

Mar Ephraem College of Engineering and Technology

ANNUAL REPORT 2023

Admirable Chairman of our college and the Bishop of Marthandam Diocese Your Excellency Most Rev. Dr Vincent Mar Paulos, Venerable Chief guest of today's function Shri. Andi S. Giri, CEO, Softsquare Solutions, Distinguished guest of honour Shri. Abhinand V. Nair, CEO, ATeam Soft Solutions, Respected Vicar General of Marthandam Diocese, Rt. Rev. Monsignor Jose Bright, Respected Correspondent and Secretary of our college Very Rev. Fr. Josephin Raj, Respected Mother Provincial Rev. Mother Anila Christy, Respected Bursar of our college Rev. Fr. Hebin, Respected Chancellor of the Diocese Very Rev. Fr. Franklin Jose, Respected Procurator of the Diocese Very Rev. Fr. Satheesh Kumar, Respected College Board Members, Respected Academic Director Prof. Dr N. Austin, Respected college day coordinator Dr.N.E. Godwin Pithalis, Student coordinators Mr Bazalin B Joseph, of final year Mechanical Engineering and Ms Divine Love Priscilla of final year ECE, Respected Heads of various departments, Rev. Fathers, Rev. Sisters, the Press, Staff, Parents and my dear students, a warm good morning to all.

ABOUT MAR EPHRAEM

MAR EPHRAEM COLLEGE OF ENGINEERING AND TECHNOLOGY at Malankara Hills, Elavuvilai, Marthandam was blessed and inaugurated by His Beatitude Moran Mor Baselios Cardinal Cleemis Catholicos, The Major Archbishop of Malankara Catholic Church, on September 14, 2009. Mar Ephraem has grown well beyond an ever-continuing explorative experience, in quality education, with six U.G Programs, four P.G Programs and one doctoral program.

ACCOLADES

- Mar Ephraem College of Engineering and Technology is a NAAC Accredited institution with various other tributes.
- Mar Ephraem added another feather on its cap by attaining the NBA Accreditation for Mechanical Engineering, Civil Engineering and Computer Science & Engineering.
- Mar Ephraem is the only FIST supported college in Southern Tamil Nadu, recognized by DST, Govt. of India with a fund of INR 73 Lakhs.
- Department of Mechanical Engineering of Mar Ephraem has been approved as recognized research center under Anna University, Chennai .
- Mar Ephraem has been granted an amount of INR 50 lakhs under Technology Development Programme Scheme, DST, Govt. of India.
- Mar Ephraem has received a Scale up Grant of INR 3 lakhs from Startup TN, Govt. of Tamil Nadu.
- Mar Ephraem has been approved by MSME, Govt. of India to set up an incubation platform named Mar Ephraem MSME Incubation Centre.

INFRASTRUCTURE ADDED

- INR 1.78 crores has been invested for the augmentation of infrastructure of Research Laboratory this year. In addition to the existing facilities in the research laboratory, we have established a fully furnished maker space, computing space with high end computing machines, sector specific laboratory, and discussion room with video conference facility.

ACADEMICS

- This academic year we secured 87.9 per cent results in the Anna University examinations
- 859 graduates and 37 postgraduates have completed their degrees and received their degree certificates from the honorable Minister of

Information Technology of Tamil Nadu Thiru. Mano Thangaraj, who was the chief guest on our eighth graduation day on 30 September 2022.

Staff Achievements:

- Prof. Dr A. Lenin Fred, Principal is appointed as Mentor of Change by ATAL Innovation Mission, NITI Aayog, Government of India. He is the IET chairman of KKLN, and vice president of ISSE Kanyakumari Chapter. Also he has been serving as the National Jury for India-International Science Festival, for the past five years.
- Prof. Dr. A. Lenin Fred, Dr. Anish John Paul, Dr. Leo Bright Singh, Dr. Lalin L Laudis and Mr. C. Gigin Durai are certified as Chief Innovation Officers by Distinguished Rocheston, New York.
- Prof. Dr. N. Austin, Academic Director, is the working president of Kumari Maha Sabha for the past four years.
- Prof.Dr.V.Suresh HoD ECE and Dr. Lalin L Laudis is appointed as Mentor for Community Innovator Fellowship program in ACIC Mar Ephraem Incubation Forum.
- Mr. C. Gigin Durai, Department of Mechanical Engineering, is the Treasurer of IET KKLN.
- Dr. Dhanya, HoD, Artificial Intelligence and Data Science, has received the Best Researcher Award from Novel Research Academy, Pudducherry.
- Mr. Sam J. Palson, Physical Director, is the qualified Referee of the All India Kabaddi Federation.

The following faculty members have been awarded the doctoral degree this academic Year in their thrust areas.

- Dr. Anish John Paul (EEE)
- Dr. Manjusha (EEE)
- Dr. Leo Bright Singh (Mechanical Engineering)
- Dr. Beschi Selvan (Mechanical Engineering)

- This academic year Three Research scholars have completed their doctoral degrees under the supervision of **Prof. Dr A. Lenin Fred** and Two Research Scholars have completed their doctoral degree under the supervision of **Dr. Jerusalin Carol**.

