
27.	T ASHA, P JASMINE, Y.NESIKA	FPGA implementation of Binary Search	2015	Second National Conference on Advances in Computing Technologies , Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
28.	W.ABISHA, M.V.PRAISEY	To Detect Tumours From Mammogram Images by Integrating Polynimial Coordinates By Least Mean Square Method	2015	Second National Conference on Advances in Computing Technologies , Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
29.	A.E.ISHA JAIN, S.PRABHA, L.VINITRA LEVY	Implementatio of Text to Speech using AVR	2015	Second National Conference on Advances in Computing Technologies , Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
30.	ANCY J A, ARYA R.U, BISWA BABY JOSEPH	Finger Print based Door Security Using Arduino	2015	Second National Conference on Advances in Computing Technologies , Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
31.	ANJALI M VARGHESE, CHRISTY SHAJ, RIYAMARYREJI	Electronic Circular Systems for Schools and Colleges	2015	IETE Sponsored Second National Conference on Advanced Communication And Electronics Systems , Dept of ECE,Rohini College of Engineering and Technology

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32.	BASIL VARGHESE, FRANKIL FRANCIS, LINS SUNNY	Segmentation of skin lesions from Digital Images using Joint statistical Texture distinctiveness	2015	IETE Sponsored Second National Conference on Advanced Communication And Electronics Systems ,Dept . of ECE,Rohini College of Engineering and Technology
33.	SOMA PRIYA. S.S, ADLINJEBA R N, SELJASATVIRAJA N N	Optimal Charging System for Solar powered Robotic vehicle Using PIC microcontroller	2015	National Seminar on Recent Trends in Electrical, Electronics and Communication PET Engineering College, Vallioor.
34.	MAGI MARY THOMAS, MARIA MARY THOMAS, NEETHU JOSEPH	Advanced Electronic Toll Collection Using RFID	2015	IETE sponsored second national conference on advanced communication and electronics systems, Dept of ECE,Rohini College of Engineering and Technology
35.	SALGA ANN JOSEPH, G.J.SANJU, P.SHALINI	Analysis of spatial and Transform Domain Filter in CT/MR Images of Abdomen	2015	Dept. of CSE & IT, KNSK College of Engineering,Nagercoil
36.	SHIBI.S.L, SHILPHA.B.G, SUBI T	Wavelet based Compression of CT/MR Medical Images	2015	Dept. of CSE & IT, KNSK College of Engineering,Nagercoil

Table: Research publications by students

G. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses attended by faculty

Academic Year 2016-2017					
Sl. No	Name	Workshop / Seminar Attended	Date		Organized by University / College
			From	To	
1.	S.N Kumar	Workshop / LaTex	19/12/2016	20/12/2016	Department of Mathematics Noorul Islam University, Kumaracoil

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2.	Suresh . V	Workshop / LaTex	19/12/2016	20/12/2016	Department of Mathematics Noorul Islam University, Kumaracoil
3.	Lalin L Laudis & Jonisha Miriam LR	Workshop / LaTex	19/12/2016	20/12/2016	Department of Mathematics Noorul Islam University, Kumaracoil
4.	S.N Kumar & Jonisha Miriam LR	Tactice on Research and Advanced Optimisation Techniques in Engineering Applications	20/08/16	-	Department of Mechanical Engineering MepcoSchlenk Engineering College, Sivakasi
5.	J.M Aravind	Cyber security	13/3/17	-	Mar ephraem college of engineering and technology
6.	J.M.Aravind	Recent advancement in medical electronics for human safety	9/3/17	-	Mar ephraem college of engineering and technology
7.	Lalin L.Laudis	Workshop / R Software	19/12/2016	20/12/2016	Department of Mathematics Thiyagaraja college of engineering madurai
8.	Jeba P.S	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
9.	Sindhuja S.N	Introduction to Firebird-V Robotics Research	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
10.	Brenda.G	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
11.	Anbu Shamini	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology

12.	Reeba Rex	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
13.	Akhila T.S	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
14.	J.Aravind	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology
15.	Jonisha Miriam L R	Introduction to Firebird-V Robotics Research Platform	7/11/16	8/11/16	Mar Ephraem college of engineering and technology

Academic Year 2015-2016				
Sl. No	**Name**	**Workshop / Seminar Attended**	**Date**	**Organized by University / College**
			From	**To**	
1.	S.N.KUMAR	Hands-on Training Programme on Soft Computing using Matlab	9/10/2015	10/10/2015	
2.	S.N.KUMAR	Analog, MCU, Webench& Connectivity	15/6/2016	18/06/2016	Texas Instruments & STEPS Knowledge Service Pvt. Ltd. MepcoSchlenk Engineering College, Madurai
3.	S.N.KUMAR	Foundation Skills in Integrated Product Development	26/3/2016	30/3/2016	UCE, Nagercoil& IT-ITeS sector Skills Council NASSCOM University College of Engineering, Nagercoil
4.	S.N KUMAR	International conference on translational medicine and imaging	4/2/2016	5/2/2016	Rajiv Gandhi center for biotechnology

5.	JEBA P.S	International conference on translational medicine and imaging	4/2/2016	5/2/2016	Rajiv Gandhi center for biotechnology
6.	SINDHUJA S.N	International conference on translational medicine and imaging	4/2/2016	5/2/2016	Rajiv Gandhi center for biotechnology
7.	AKHILA T.S	International conference on translational medicine and imaging	4/2/16	5/2/16	Rajiv Gandhi center for biotechnology
8.	REEBA REX	International conference on translational medicine and imaging	4/2/2016	5/2/2016	Rajiv Gandhi center for biotechnology
9.	BRENDA G	International conference on translational medicine and imaging	4/2/2016	5/2/2016	Rajiv Gandhi center for biotechnology
10.	JONISHA MIRIAM L R	International conference on translational medicine and imaging	4/2/16	5/2/16	Rajiv Gandhi center for biotechnology
11.	ABHILASH	International conference on translational medicine and imaging	4/2/16	5/2/16	Rajiv Gandhi center for biotechnology
12.	ARAVIND J M	International conference on translational medicine and imaging	4/2/16	5/2/16	Rajiv Gandhi center for biotechnology

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses attended by faculty

H. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses organized by faculty

Academic Year 2016-2017				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	28/1/2017	Workshop on verilog programming	Reebarex	ECE Students
2.	13/3/2017	Workshop on cyber security	Reebarex	ECE Students
3.	9/03/17	Recent advancement in medical electronics for human safety	S.N.Kumar	ECE Students
4.	20/8/2017	Workshop on arudino processor	Akhila T.S	ECE Students

Academic Year 2015-2016				
Sl. No	Dates	Workshop Name	Organized by	Targeted audience
1.	19/09/2015	Programming in C language	Reeba Rex. S, T.S.Akila, Sinduja	ECE Students
2.	26/9/2015	Electronics basis	Reeba Rex.S,T.S. Akila, Sinduja	ECE Students
3.	25-1-2016	Verilog HDL	Reeba Rex	ECE Students
4.	9-9-2015	Workshop on Image processing	Kumar S.N	ECE Students

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		using Matlab		
7.	29-7-2015	PCB Design	Mr.Suresh	ECE Students

Academic Year 2014-2015				
Sl. No	**Dates**	**Workshop Name**	**Organized by**	**Targeted audience**
1.	27/09/2014	Embedded systems and Real time applications	Mrs.JEBA.P.S,	ECE Students
2.	20-06-2014 To 22-06-2014	Workshop on Digital Image processing using Matlab	Mr.KUMAR. S.N	ECE Students
3.	19/09/2014	Workshop on Thrust research areas in Image Processing	Mr.KUMAR. S.N	ECE Students
4.	02/09/2014	Workshop on PCB Design	MR.SURESH .V	ECE
5.	27/08/2014 & 28/08/2014	Workshop on Nuvoton Microcontroller	Mrs.AKHILA.T.S	ECE
6.	22/8/2014	Google Apps for Education	Mrs. JASMINE.C	Faculties

Table : Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses organized by faculty

I. Details of values added courses / seminars/ symposium/ workshops organized for students

Academic Year 2016-2017					
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1.	28/1/2017	Workshop on verilog programming	Ms.Akhila	Ms.Reebarex	ECE Students
2.	13/3/2017	Workshop on cyber security	Ms.Reeba Rex	Mr.S.Gavaskar	ECE Students
3.	9/03/17	Recent advancement in medical electronics for human safety	S.N.Kumar	Mr.Nandha Kumar	ECE Students
4.	20/8/2017	Workshop on arudino processor	Ms.Akhila T.S	Mr.Suresh V.	ECE Students

Academic Year 2015-2016					
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1.	19/09/2015	Programming in C language	Ms.Sinduja	Ms.Shanmuga Priya	ECE Students
2.	26/9/2015	Electronics basis	Ms.Reeba	Ms. Suresh V	ECE Students
3.	25-1-2016	Verilog HDL	Ms.Akhila	Ms.Reeba Rex	ECE Students
4.	9-9-2015	Workshop on Image processing using Matlab	Ms.JonishaMiriyam	Mr. Kumar S.N	ECE Studnets
7.	29-7-2015	PCB Design	Ms.Brenda G	Mr.Suresh V.	ECE Students

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Academic Year 2014-2015					
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1.	27/09/2014	Embedded systems and Real time applications	Ms.Jeba.P.S,	Mr.Abhilash	ECE Students
2.	20-06-2014 to 22-06-2014	Workshop on Digital Image processing using Matlab	Ms.Jonisha Miriyam	Mr.Kumar. S.N	ECE Students
3.	19/09/2014	Workshop on Thrust research areas in Image Processing	Ms.Jonisha Miriyam	Mr.Kumar. S.N	ECE Students
4.	02/09/2014	Workshop on PCB Design	Ms.Brenda	Mr.SureshV.	ECE
5.	27/08/2014 to 28/08/2014	Workshop on Nuvoton Microcontroller	Ms.Akhila.T .S	Mr.Suresh V.	ECE
6.	22/8/2014	Google Apps for Education	Mr.Abhilash	Ms. Jasmine.C	Faculties

Table: Values added courses / Seminars/ Symposium/ Workshops organized for students

J. The details of student's achievements & workshops attended by students at various places for the three academic years.

Academic Year 2016 – 17				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Month & Year
1.	N.MarySherin	Inplant Training	BSNL office Nagercoil	7-12-16 to 11-12-16
2.	B.K. BencyJebalin	Inplant Training	BSNL office Nagercoil	7-12-16 to 11-12-16
3.	S.Ranjani	Inplant Training	BSNL office Nagercoil	7-12-16 to 11-12-16

4.	J.M.Akisha Mary	Inplant Training	BSNL office Nagercoil	7-12-16 to 11-12-16
5.	Hari Hara Kumar	Inplant Training	BSNL office Nagercoil	7-12-16 to 11-12-16
6.	Anulakshmin	Internship Training	Keltron,Trivandrum	7-12-15 to 11-12-15
7.	Nikitha Mathew	Internship Training	Keltron,Trivandrum	7-12-16 to 11-12-16
8.	Snehasabu	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
9.	AshminElezabeth	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
10.	AnsuAchankunju	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
11.	Ashly Ann Joseph	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
12.	AnjuAniyan	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
13.	LiniAji	Inplant Training	All India Radio,Thrissur	14-11-16 to 19-11-16
14.	Sharon Elsa Mathew	Internship Training	NTPC limited, Rajiv Gandhi Combined Cycle Power Project, Kayamkulam	01-07-16 to 08-07-16
15.	Reshma Sara Reji	Internship Training	NTPC limited, Rajiv Gandhi Combined Cycle Power Project, Kayamkulam	01-07-16 to 08-07-16

Academic Year 2015 – 16				
Sl. No	**Name of the Student**	**Event**	**Name of the Organizing College/ Company/ Organization/ Society...etc**	**Month & Year**
1.	Cinla K Pappachan	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
2.	Baby Paul	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
3.	Arya Prasad	Internship	Keltron,Trivandrum	01-12-15 to

		Training		05-12-15
4.	Sruti Alphonse	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
5.	JinjuMol George	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
6.	Pretty Ann Samuel	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
7.	Reenu Elizabeth	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
8.	Justy Susan	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
9.	Anju Anna	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
10.	Shijin Raj	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
11.	Tolin Raj	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
12.	Sujitha	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
13.	Elizabeth	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15
14.	Manju Alex	Internship Training	Keltron,Trivandrum	01-12-15 to 05-12-15

Table: Student's Achievements & Workshops Attended by students

Evaluative Reports

School of Electrical and Electronics Engineering

1. **Name of the Department : Electrical and Electronics Engineering**

2. **Year of Establishment** : 2012

3. **Names of Programmes/ Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)**

Courses Offered	Name of the Course	Specialization
UG	B.E.	Electrical and Electronics Engineering

Table: Programmes / Courses offered

4. **Names of Interdisciplinary courses and the departments/units involved**

Sl. No	Sub Code	Sub Name	Seme ster	Discipline	Name of the staff	Area of Expertise
1	MA2211	Transforms and Partial Differential Equations	III	Science & Humanities	Mrs. L.R.Bindhu	Bernaulli Method
2	EE 2204	Data Structures and Algorithms	III	Computer Science	Mrs. Ashy Daniel	Data Structure & Image Processing
3	MA2264	Numerical Methods	IV	Science & Humanities	Mrs. F.Giftlin	Differentiation
4	EE 2252	Power Plant Engineering	IV	Mechanical	Mr. Arun	Thermal Engineering
5	EC2311	Communication Engineering	V	Electronics and Communication	Mr. Babin. T. Praise	Communication Engineering
6	EC2314	Digital Signal Processing	V	Electronics and Communication	Mrs. Jeba.P.S	Image Processing
7	CS2311	Object Oriented Programming	VI	Computer Science	Mr. Aswin	Networking
8	CS2363	Computer Networks	VI	Computer Science	Mrs. Ashy Daniel	Networking &Image Processing
9	CS2411	Operating Systems	VII	Computer Science	Mrs. InnasiLineta	Data Mining
10	MA6351	Transforms and Partial Differential Equations	III	Science & Humanities	Mrs. RoselinSuhi	Integration
11	MA6459	Numerical Methods	IV	Science & Humanities	Mrs. F.Giftlin	Differentiation
12	CS6456	Object Oriented Programming	IV	Computer Science	Ms. Sobhana	Image Processing
13	EE6403	Discrete Time Systems and Signal Processing	IV	Electronics and Communication	Mrs. Jeba.P.S	Image Processing

Table: Interdisciplinary courses

5.   Annual/ semester/ choice based credit system (programmewise)

Program	B.Tech (UG Program)
B.E - EEE	Semester Based Credit System

Table: Annual / Semester systems

6.   Participation of the department in the courses offered by other departments

Sl.No	Sub Code	Sub Name	Semester	Discipline	Name of the staff	Area of Expertise
01	EC2201	Electrical Engineering	III	B.E-ECE	Mr. S. Stalin	Electrical Drives
02	EC 2255	Control Systems	IV	B.E-ECE	Mr. Anish John Paul.M	Control & Instrumentation
03	GE2151	Basic Electrical & Electronics Engineering	II	B.E-Civil	Mr. J.R. Aldous Huxley	Electrical Drives
04	ME2205	Electrical Drives and Control	III	B.E-Mech	Mr. S. Stalin	Electrical Drives
05	GE2151	Basic Electrical & Electronics Engineering	II	B.E-Mech	Mr. J.R. Aldous Huxley	Electrical Drives

Table: Courses offered by other departments

7.   Courses in collaboration with other universities, industries, foreign institutions, etc. : Nil

8.   Details of courses / programmes discontinued (if any) with reasons : Nil

9.   Number of teaching posts

Position	Sanctioned	Filled
Professors	NA	Nil
Associate Professors	NA	Nil
Asst. Professors	NA	12

Table : Teaching Post

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10.   **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt.**
/Ph.D./M.Phil.etc.,)

SI.No	Name	Designation	Designation	No. of Years of Experience
1	Mr. M. ANISH JOHN PAUL	Asst Prof	Energy Engineering	5 Years 9 Months
2	Mr. J. R. ALDOUS HUXLEY	Asst Prof	Power Electronics and Drives	7 Years 7 Months
3	Mr. J. ARTHUR VASANTH	Asst Prof	Power Electronics and Drives	10 Years 6 Months
4	Mrs. J. STEPHY ANGELIN	Asst Prof	Power Systems	2 Years 5 Months
5	Mr.S. STALIN	Asst Prof	Power Electronics and Drives	5 Years 4 Months
6	Mrs.T. NANDHINI PRIYA	Asst Prof	Power Electronics and Drives	3 Years 8 Months
7	Mrs.M. MANJUSHA	Asst Prof	Applied Electronics	10 Years 6 Months
8	Ms. DAYANA	Asst Prof	Control and Instrumentation	1 Years 1 Month
9	Mrs.T.C.BELCITTA CHARLES	Asst Prof	Power Electronics and Drives	3 Years 8 Months
10	Ms. ANU S	Asst Prof	Power Electronics and Drives	15 Days
11	Mr. REJISH R	Asst Prof	Instrumentation Engineering	1 Month
12	Mr. R.IRISH KUMAR	Asst Prof	Power Electronics and Drives	8 Months

Table: Faculty profile

11.   **List of senior visiting faculty**: Nil

12.   **Percentage of lectures delivered and practical classes handled (programmewise)**
by temporary faculty: Nil

13. **Student-Teacher Ratio (programmewise)**

Programme	No. of students Approved	No. of students Admitted	No. of staffs	Students staff ratio
UG	180	132	12	1:15

Table: Student- Teacher ratio

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	Sanctioned	Filled
Lab Instructor	NA	2

Table: Supporting Staff sanctioned and filled

15. **Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D /MPhil/ PG.**

Qualifications of teaching faculty	Number
M.E./M.Tech	12

Table: Faculty qualification

16. **Number of faculty with ongoing projects from a)National b)International funding agencies and grants received:** NIL

17. **Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received:** Nil

18. **Research Centre/ facility recognized by the University:** Nil

19. **Publications:**

Sl.No	Name	Paper Title	Journals	Date of Publication
1	M. ANISH JOHN PAUL	Design and Performance Analysis of Automated Two-Axis Solar Tracking System for Steam Generation	IEEE Xplore	18 June 2013, 978-1-4673-6150-7

Conference Presentation:

Sl. No	Name	Paper Title	Conference	Date
1	M. ANISH JOHN PAUL	Performance Analysis on PV Panel with Single and Dual axis Sun Tracking System	International Conference on Green Technology, NIT Trichy	27-29 September 2014
2	M. ANISH JOHN PAUL	Design of Converters for Photovoltaic Systems	International Journal of Power System and Power Electronics,	Feb 2016
3	M. ANISH JOHN PAUL	Design and Performance Analysis of Automated Two axis Solar Tracking System for Parabolic Dish	International Conference on Emerging Green Technologies.	27-30 July 2011

20. Areas of consultancy and income generated: Nil

21. Faculty as members in a) National committees b) International Committees c)Editorial Boards : Nil

22. Student projects

   a) **Percentage of students who have done in-house projects including interdepartmental/ programme**

Program	2012-2016		2013-2017	
	In	Out	In	Out
B.E	100%	Nil	100%	Nil

Table : Student Projects

*In=In-house *Out=outside the organization

   b) **Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies:** Nil

23. Awards/Recognitions received by faculty and students : Nil

24. List of eminent academicians and scientists/ visitors to the department

Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1.	Dr.D.Thomas, Scientist F	DRDO, Govt. of India, Cochin.	2016-2017	Chief Guest for National level technical Symposium-GENESYS 2K17
2.	Er..Silvester,	Assistant Excecutive Engineer ,TNEB	2015-2016	Chief Guest for National level technical Symposium-GENESYS 2K16
3.	Rof.Dr.M. Carolin Mabel,	Professor,SXCCE	2014-2015	Resource person
4.	Mr.S.Kannan,	Auditor, AMSET Energy Systems and Solutions	2014-2015	Resource person
5.	Dr.P.Valsalal,	Professor, EEE, Anna University, Chennai	2013-2014	Resource person

Table: Eminent academicians and scientists/ visitors to the department

25.   Seminars/ Conferences/ Workshops organized & the source of funding

Sl No	Name of the Seminars/Conferences /Workshops	Duration	No of Beneficiaries	Source of funding
01	National level technical Symposium-GENESYS 2K17	10/03/2017	240	IET
02	Faculty development program on Entrepreneurship	14/06/2016	86	-
03	Entrepreneurship Awerness Camp- For circuit branches	25/06/2016 to 27/06/2016	120	-
04	Entrepreneurship Awerness Camp- For non circuit branches	02/07/2016 to 04/07/2016	120	-
05	Faculty Development program on "Embedded System Design"	07/11/2016 to 09/11/2016	40	-
06	Project Expo for school students	Oct 2016	200	-

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07	One day workshop on Robotics – Arduino UNO controller for EEE students	Sep 2016	36	-
08	One day workshop on Robotics – Arduino UNO controller- ECE students	Aug 2016	52	-
09	National level technical Symposium-GENESYS 2K16	27/02/2016	114	IET
10	Open house Exhibition-2015	06.10.2015	34	-
11	Siemens and Salzer project center, Karunya University	13/08/2015	34	-
12	Golden Rock Railway Workshop, Trichy	13/01/2015	48	-
13	Workshop on MAT LAB FOR BEGINNERS	02/09/2014 & 03/09/2014	114	-
14	SADAS Engineering Works and VARIAC Electricals, Coimbatore	14/08/2014	38	-
15	Seminar on Energy conservation	22/01/2014	114	-
16	Workshop on printed Circuit Board	10/08/2013	82	-
17	Seminar on Solar photo Voltaic	26/08/2013	82	-

Table: Seminars/ Conference/Workshops organized & the source of funding

26. **Student profile programme/ course wise:**

Name of the Course/programme (refer question no. 4)	Batch/ Year	Year of pass out	Applications received	Enrolled			Pass percentage
				Selected	*M	*F	
UG	2012-2016	2016	18	18	18	Nil	50%
	2013-2017	2017	26	26	24	2	
	2014-2018	20118	38	38	34	4	
	2015-2019	2019	32	32	25	7	
	2016-2020	2020	38	38	34	4	

Table: Student Profile

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27.   Diversity of Students

Name of the Course	% of students from the same State	% of students from other state	% of students from other Country
B.E.	45.80%	53.60%	0%

Table: Diversity of students

28.   How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?Nil

29.   Student progression

Student Progression	Against % enrolled
UG to PG	50%
PG to Ph.D	-
Ph.D. to Post-Doctoral	-
Employed	72.21%
(Campus selection)	
Entrepreneurship/Self-employment	11.11%

30.   Details of Infrastructural facilities

a) Library

SI.No	Library	No. of books
1	Department library	128

b) Internet facilities for Staff &Students

- Computers with high bandwidth internet connectivity available for students and staffs usage.
- 24/7 internet access with Wi-Fi connectivity
- Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

c) **Class rooms with ICT facility**

- All class rooms are ergonomically designed to reinforce a student-centered style of instruction.
- All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from a centralized UPS.
- Usage of Power Point and other computer programs to improve the presentation of material to class
- Presentation of IIT videos for each course helps the students in learning and clear with the concept.
- ICT facility encourages independent and active learning, and students' responsibility for their own learning.
- It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment.

d) **Laboratories**

Sl No	Name of the lab	Area in Square Feet	Major Equipments	Total investment
1	Electrical Machines Lab	3500	Motors, Generators, Transformers, Loads, meters, Rheostats, Switches and connecting wires	7,65,681.00
2	Control & Instrumentation Lab	1000	Transducers, Bridge circuit Kits,Computers	9,25,786
3	Power Electronics Lab	1000	Kit modules, CROs,DSOs,FunctionG enerator,SCR TESTER,RPS transformer, meters	5,55,898

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31. Number of students receiving financial assistance from college, university, Government or other agencies:

Category	No. of Students			
	2016-17	**2015-16**	**2014-15**	**2013-14**
SC/ST	-	-	1	-
OBC	10	5	-	-
Minority	-	-	-	-
Institutional Scholarship	27	27	33	6

32. Details on student enrichment programmes (special lectures/workshops/ seminar) with external experts

SI.No	Events	Conducted
1	Symposium	02
2.	Work shop	04
3.	Seminar	02
4.	Industrial Visit	04
5.	Conference	-
6.	Value Added courses	04
7.	Online training	**-**
8.	Internship program	21

SI.No	Student enrichment programmes	Period
Academic Year 2016 – 17		
1	National level technical Symposium-GENESYS 2K17	10/03/2017
2	Entrepreneurship Awareness Camp- For circuit branches	6/2016 to 27/06/2016
3	Entrepreneurship Awareness Camp- For non circuit branches	02/07/2016 to 04/07/2016
4	Faculty Development program on "Embedded System Design"	07/11/2016 to 09/11/2016
Academic Year 2015 – 16		
1	Project Expo for school students	Oct 2016
2	One day workshop on Robotics – Arduino UNO controller for EEE students	Sep 2016
3	One day workshop on Robotics – Arduino UNO controller- ECE students	Aug 2016
4	National level technical Symposium-GENESYS 2K16	27/02/2016

Academic Year 2014 – 15		
1	Open house Exhibition-2015	06.10.2015
2	Siemens and Salzer project center, Karunya University	13/08/2015
3	Golden Rock Railway Workshop, Trichy	13/01/2015
4	Workshop on MAT LAB FOR BEGINNERS	02/09/2014 & 03/09/2014
5	SADAS Engineering Works and VARIAC Electricals, Coimbatore	14/08/2014
6	Seminar on Energy conservation	22/01/2014
Academic Year 2013 – 14		
1	Workshop on printed Circuit Board	10/08/2013
2	Seminar on Solar photo Voltaic	26/08/2013

Table : Student Enrichment Programme

More detail-Refer annexure-1

33. Teaching methods adopted to improve student learning

- ✓ Peer group discussion

- ✓ ICT methods – NPTEL, Webinars etc.,

- ✓ Industrial visits, Implant raining and internship projects.

- ✓ Class test / Improvement tests

- ✓ Seminar on recent trends

- ✓ Tutorials

- ✓ Assignments (Individual & Group)

- ✓ Presentations

- ✓ Project

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Sl No	Name	Type of activity
1	Santhosh	Blood donation
2	Jino Sam	Blood donation
3	Sanjith	Blood donation
4	Rexlin Varghese	Blood donation
5	Ananthu	Blood donation

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35.   SWOC analysis of the department and Future plans

Strength	Weakness
- Increasing intake rate of students. - A team of Qualified Faculty, with diverse research potential for conducting Interdisciplinary research. - Specific skill training programs for professional development - Conducting remedial measures for slow learners. - Developing projects for potential challenges identified from community	- As the College is situated in the rural area, where there is less number of industries, industry-institute interactions are minimal. - Less interest in students for higher degrees like post-graduation and doctoral studies. - Lagging in consultancy works by faculty. - The competitiveness of students to national service exams is considerably low.
Opportunities	**Challenges**
- Possibilities for developing products which address community challenges - Improvement of national and regional recognition of the institution. - Making more entrepreneurs - Placement Opportunities for students - Acquiring technical knowledge in real time projects	- Training rural based Tamil medium students in English language and developing communication skills of them is really a challenging job. - Generating of funds through consultancy as no big industries are in the vicinity. - Students coping level to the industrious standards are fairly less. - Due to less employability the students unlikely join post-graduation.

Future Plan

- ✓ High pass percentage with University Ranks
- ✓ Placements in well reputed tier I Companies.
- ✓ To encourage the students to become an entrepreneur by conducting more entrepreneurship Programs.
- ✓ 50% of faculty with Ph.D. qualifications
- ✓ Involvement of Consultancy activities
- ✓ Centre of Excellence in Advanced Drives
- ✓ Establishing Technical skill Development Centre for students and faculty members.

- ✓ Establishing a dedicated Industry Institute Partnership for the Department
- ✓ Establish Research Centre & Technology Incubator

Annexure-1

A. Workshops Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Benefici aries
1	Workshop on printed Circuit Board	Er. Asish Thomas john	10/08/2013	Students can design and fabricate the PCB	82
2	Workshop on MAT LAB FOR BEGINNERS	Prof. Dr. M. Carolin Mabel, Professor, SXCCE	02/09/2014 & 03/09/2014	The students can be able to do their projects using Mat-Lab	114
3	One day workshop on Robotics – Arduino UNO controller- Third EEE students	Prof. John Pradeeph, Mar Ephraem College of Engineering and Technology	Aug 2016	The students can be able to do their projects using Arduino UNO controller	38
4	One day workshop on Robotics – Arduino UNO controller for Final EEE students	Prof. John Pradeeph, Mar Ephraem College of Engineering and Technology	Sep 2016	The students can be able to do their projects using Arduino UNO controller	36

B. Symposium/Conference Organized

Sl no	Title	Resource Person	Duration	Outcomes
1	National level technical Symposium- GENESYS 2K16	Er..Silvester, Assistant Excecutive Engineer ,TNEB	27/02/2016	Students are capable of understanding the importance of presenting the paper and got motivated to publish their real work.
2	National level technical Symposium- GENESYS 2K17	Dr. D. Thomas, Scientist F DRDO, Govt. of India, Cochin.	10/03/2017	Students are capable of understanding the importance of presenting the paper and the current trends and issues in the field of Electrical and Electronic Engineering and got motivated to publish their real work.

C. Seminar Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	Seminar on Solar photo Voltaic	Dr. P. Valsalal, Professor, EEE, Anna University, Chennai	26/08/2013	Students were able to realize the importance of application of Solar photo Voltaic	60
2.	Seminar on Energy conservation	Mr.S.Kannan, Energy Auditor, AMSET Energy Systems and Solutions	22/01/2014	Students were able to Save energy through Energy Auditing	62
3.	Project Expo for school students	Prof. Arthur Vasanth, Mar Ephraem College of Engineering and Technology	Oct 2016	Students are able to do their mini Project so that they can increase their Technical knowledge	29
4.	Open house Exhibition-2015	Prof. Arthur Vasanth, Mar Ephraem College of Engineering and Technology	06.10.2015	Students are able to do their mini Project so that they can increase their Technical knowledge	40

D. Certificate Value Added Courses Organized

Sl.No	Program	Duration	Trainers	Outcomes	No of Beneficiaries
1	Entrepreneurship Awareness Camp-For circuit branches	25/06/2016 to 27/06/2016	Prof.S.Stalin, Mar Ephraem College of Engineering and Technology	Students may become an Successful Entrepreneur	42

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| 2 | Entrepreneurship Awareness Camp-For non circuit branches | 02/07/2016 to 04/07/2016 | Prof.Jouds Lenin, Mar Ephraem College of Engineering and Technology | Students may become an Successful Entrepreneur | 37 |
| 3 | Photo Voltaic Power plant Installation and Maintenance | 16/02/2017 to 30/02/2017 | TUV Rheinland, Academy and Lifecare, Coimbatore-37 | Students were able Design A solar Power Plant for a Particular load | 17 |

E. Industries Visited

S.NO	DATE	TITLE	COMPANY NAME & DESCRIPTION
1.	12/08/2014	Industrial Visit (III yr EEE)	Wifiltronics Private Limited
2.	12/08/2014	Industrial Visit (III yr EEE	Railway Museum,Mysore
3.	13/08/2015	Industrial Visit (II yr EEE	Transformers Electrical Kerala Limited
4.	25/08/2016	Industrial Visit (IV yr EEE	MG Power Electronics ,Mumbai
5.	07/10/2016	Industrial Visit (III yr EEE	110 KV Substation, Thuckalai
6.	14/08/2014	Industrial Visit (III yr EEE	SADAS Engineering Works, Coimbatore
7.	13/08/2015	Industrial Visit (II yr EEE	Siemens Drive center, Karunya University
8.	21/08/2014	Industrial Visit (III yr EEE	Transformers Electrical Kerala Limited
9.	16/08/2014	Industrial Visit (II yr EEE	Transformers Electrical Kerala Limited

F. Students achievements

Sl. No	Name	Title	Year	Organized by	Achievement
1.	TOBIN TONY	PROJECT	2014	Lourdes matha college of science&tech	PARTICIPATION
2.	TOBIN TONY	QUIZ	2014	Lourdes matha college of science&tech	PARTICIPATION
3.	TOBIN TONY	BIKE ASSEMBLY	2014	Lourdes matha college of science &technology	PARTICIPATION

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4.	TOBIN TONY	PICO TEAR ROBOT	2014	Lourdes matha college of science &tech	2ND
5.	TOBIN TONY	PITSTOP	2014	Lourdes matha college of science &tech	PARTICIPATION
6.	BLESSO VARKEY CHACKO	PITSTOP	2014	Lourdes matha college of science&tech	2ND
7.	TOBIN TONY	ROBOTICS	14/03/2014 to 16/03/2014	LBS institute of technology poojappura	1ST
8.	ASHISH THOMAS JOHN	ROBO-ZEST	13-14/08/2014	International accreditation organization houten,U.S.A	1ST
9.	TOBIN TONY	ROBO-ZEST	14-16/03/2014	LBS institute of technology ,poojappura	1ST
10.	TOBIN TONY	ROBO TRYST	2014	Indian institute of technology-delhi	2ND
11.	TOBIN TONY	ROBO TRYST	2014	Indian institute of technology delhi	PARTICIPATION
12.	TOBIN TONY	ROBO TRYST	26/03/2014	Robosapiens technology of IIT-delhi	PARTICIPATION
13.	TOBIN TONY	SPORTECH	11/08/2014 - 12/08/2014	International accreditation organization,Houston,U.S.A	1ST
14.	NITHIN THOMAS	ROBO TRYST	26/03/2014	Robosapiens technology of IIT-delhi	PARTICIPATION
15.	CIBIN BABU	ROBO TRYST	2014	Lourdes matha college of science&tech	PARTICIPATION
16.	NITHIN THOMAS	ROBO TRYST	2014	Indian institute of technology ,delhi	2ND
17.	CIBIN BABU	ROBO TRYST	2014	Indian institute of technology ,delhi	2ND
18.	ATHUL TOM PHILIP	ROBO-ZEST	14/08/2014	SportechIITdelhi	1ST
19.	BLESSON VARKEY CHACKO	ROBO TRYST	2014	Lourdes matha college of science & tech	PARTICIPATION
20.	BLESSON VARKEY CHACKO	ROBO TRYST	2014	Indian institute of technology, delhi	PARTICIPATION
21.	CIBIN BABU	ROBO-ZEST	26/03.2014	Robosapiens technology of IIT delhi	1ST
22.	ASHISH THOMAS JOHN	REVEL IN JUNK	22/03/2014	Mar ephraem college of engg & tech	PARTICIPATION
23.	CIBIN BABU	PROJECT	14/08/2014	Mar Ephraem college of engg & tech	2ND
24.	BLESSON VARKEY CHACKO	PROJECT	26/03/2014	Mar Ephraem college of engg & tech	PARTICIPATION
25.	ASHISH THOMAS JOHN	PIT STOP	2014	Lourdes matha college of science & tech	2ND

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26.	TOBIN TONY	PIT STOP	2014	Lourdes matha college of science &tech	1ST
27.	ANISH R.M	PORTRAIT DESIGN	2014	Mar Ephraem college of engg & tech	1ST
28.	BLESSON VARKEY CHACKO	MIME	2014	Mar Ephraem collage of engg & tech	2ND
29.	REXLIN VARGHESE	800M RUNNING	2014	Mar Ephraem college of engg & tech	3RD
30.	REXLIN VARGHESE	400*2 RELAY	2014	Mar Ephraem collage of eng&tech	1ST
31.	CHIPPY SAJI	GROUP DANCE	2014	Mar Ephraem college of engg & tech	1ST
37.	R. JOY	Paper Presentation	27/09/2016	Cape institute of technology	2'nd
38.	BLESSONVARKEYCHACHO	Paper Presentation	27/09/2016	Cape institute of technology	1'st
39.	JOY .R	Circuit Debugging	27/09/2016	Cape institute of technology	1'st
40.	NITHIN THOMAS	Paper Presentation	27/092016	Cape institute of technology	-
41.	SAJITH. S	Paper Presentation	27/09/2016	Cape institute of technology	-
42.	JOY. R	Paper Presentation	27/09/2016	Cape institute of technology	-
43.	MATHEW ISSAC	OHE'15	27/02/2016	Mar Ephraem college of eng& tech	-
44.	BLESSONVARKEYCHACHO	Technical Quize	27/09/2016	Cape institute of technology	2'nd
45.	ANANTHU ANIL KUMAR	PROJECT EXPO	20/03/2017	College of Engg., Trivandrum	THIRD
46.	AKHIL MATHEW JACOB	PROJECT EXPO	20/03/2017	College of Engg., Trivandrum	THIRD
47.	ABIN REJI MATHEW	PROJECT EXPO	20/03/2017	College of Engg., Trivandrum	THIRD
48.	ROBIN RAJU	PROJECT EXPO	20/03/2017	College of Engg., Trivandrum	THIRD
49.	ANANTHU ANIL KUMAR	PROJECT EXPO	23/03/2017	St.Xavier Catholic College of Engg	FIRST
50.	AKHIL MATHEW JACOB	PROJECT EXPO	23/03/2017	St.Xavier Catholic College of Engg	FIRST
51.	JISHNU NAIR	PROJECT EXPO	23/03/2017	St.Xavier Catholic College of Engg	FIRST
52.	TIBIN MATHEW	PROJECT EXPO	23/03/2017	St.Xavier Catholic College of Engg	FIRST
53.	RENJU VARGHESE DANIEL	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	FIRST
54.	SHERIN THOMAS	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	FIRST

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55.	BENIL BABY MATHEW	PROJECT PRESENTATION	24/03/2017	Lourdes Mount College of Engg.	SECOND
56.	SUNIL	PROJECT PRESENTATION	24/03/2017	Lourdes Mount College of Engg.	SECOND
57.	JAYAKRISHNAN	PROJECT PRESENTATION	24/03/2017	Lourdes Mount College of Engg.	SECOND
58.	DERICK K.J ROBIN	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
59.	MOHAMED RIGIN	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
60.	P.J ABHISHA JAYA PRABHA	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
61.	P. ABHIYA MOL	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
62.	SNEHA BINNY	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
63.	CHIPPY SAJI	PAPER PRESENTATION	14/03/2017	Sivaji college of eng&tech	PARTICIPATION
64.	P.J ABHISHA JAYA PRABHA	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	PARTICIPATION
65.	P. ABHIYA MOL	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	PARTICIPATION
66.	SNEHA BINNY	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	PARTICIPATION
67.	CHIPPY SAJI	PAPER PRESENTATION	24/03/2017	St.Xavier Catholic College of Engg	PARTICIPATION
68.	MATHEWS ISSAC	TECHNICAL QUIZ	24/03/2017	Lourdes Mount College of Engg.	FIRST
69.	NITHIN THOMAS	TECHNICAL QUIZ	24/03/2017	Lourdes Mount College of Engg.	FIRST
70.	JOY.R	CIRCUIT DEBUGGUING	24/03/2017	Lourdes Mount College of Engg.	FIRST
71.	TOBIN TONY	CIRCUIT DEBUGGUING	24/03/2017	Lourdes Mount College of Engg.	FIRST

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Evaluative Reports

School of Mechanical Engineering

1. **Name of the Department :Mechanical Engineering**

2. **Year of Establishment :**2009

3. **Names of Programmes / Courses Offered:**

Courses Offered	Name of the Course	Specialization
UG	B.E.	Mechanical Engineering
PG	M.E.	Manufacturing Engineering

Table: Programmes / Courses offered

4. **Names of Interdisciplinary courses and the departments / units involved:**

SI.No	Names of Interdisciplinary Courses	Department Involved	Expert	Expert Area
1.	Transforms and Partial Differential Equations	Science &Humanitics	MrsBindhu	Graph Theory
2.	Electrical drives and Control	Electrical and Electronics	Mr Stalin	Electrical Drives
3.	Statistics and Numerical Methods	Science &Humanitics	MrsBindu	Graph Theory
4.	Professional Ethics in Engineering	Electronics and Comminication	Mr. Benszwartz	Engineering Ethics

Table: Interdisciplinary courses

5. **Annual / Semester / choice based credit system (programme wise):**

B.E (UG Program)	M.E. (PG Program)
Semester based Credit System	Semester based Credit System

Table: Annual / Semester systems

6. **Participation of the department in the courses offered by other departments:**

SI.No	Course Name	Offered to (Dept. Name)	Expert	Expert Area
1.	Engineering Graphics	B.E-ECE	Mr. Dani	Machine Design
2.	Engineering Graphics	B.E-EEE	Mr.Akhil P Sam	Manufacturing Engineering
3.	Engineering Graphics	B.E-Civil	Mr.Dani	Machine Design
4.	Engineering Graphics	B.E-CSE	Mr.Akhil P Sam	Manufacturing Engineering
5.	Basic Civil &	B.E-EEE	MrGiginDurai	Manufacturing

	Mechanical Engineering			Engineering
6.	Engineering Mechanics	B.E-Civil	Mr Franklin	Energy Engineering
7.	Power Plant Engineering	B.E-EEE	Mr. Arun	Thermal Engineering

Table: Courses offered by other departments

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.:** Nil

8. **Details of courses / programmes discontinued (if any) with reasons :** Nil

9. **Number of Teaching posts :**

Position	Sanctioned	Filled
Professors	NA	2
Associate Professors	NA	4
Asst. Professors	NA	21

Table: Teaching Post

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) :**

SI. No	Name	Qualification	Designation	Specialization	No. of Years of Experience
1.	Prof. Dr. N. Austin	M.E PhD	Professor	Thermal Engineering	1.6 yrs
2.	Prof. Dr.Venugopal	M.E PhD	Professor	Manufacturing Engineering	
3.	Mr. Rajeev D	M.E	Asso. Prof	Computer Aided Design	16.6yrs
4.	Mr.VijayaKumar S	M.E	Asso. Prof	Computer Aided Design	16.7 yrs
5.	Mr.Lalu Gladson Robin G	M.E	Asst. Prof	Manufacturing Engineering	11.3 yrs
6.	Mr. John Iruthya Raj M	M.E	Asst. Prof	Computer Aided Design	13 yrs

7.	Mr.Reghu P	M.E	Asst. Prof	Manufacturing Engineering	1 yrs
8.	Mr. Renjith Sam Raj T	M.E	Asst. Prof	Manufacturing Engineering	2 months
9.	Mr.Beschi Selvan S L	M.E	Asst. Prof	Manufacturing Engineering	5.6 yrs
10.	Mr.Arun S	M.E	Asst. Prof	Energy Engineering	8.6 Yrs
11.	Mr.Dani D	M.E	Asst. Prof	Energy Engineering	1.5 yrs
12.	Mr. Jude Felix A	M.E	Asst. Prof	Manufacturing Engineering	0.6yr
13.	Mr. Franklin G	M.E	Asst. Prof	Energy Engineering	2.6yrs
14.	Mr.Gigin Durai C	M.E	Asst. Prof	Manufacturing Engineering	1.6 yrs
15.	Mr.Godwin Pithalis N E	M.E	Asst. Prof	Computer Integrated Manufacturing	4.5yrs
16.	Mr.Jackson Thanga Roy I	M.E	Asst. Prof	Computer Aided Design	3.6yrs
17.	Mr. Joseph Bencier C k	M.E	Asst. Prof	Thermal Engineering	6.6yrs
18.	Mr. Kumar D	M.E	Asst. Prof	Manufacturing Engineering	0.9yrs
19.	Mr. Leo Bright Singh R	M.E	Asst. Prof	Computer Aided Design	3.6yrs
20.	Mr. Manoj M	M.E	Asst. Prof	Manufacturing Engineering	6.5 yrs
21.	Mr.Sujin T	M.E	Asst. Prof	Energy Engineering	0.9 yrs
22.	Mr.Senthil Kumar A	M.E	Asst. Prof	Engineering Design	0.9 yrs
23.	Mr.Anto Paulin Merinto P	M.E	Asst. Prof	Manufacturing Engineering	7.6 yrs
24.	Mr.Jegan Raj D	M.E	Asst. Prof	Manufacturing Engineering	6.7 yrs
25.	Mr.Akhil Sam P	M.E	Asst. Prof	Manufacturing Engineering	0.6yrs
26.	Mr.Suresh Kumar J	M.E	Asst. Prof	Cad/ Cam	0.2yrs
27.	Mr. John Pradeep J	M.E	Asst. Prof	Manufacturing Engineering	0.2yrs

Table: Faculty profile

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11. List of senior visiting faculty : Nil

12. Percentage of lectures delivered and practical classes handled(programme wise) by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :

SI.No	Programme	No. of students	No. of staffs	Students staff ratio
1	UG	382	24	15:1
2	PG	23	3	7:1

Table: Student- Teacher ratio

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	Sanctioned	Filled
Lab Assistant	NA	6
Office Assistant	NA	1

Table: Supporting Staff sanctioned and filled

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.

Qualifications of teaching faculty	Number
M.E./M.Tech	25
Ph.D	2

Table: Faculty qualification

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : Nil

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received : Nil

18. Research Centre /facility recognized by the University:

- Research groups with various emerging areas are initiated to promote the intellectual ideas to practice

19. Publications: Papers Publications in Journals/Conferences

Academic Year 2016-2017			
Sl. No	**Name**	**Paper Title**	**Journals / Conference**
1	Dr.N.Austin, D.Rajeev, Anto Paulin Merinto & M.Manoj	Experimental Study of Environment Friendly Mixed Refrigerant to Replace R-134a in a VCR System with Testing and Training of ANN	Journal of Advances in chemistry (Annexure I, ISSN 2 3 2 1 - 8 0 7 Volume 12 N u m b e r 2 4, Pages 5560-5565\)
2	D. Rajeev &Austin. N	Prediction of Tool Wear in Hard Turning of AISI4140 Steel Through Artificial Neural Network and Regression Models'	Middle-East Journal of Scientific Research (https://www.idosi.org/mejsr/mejsr 24(7)16/18.pdf)
3	Dr.N.Austin, R.Leo Bright Singh& Manoj	Mechanical Characterization and Water absorption behavior of Woven Banana and Glass Fiber Reinforced Polyester composites	International Journal of Material Management
4	D. Rajeev &Austin. N	Experimental Study of Surface Roughness in Hard Turning of AISI4140 Steel with Coated Carbide Tool'	World Applied Sciences Journal (https://www.idosi.org/wasj/wasj3 4(10)16/6.pdf)
6	Mr.Rajeev.D	Statistical Analysis of Surface Roughness in Hard Turning An Optimization Research	Applied Mathematics and Information Sciences (http://www.naturalspublishing.co m/Article.asp?ArtcID=12866)
7	Lalu G Robin	Wire Mesh/Ceramic Particle Reinforced Aluminum Based Composite Using Explosive Cladding	International Journal Materials Science Forum.

Academic Year 2015-2016			
Sl. No	**Name**	**Paper Title**	**Journals / Conference**
1	S.Vijayakumar	Mechanical Properties Evaluation of Hybrid Natural Composites	Journal of Material Science.

Table: Faculty publication

20. Areas of consultancy and income generated: NIL

21. Faculty as members in a) National committees b) International Committees c) Editorial Boards: Nil

22. Student projects

a) Percentage of students who have done in-house projects including interdepartmental/programme

Program	2012-16		2011-15		2010-14		2009-13	
	In	Out	In	Out	In	Out	In	Out
B.E	82%	18%	66%	34%	68%	38%	58%	42%

Program	2014-16		2013-15		2012-14	
	In	Out	In	Out	In	Out
M.E	100%	-	100%	-	100%	-

*In=In-house *Out=outside the organization

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

SI.No	Program	Batch/Year	Name of organization	Percentage
1	B.E	2015-16	KMML, FACT	18
2	B.E	2011-15	KMML, FACT	34
3	B.E	2010-14	KMML, FACT	38

Table: Student Projects

23. Awards/ Recognitions received by faculty and students: Nil

24. List of eminent academicians and scientists/ visitors to the department

Academic Year 2016 – 2017				
Sl. No	Name	Place of work / Designation	Date of Visit	Purpose of Visit
1	Dr. Joseph Sekhar	Principal, SXCCE	17/02/2017 to 19/02/2017	Workshop on Computational Fluid Dynamics
2	Er.Grish MS (Germany).	Engineer	23/08/2016	SAE Supra Orientation

| 3 | Dr.P.Satheesh, | Engineer | 18/08/2016 | Soft Skill And Personality Development |
| 4 | Prof.P.SaravanaPandian | Engineer | 18/08/2016 | Soft Skill And Personality Development |

Academic Year 2015 – 2016				
Sl. No	**Name of the Student**	**Place of work / Designation**	**Date of Visit**	**Purpose of Visit**
1	Dr. Joseph Sekhar	Principal, SXCCE	11/08/2015- 14/08/2015,	Workshop on Computational Fluid Dynamics
5	Mr.SenthilKumar	Engineer	16/03/2016	Agneya 14

Table: Eminent academicians and scientists/ visitors to the department

25. Seminars/ Conferences/Workshops organized & the source of funding:

Sl. No	Event	Period	source of funding
1	Workshop on Robotics (Robozest 2014)	11/08/14- 14/08/14	MATES & School of Mechanical Engineering
2	CFD applications in Thermal Engineering	27/11/14- 03/12/14	MATES & School of Mechanical Engineering
3	National level technical Symposium- Agneya 2K14	22/023/2014	MATES & School of Mechanical Engineering
4	National level Workshop on Automobile Engineering	26/02/2017 & 27/02/2017	MATES & School of Mechanical Engineering

5	Workshop on FUSION PRO-Auto Desk	05/01/2017 &12/01/2017	MATES & School of Mechanical Engineering
6	Soft Skill And Personality Development	18/08/2016	MATES & School of Mechanical Engineering
7	National level Workshop on Computational Fluid Dynamics	17/02/2017-19/02/2017	MATES & School of Mechanical Engineering
8	National level Workshop on Computational Fluid Dynamics	11/08/2015-14/08/2015	MATES & School of Mechanical Engineering
9	National level technical Symposium-Agneya 2K16	02/04/2016	MATES & School of Mechanical Engineering
10	National level Workshop on Automobile Engineering	17/02/2016 &18/02/2016	MATES & School of Mechanical Engineering
11	Student Empowerment	15/03/2016	MATES & School of Mechanical Engineering

Table: Seminars/ Conference/Workshops organized & the source of funding

26. Student profile programme/course wise:

Name of the Course/programme (refer question no. 4)	Batch/ Year	Year of pass out	Applications received	Selected	Enrolled		Pass %
					*M	*F	
UG	2015-16	2019	128	120	123	3	-
	2014-15	2018	121	120	134	1	-
	2013-14	2017	121	115	120	1	-
	2012-13	2016	120	118	118	0	56
	2011-12	2015	123	119	119	0	54
	2010-11	2014	72	66	66	0	68
	2010-09	2013	68	66	66	0	68
PG	2015-16	2017	8	7	7	0	-
	2014-15	2016	18	16	16	0	94
	2013-14	2015	20	18	18	0	73

Table: Student Profile

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27. Diversity of Students

Name of the Course	% of students from the same State	% of students from other state
B.E.	44.6%	55.6%
M.E.	83.2%	16.8%

Table: Diversity of students

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?: Nil

29. Student progression (Previous year)

Student Progression	Against % enrolled
UG to PG	11
PG to Ph.D	-
Ph.D. to Post-Doctoral	-
Employed (Campus selection)	27
Entrepreneurship/Self-employment	5

Table: Student Progression.

30. Details of Infrastructural facilities

Library

SI.No	Library	No. of books
1	Department library	142

Internet facilities for Staff &Students

➢ Computers with high bandwidth internet connectivity available for students and staffs usage.

➢ 24/7 internet access with Wi-Fi connectivity

➢ Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

Class rooms with ICT facility

➢ All class rooms are ergonomically designed to reinforce a student-centered style of instruction.

➢ All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from a centralized UPS.

➢ Usage of Power Point and other computer programs to improve the presentation of material to class

➢ Presentation of NPTEL videos for each course helps the students in learning and clear with the concept.

➢ ICT facility encourages independent and active learning, and students' responsibility for their own learning.

➢ It is also confirmed that many students found learning in a technology-enhanced setting more stimulating and much better than in a traditional classroom environment.

Laboratories

Sl No	Name of the lab
1	Manufacturing Technology Laboratory
2	Fluid Mechanics and Machinery Laboratory
3	Computer Aided Drafting and Modelling Laboratory & CAD /CAM
4	Simulation And Analysis Laboratory
5	Thermal Engineering Laboratory
6	Strength of Materials Laboratory
7	Dynamics Laboratory
8	Metrology and Measurements Laboratory
9	Mechatronics Laboratory

31. Number of students receiving financial assistance from college, university, government or other agencies.

Category	No. of Students			
	2016-17	2015-16	2014-15	2013-14
SC/ST	-	2	3	5
OBC	104	160	135	169
Minority	-	2	-	4
Institutional Scholarship	-	19	-	-

32. Details on student enrichment programme (special lectures / workshops / seminar) with external experts.

SI.No	Student enrichment programmes	Period
Academic Year 2016 – 17		
1	Soft Skill And Personality Development	18/08/2016
Academic Year 2015 – 16		
1	Student Empowerment Program	15/03/2016

Table: Student Enrichment Programme

SI.No	Events	Conducted
1.	Symposium	2
2.	Work shop	5
3.	Seminar	4
4.	Industrial Visit	10
5.	Value Added courses	1

More detail-Refer annexure-1

33. Teaching methods adopted to improve student learning

- ➢ Students are directed to take seminar, based on reputed Journals/ Transaction
- ➢ Micro project was incorporated to increase student interest towards their core area.
- ➢ Propagation of technical topics of current interest to students.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities-

- ➢ We have close relation with MIDS, which is a social service organization. We have frequent meetings with them and we are able to identify the challenges faced by common people. Our team will work on this challenge and help them technically.

> ➢ We have addressed the following issues through our team of faculty and students

SL No	Challenges	Products
1	Mango Plucking is Difficult	Design & Fabrication of Mango plucking Device
2	Coconut De husking	Design & Fabrication of Coconut De husking machine
3	Plucking Coconut from tree	Design & Fabrication of Coconut tree Climbing machine

35. SWOC analysis of the department and Future plans

Strength	Opportunities
- Addressing the social Challenges through our Technical Experts. - Research culture in schools. - School has active and vibrant SAE Collegiate club. - Institute Industry Interaction. - School regularly organizes Workshops, Seminars, and Training program. - Mentoring the students with diverse qualities and capabilities.	- Demand for Mechanical Engineers. - Motivation of students through Alumni. - Product development resulting in addressing the social need. - Most of the alumni are placed in overseas, hence more chance for overseas placement.
Weakness	**Challenges**
- Lack of interest of students for higher studies. - Rate of students participating in competitive exams is less. - Lack of communication skills among students due to rural back ground. - Lack in Technical Consultancy.	- Fluctuating job Market. - Less interest among students to join in PG & Research programme. - Non Existence of major Industries in nearby areas. - To train and generate awareness periodically on latest Technology.

Future plans

➢ Interaction with 10 industries in the year 2017-2018

➢ To offer a minimum of 2 consultancy services in the year 2017-2018

➢ To upgrade the department as research Centre.

➢ To send a minimum of 5 proposals to various funding agencies for grant.

➢ Signing MOU with 5 core companies in the next 5 years.

➢ To make the students aware about competitive exams such as GATE, Civil services, Defense services, GRE etc, and hence to ensure a minimum of 25 students do the same in every year.

➢ To conduct one entrepreneurship development programme for Pre Final & Final year students every year.

Annexure-1

A. Workshops Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1	CFD workshop	Dr.S. Joseph Sekhar, Principal, SXCCE	3days, 11/08/2015-14/08/2015	Students are able to solve the heat transfer problem using CFD	95
2	CFD workshop	Dr.S. Joseph Sekhar, Principal, SXCCE	3days, 17/02/2017-19/02/2017	Students are able to solve the heat transfer problem using CFD	42
3	National level Workshop on Automobile Engineering	GG Maruthi& ATHENS Bajaj	17/02/2016 &18/02/2016	Students are able design and develop Automotives	121
4	National level Workshop on Automobile Engineering	GG Maruthi& ATHENS Bajaj	23/02/2017, 24/02/2017	Students are able design and develop Automotives	135

B. Symposium/Conference Organized

Sl no	Title	Resource Person	Duration	Outcomes
1	Agneya '16	-	1 day	Students are able to participate various technical and non technical events
2	Agneya '14	Mr.Senthil Kumar, ISRO	1 day	Students are able to participate various technical and non technical events

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C. Seminar Organized

Sl no	Title	Resource Person	Duration	Outcomes	No of Beneficiaries
1.	Student Empowerment	Dr.P.Satheesh, Prof.P.Saravana Pandian.	1 day	Students are able to face interview with confidently	118
2.	Seminar onSAE-SUPRA	Er.Grish MS (Germany).	1 day	Students are able design and develop Automotives	60
3.	Soft Skill And Personality Development	Band U Banglore	1 day	Students are able to develop their Communication skills and personality.	121

D. Certificate Value Added Courses Organized

Sl no	Program	Duration	Trainers	Outcomes	No of Beneficiaries
1.	Piping Design and Plant Engineering Design	August 2016 to January 2016	Hysan Engineering PVT LTD	Students are able to design piping / plant layout	51

E. Industries Visited

SI.NO	DATE	TITLE	COMPANY NAME & DESCRIPTION
1.	13/08/2016	II Mechanical	HYDAC India PVT LTD, Coimbatore
2.	12/08/2016	III Mechanical	Entell CAD Engineering, Mysore
3.	21/08/2015	II Mechanical	HYDAC India PVT LTD, Coimbatore
4.	20/08/2016	III Mechanical	Visvesvaraya technological Museum

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F. Research publications in national/ international journals/ conferences by faculty

Sl. No	Academic Year	No. of Papers
1.	2016-2017	13
2.	2015-2016	1
3.	2014-2015	-
4.	2013-2014	-
5.	2012-2013	-
6.	2011-2012	-

Table: Research publications by faculty

G. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses attended by faculty

Academic Year 2016-2017					
Sl. No	Name	Workshop / Seminar Attended	Date		Organized by University / College
			From	To	
1	Lalu G Robin	Conference	26/09/2016	30/09/2016	Beijing Institute of Technology, Beijing, China
Academic Year 2015-2016					
Sl. No	Name	Workshop / Seminar Attended	Date		Organized by University / College
			From	To	
1	Leo Bright Singh R	ICTMI-16 conference	4/03/2016	5/03/2016	Rajiv Gandhi Centre for Bio Technology & Mar Ephraem

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		Academic Year 2014-2015			
Sl. No	Name	Workshop / Seminar Attended	Date		Organized by University / College
			From	To	
1	Prof. Dr. N. Austin	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
2	Mr. Rajeev D	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
3	Mr.VijayaKumar S	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
4	Mr.LaluGladson Robin G	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
5	Mr. John iruthya Raj M	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
6	Mr.Beschi SelvanSl	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
7	Mr.Arun S	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
8	Mr.BeschiSelvan SL	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
9	Mr. Franklin G	Application of CFD In	28/11/2014	03/12/2014	Mar

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		Thermal Engineering			Ephraem
10	Mr.GodwinPithalis N E	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
11	Mr.JacksonThanga Roy I	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
12	Mr. Joseph Bencier C k	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
13	Mr. Franklin G	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
14	Mr. Leo Bright Singh R	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
15	Mr. Manoj M	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem
16	Mr.AntoPaulinMe rinto P	Application of CFD In Thermal Engineering	28/11/2014	03/12/2014	Mar Ephraem

Table: Conferences/ Seminars/ Workshops/ FDPs/ Short-term courses attended by faculty

H. Details of values added courses / seminars/ symposium/ workshops organized for students

	Academic Year 2016-2017				
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1	26/02/2017 & 27/02/2017	National level Workshop on Automobile Engineering	SAE & School of Mechanical Engineering	Er. Christo G GMaruthi	Pre Final Year Mechanical Engineering Students (135)

2	05/01/2017 & 12/01/2017	Workshop on FUSION PRO-Auto Desk	School of Mechanical Engineering	Auto Desk	60
3	18/08/2016	Soft Skill And Personality Development	MATES & School of Mechanical Engineering	Dr.P.Satheesh, Prof.P.SaravanaPandian	Final Year Mechanical Engineering Students (121)
4	17/02/2017 - 19/02/2017	National level Workshop on Computational Fluid Dynamics	MATES & School of Mechanical Engineering	Dr. Joseph Sekhar	Final Year Mechanical Engineering Students (121)

Academic Year 2015-2016					
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1	11/08/2015 - 14/08/2015	National level Workshop on Computational Fluid Dynamics	MATES & School of Mechanical Engineering	Dr. Joseph Sekhar	Final Year Mechanical Engineering Students (118)
2	02/04/2016	National level technical Symposium-Agneya 2K16	MATES & School of Mechanical Engineering	-	All Engineering Students (750)
3	17/02/2016 &18/02/2016	National level Workshop on Automobile Engineering	SAE & School of Mechanical Engineering	Er. Christo G GMaruthi	Pre Final Year Mechanical Engineering Students(122)
4	15/03/2016	Student Empowerment	MATES & School of Mechanical Engineering	Band U Banglore	Final Year Mechanical Engineering Students (115)

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Academic Year 2014-2015					
Sl. No	Dates	Workshop Name	Organized by	Resource Person	Targeted audience
1	11/08/14- 14/08/14	Workshop on Robotics (Robozest 2014)	MATES & School of Mechanical Engineering	Mr.Saurabh (Robo Species Technologies)	134
2	27/11/14- 03/12/14	CFD applications in Thermal Engineering	MATES & School of Mechanical Engineering	Dr. Joseph Sekhar	21
3	22/023/2 014	National level technical Symposium- Agneya 2K14	MATES & School of Mechanical Engineering	Mr.Senthil Kumar	380

Table: Values added courses / Seminars/ Symposium/ Workshops organized for students

I. **The details of student's achievements & workshops attended by students at various places for the three academic years.**

Academic Year 2016 – 17				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Month & Year
1	Alex Y	IET KKLN PATW	CET Trivandrum	March/2017
2	Aswin	IET KKLN YP Award	CET Trivandrum	March/2017
3	Nirmal T Rajan	RC Aircraft Workshop	Mar Baselious	March/2017

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Academic Year 2015 – 16				
Sl. No	Name of the Student	Event	Name of the Organizing College/ Company/ Organization/ Society...etc	Month & Year
1	Sigin G	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
2	T.Vijaya Raj	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
3	Austin Tubi T.S	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
4	Hamjith Merlin G	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
5	S.A.Deepan	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
6	Arul Babish.A	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
7	Bibin.G	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
8	Berlin Dhas.Y	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
9	Jothish.Y	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
10	SundaraAjith S	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
11	S.Sujin John Bosco	Work Shop On Application of Novel Materials	PSN of Institute of Technology And Science	04/09/2015
12	Gowtham A S	OPTSME 2K15	University college of Engineering Konam	23/09/2015
13	B Joythish	OPTSME 2K15	University college of Engineering Konam	23/09/2015

14	Y Berlin Dhas	OPTSME 2K15	University college of Engineering Konam	23/09/2015
15	G Hamjith Merlin	OPTSME 2K15	University college of Engineering Konam	23/09/2015
16	R Abilash Sony	OPTSME 2K15	University college of Engineering Konam	23/09/2015
17	Gowtham AS	Joule's Fest	Stella Marys College of Engineering	16/09/2015
18	Stalin Joseph	Joule's Fest	Stella Marys College of Engineering	16/09/2015
19	KuriaKose Joseph	Joule's Fest	Stella Marys College of Engineering	16/09/2015
20	B Joythish	Joule's Fest	Stella Marys College of Engineering	16/09/2015

Table: Student's Achievements & Workshops Attended by students

Evaluative Reports

School of Humanities and Science

1. **Name of the Department : Humanities and Science**

2. **Year of Establishment   :** 2009

3. **Names of Programmes / Courses Offered :**

Courses Offered	Name of the Course	Specialization
UG	NA	Science and Humanities

Table: Programmes / Courses offered

4. **Names of Interdisciplinary courses and the departments / units involved:**

SI.No	Course Name	Offered to (Dept. Name)
1.	Engineering Graphics	MECH
2.	Computer Programming	CSE
3.	Basic Electrical and Electronics Engineering	ECE
4.	Engineering Mechanics	MECH
5.	Digital Principles and system Design	ECE
6.	Programming and Data Structures	CSE
7.	Basic Civil and Mechanical Engineering	MECH
8.	Circuit Theory	EEE
9.	Electronic Devices	ECE

Table: Interdisciplinary courses

5. **Annual / Semester / choice based credit system (programme wise):**

B.E (UG Program)		
B.E (Ist Year)	Semester Based Credit System	I Year

Table: Annual / Semester systems

6. **Participation of the department in the courses offered by other departments:**

SI.No	Names of Interdisciplinary Courses	Department Involved
1.	Transforms and Partial Differential Equations	CIVIL,MECH,ECE,EEE,CSE

1.	Numerical Methods	CIVIL,EEE
2.	Statistics & Numerical Methods	MECH
3.	Probability & Random Process	ECE
4.	Probability & Queuing Theory	CSE
5.	Discrete Mathematics	CSE
6.	Principles of Management(POM)	MECH
7.	Total Quality Management	MECH
8.	Applied Probability & Statistics (MA7155)	M.E.-MANUFACTURING
9.	Applied Probability & Statistics (MA7165)	M.E.- CSE
10.	Applied Mathematics for Electronic Engineers	M.E –Applied Electronics

Table: Courses offered by other departments

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.:** Nil

8. **Details of courses / programmes discontinued (if any) with reasons :** Nil

9. **Number of Teaching posts :**

Position	Sanctioned	Filled
Professors	NA	Nil
Associate Professors	NA	6
Asst. Professors	NA	28

Table: Teaching Post

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. Etc.,) :**

SI.No	Name	Qualification	Designation	Specialization
1.	Dr.D.Vethroy	Ph.D	Professor	Chemistry
2.	Mr.G.Ravi Selva Kumar	M.Tech	Professor	Computer Science
3.	Mrs.Princy Kala	M.Sc., M.Phil	Asso.Prof	Physics
4.	Dr.T.Binu Selin	Ph.D	Asso.Prof	Graph Theory
5.	Mrs.Sukku Joshi	M.A	Asso.Prof	English
6.	Mrs. M.Jeba Priya	M.Sc., M.Phil	Asst.Prof	Chemistry

7.	Mrs.L.R.BIndhu	M.Sc., M.Phil	Asst.Prof	Mathematics
8.	Mrs.A.Seema	M.Sc., M.Phil	Asst.Prof	Chemistry
9.	Mrs.B. P.Asha Beulah	M.Sc., M.Phil	Asst.Prof	Mathematics
10.	Mrs. T. Simmi	M.Sc., M.Phil	Asst.Prof	Chemistry
11.	Mrs.D. Mary Prabha	M.Sc., M.Phil	Asst.Prof	Physics
12.	Mrs.Roselin Suhi	M.Sc., M.Phil	Asst.Prof	Mathematics
13.	Mrs.E. Petdami	M.Sc., M.Phil	Asst.Prof	Physics
14.	Mrs.F. Giftlin	M.Sc., M.Phil	Asst.Prof	Mathematics
15.	.Mr.R.S. Vinod	M.A., M.Phil	Asst.Prof	English
16.	Mrs.Y.Anuja Malar	M.A., M.Phil	Asst.Prof	English
17.	Mrs.N.E. Johnwin Beula	M.Sc., M.Phil	Asst.Prof	Mathematics
18.	Mrs.S.K. Johnsy Suhitha	M.Sc., M.Phil	Asso.Prof	Chemistry
19.	Ms.J.S.Jelin Jangary	M.A., M.Phil	Asst.Prof	English
20.	Dr.R.Melba Kani	Ph.D	Asst. Prof	HRM Marketing management
21.	Mrs.Jeya Reshmi	M.Sc., M.Phil	Asst.Prof	Physics
22.	Ms.N.Sherly	M.Sc., M.Phil	Asst.Prof	Mathematics
23.	Mrs. A.Ayana	M.Tech	Asst. Prof	Computer Science
24.	Mrs.M.Ajila Mary	M.E	Asst. Prof	Computer Science
25.	Mr.H.Ajay Kumar	M.E	Asst. Prof	Communication Engineering
26.	Mrs.P.V.Auslin Nisha	M.E	Asst. Prof	Communication Engineering
27.	Mrs.Shanmugha Priya	M.E	Asso. Prof	Computer Science
28.	Mrs.Fathima Mary	M.Sc., M.Phil	Asst.Prof	Mathematics
29.	Mrs.D.B.Juliet Rose	M.E	Asst. Prof	Power System
30.	Mrs.Shijula Lindry	M.Sc., M.Phil	Asst.Prof	Chemistry
31.	Mrs.T.Priya Viji	M.Sc., M.Phil	Asst.Prof	Mathematics

32.	Mrs.Awathy Komalan	M.E	Asst. Prof	Structural Engineering
33.	Mrs.D.Analin Remena	M.E	Asst. Prof	VLSI Design
34.	Mrs. Praveena	M.Sc., M.Phil	Asst.Prof	Physics
35.	Mr.G. Prince	Ph.D	Asst. Prof	Library Science
36.	Mr. Pradeep	M.Ped	Physical Director	Physical Education

Table: Faculty profile

11. List of senior visiting faculty : Nil

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: Nil

13. Student -Teacher Ratio (programme wise) :

SI.No	Programme	No. of students Sanctioned	No. of students	No. of staffs	Students staff ratio
1	UG	480	343	34	14:1

Table: Student- Teacher ratio

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Supporting Staff	Sanctioned	Filled
Lab Assistant	NA	2
Office Assistant	NA	1

Table : Supporting Staff sanctioned and filled

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.

Qualifications of teaching faculty	Number
Ph.D	2
M.E/ M.Tech	9
M.A., M.Phil	4
M.Sc., M.Phil	19

Table : Faculty qualification

16. **Number of faculty with ongoing projects from a) National b) International funding agencies and grants received :**NIL

17. **Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received** : NIL

18. **Research Centre /facility recognized by the University:** NIL

19. **Publications: Papers Publications in Journals/Conferences**

Academic Year 2016-2017			
Sl. No	**Name**	**Paper Title**	**Journals / Conference**
1	Dr.BinuSelin	Edge Fixed Geodominating Sets and Polynomials of Centipedes	Global Journal of Pure and Applied Mathematics

Academic Year 2015-2016			
Sl. No	**Name**	**Paper Title**	**Journals / Conference**
1	Dr.BinuSelin	Edge Fixed Geodominating Sets and Polynomials of Helm graphs	Proceedings of UGC sponsored national seminar on ''Emerging trends in graph theory''

Table: Faculty publication

20. **Areas of consultancy and income generated:** NIL

21. **Faculty as members in a) National committees b) International Committees c) Editorial Boards:** NIL

22. **Student projects**

   a) **Percentage of students who have done in-house projects including interdepartmental/ programme:** NA

   b) **Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies:** NA

23. **Awards/ Recognitions received by faculty and students:** NIL

24. List of eminent academicians and scientists/ visitors to the department

Sl No	Name of the Expert	Activity	Academic Year
01	Er.Cyril Rose Xavier,Sub Divisional Engineer BSNL,NGL	Resource person	11.04.2016 – 13.04.16 2015-2016
02	Prof.Dr. Sekar	Resource person	2015-2016
03	Prof.Dr. Justin Dhanaraj,University College of Engineering,NGL	Resource person	2015-2016
04	Mr Thomas Ebrahm, TCI	Resource person	03.08.2016 – 04..08.16 2016-2017
05	Mr Thomas Ebrahm TCI	Resource person	17.08.2016 – 18..08.16 2016-2017
06	Mr. Riat John Joshi Convergie , Bangalore	Resource person	04.01.2017-05.01.2017 2016-2017
07	Mr. Riat John Joshi Convergies , Bangalore	Resource person	06.02.2017-07.02.2017 2016-2017

Table: Eminent academicians and scientists/ visitors to the department

25. Seminars/ Conferences/Workshops organized & the source of funding: Nil

26. Student profile programme/ course wise:

Program	2016-17		2015-16		2014-15		2013-14	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
B.E I year	295	49	263	78	278	81	214	83
	85.75%	15.25%	77.12 %	22.8%	77.4%	22.6%	72.1%	27.9%

Table: Student Profile

27. Diversity of Students

Name of the Course	% of students from the same State	% of students from other state	% of students from country
B.E.	34.6%	65.4%	0%

Table Diversity of students

28. **How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?:** NIL

29. **Student Progression:** NA

30. **Details of Infrastructural facilities**

   Library: Nil

   Internet facilities for Staff &Students

   - Computers with high bandwidth internet connectivity available for students and staff usage.

   - 24/7 internet access with Wi-Fi connectivity

   - Staff rooms are equipped with wired internet and Corridors and lobbies are equipped with Wi-Fi connectivity.

   Class rooms with ICT facility

   - All class rooms are ergonomically designed to reinforce a student-centered style of instruction.

   - All class rooms have ceiling mount LCD projectors, Uninterrupted Power Supply from centralized UPS.

   - Usage of Power Point and other computer programs to improve the presentation of material in class.

   - Presentation of NPTL videos for each course helps the students in learning and clear with the concept.

   Laboratories

Sl No	Name of the lab
1.	Chemistry
2.	Physics

   Table: Details of Laboratory

31. **Number of students receiving financial assistance from college, university, government or other agencies:** Reported along with core department.

32. **Details on student enrichment programme (special lectures / workshops / seminar) with external experts.**

SI.No	Student enrichment programmes	Period
Academic Year 2016 – 17		
1	Team Centered Interaction Programme	03.08.2016 – 04..08.16 2016-2017

2	Team Centered Interaction Programme	17.08.2016 – 18..08.16 2016-2017
3	Soft skill Training	04.01.2017-05.01.2017 2016-2017
4	Soft skill Training	06.02.2017-07.02.20172016-2017
Academic Year 2015 – 16		
1	Winning Edge- Personality development pogramme	11.04.2016 – 13.04.16 2015-2016

Table Student Enrichment Programme

33. Teaching methods adopted to improve student learning

➢ Students are instructed to have face-to-face interaction.

➢ Appropriate use of teamwork skills.

➢ Workshops, Seminars, Guest Lectures and Extension Lectures are conducted on all topics to provide a platform for deliberation and knowledge sharing.

➢ Hands on experience in the respective fields is provided in the form of entrepreneurial ventures and field visits

➢ Students are directed to take seminar, based on reputed Journals/ Transaction

➢ Micro project was incorporated to increase student interest towards their core area.

➢ Propagation of technical topics of current interest to the students.

34. Participation in Institutional Social Responsibility (ISR)and Extension activities-

➢ Blood donation-16

35.   SWOC analysis of the department and Future plans

Strength	Opportunities
• Placement Oriented Skill development training • Self awareness and goal setting programmes • Counselling, mentoring and remedial classes conducted regularly to cater the weaker section of the students. • Application Oriented teaching of Science and mathematic principles. • Bridge Course	• Interdisciplinary project can be encouraged • Work collaboratively with major Institutions in research • Encouraging the faculty to do research (PhD) in their interested field and to publish research findings.
Weakness	**Challenges**
• Lack of Research and development and consultancy • Difficulty of students to cope up with semester system. • Less number of faculties doing research	• Students from diverse background • Declining interest in technical subjects by students

Table:SWOC analysis

Future plans

➢ To upgrade the department as research Centre by 2017-2018.

➢ Strengthening of Research & Development laboratory

➢ To help the students to clear national and state competitive examinations such as GATE, Civil services, Defense services, GRE, TANCET

➢ To conduct more orientation programmes from the forth coming semester onwards

➢ To develop communication skill of students

Annexure-1

A. Industries Visited

S.NO	DATE	TITLE	COMPANY NAME & DESCRIPTION
1.	09.05.2013	Industrial Visit (Mechanical & Civil Engineering)	The Kerala Minerals and Metal Limited, Kollam
2.	10.05.2013	Industrial Visit (ECE, EEE & CSE)	LPSC, Mahendregiri
1.	16.04.2014	Industrial Visit (Mech., Civil, ECE, EEE & CSE)	VSSC, Thiruvananthapuram
2.	09.03.2015 to 10.03.2015	Industrial Visit (Mech., Civil, ECE, EEE & CSE)	TCCL& IPSR, Ernakulam

Table : Industrial Visit

B. Research publications in national/ international journals/ conferences by faculty

Sl. No	Academic Year	No. of Papers
1.	2016-2017	1
2.	2015-2016	1
3.	2014-2015	NIL
4.	2013-2014	1
5.	2012-2013	NIL
6.	2011-2012	NIL

Table: Research publications by faculty

C. Details of conferences/ seminars/ workshops/ FDPs/ short-term courses attended by faculty

Academic Year 2016-2017				
Sl. No	Name	Workshop / Seminar Attended	Date	
			From	To	Organized by University / College
1.	Mrs.L.R.BIndhu	1	20.1.17	21.1.17	N.M.Christian College,

Mar Ephraem

					Marthandam
2.	Mrs.B. P.Asha Beulah	1	20.1.17	21.1.17	N.M.Christian College, Marthandam
3.	Mrs.RoselinSuhi	1	20.1.17	21.1.17	N.M.Christian College, Marthandam
4.	Mrs.A.Seema	1	13.10.16	-	N.M.Christian College, Marthandam

Table: Workshop attended by faculty