Staff as Resource Persons:

- Prof. Dr A. Lenin Fred, Principal, served as the resource person for a six day FDP programme organized by IET Kanyakumari Local Network and for an ISSE Event. He also acted as Chief guest at St. Jude's School, Scott Christian College Maths day celebrations, and Startup Hackathon at Stella Marys Engineering College.
- Prof. Dr. N. Austin, Academic Director, has served as the Chief Guest for the Annual Day Celebrations at Vivekananda Polytechnic College and at Bangalore Tamil Sangam.
- Dr. R. Leo Bright Singh, Department of Mechanical Engineering, has served as Resource Person for the Programme towards Success and a seminar on Gandhian Thoughts at Anna University MIT Campus, Campus. He has also served as the Chief Guest and Motivational Speaker at various institutions such as Narayanaguru College of Engineering, Scott Christian College, Nesamony Memorial Christian College, Al Ameen Matriculation School, Christhuraja Matriculation School and Annai Velankanni College.
- Dr. Anish John Paul, HoD, EEE, has served as the Resource Person for the Entrepreneurship Programmes organized at Malankara Catholic College, Mariagiri, Stella Mary's College of Engineering. Also, he has served as the Resource Person in the event Aadukalam organized by Startup Tamil Nadu at St. Xavier's Catholic College.

- Dr. R. Benschwartz, and Mr. Y. S. John Pradeep Department of ECE served as the Master Trainer for the Nan Muthalvan programme, by Govt of TamilNadu entitled Powering of IoT.
- Prof. Dr. V. Suresh, HoD, ECE, has served as the Resource Person for the Robotics Training at Christhuraja Matriculation School, Marthandam.
- Dr. Lalin L Laudis, Department of ECE, has served as the Resource Person in the Entrepreneurship Events conducted at Annai Velankanni College of Engineering and Technology and Morning Star Polytechnic College. Moreover, he has served as the Resource Person for the event Indian Society of Systems for Science and Engineering for organized by ISRO at Mar Ephraem College of Engineering and Technology.
- Mr. C. Gigin Durai, Department of Mechanical Engineering, has served as the Resource Person for the Entrepreneurship Programme at Stella Marys College, Holy Cross College, and Udaya College of Engineering and Technology.
- Mr. Sam J Palson, Physical Director, has served as Referee for the Anna University Zonal Kabaddi Tournament at PET Engineering College, MS University Intercollegiate Kabaddi match at Vivekananda College, and District Championship Kabaddi tournament organized by Kanyakumari District Kabaddi Association.

Student Achievements

- Ms. Mersheba Fred L. of final year CSE is obtained third prize in the Student Innovation Project in India International Science Festival at NIT Bhopal Organized by Govt. of India.
- Densiya.I, Surekha.S.K, Fenilda Riju R F and Nisha M.N of Final Year ECE Persented the project entitled “IoT in Smart Irrigation” in Regional finals TECH SHOW - 23 at NEC, Kovilpetti organized by Govt. of TamilNadu, in association with IBM and Anna University Chennai. The

project has been shortlisted by IBM as one among the 25 out of 7000 projects all over Tamil Nadu.

- Mr. Pravin Raj and Mr. Krishna Kumar of IV EEE is crowned with the first prize in the Startup Tamil Nadu Zonal Level – Project Expo.
- Mr. Jerish J of I CSE, Mr. Bibis Jino of I Civil and Mr. Libin R C of I CSE has won the III prize in Quiz, and Elocution conducted by Rajiv Gandhi Centre for Biotechnology Thiruvananthapuram.
- Mr. George Binu of I CSE has obtained the first prize in Paper Presentation and Mr. Anto Remin of I CSE has attained the first place in Poster Presentation conducted by Rohini College of Engineering and Technology.
- Ms. Christu Padakey and Ms. Parvathi of II EEE have secured the first position in Poster Presentation conducted by St. Xavier's Catholic College.
- Ms. Parvathi of II EEE has secured the first position in Poster Presentation conducted by Arunachala College of Engineering by Women.
- Ms. Jemi J L, Ms. Ancy Mol, & Ms. Abina of IV ECE have secured the third position in Paper Presentation organised by Rohini College of Engineering and Technology.
- Mr. Roshan R S of II ECE has won the second prize for poster Presentation conducted by St. Xavier's Catholic College, Chunkankadai.
- Ms. Angelin Seema and Mr. Aswin A of IV ECE have won the second prize in Paper Presentation conducted at Loyola Institute of Technology & Science.
- Mr. Sajith and Albin B of IV ECE is given the first prize and best paper award for his Paper entitled "Smart Trolley" and the first prize in Circuit

Debugging at the National Level Technical Symposium conducted by St. Xavier's Catholic College, Chunkankadai.

- The final Year students of Department of ECE has won the overall Champion for the National Level technical Symposium organized by Loyola Institute of Technology and Science ECLATECS 2k22.
- Mar Ephraem Students exhibited their innovations in MCCXIBAS-2023, a silver jubilee year and technology exhibition organized by Malankara Catholic College and in the EXPO-CIENCIA, the Golden Jubilee Science Exhibition organised by Christuraja Matrci Hr. Sec. School, Marthandam.

TNSCST Sponsored Student Projects:

Tamil Nadu State Council for Science & Technology has approved two student projects entitled

- “Vege-Buy: A Smart Identification, Weighing and billing of vegetables” by Mr. Sajith S., Mr. Albin B. and Mr. Jerlin Jacob of final year ECE, supervised by Dr. R. Benschwartz, department of ECE
- “Automated Smart Asola Bed” by Ms. Mersheeba fred L. of final year CSE, Ms. Divine Love Priscilla and Ms. Angelin Abi M. of final year ECE, supervised by Mr. G. Ashwin, department of CSE

Events organized

- Value Added Courses on Revit Architecture, Primavera and AutoCAD are conducted by the Cadd Centre Team for the third and final year students of the Department of Civil Engineering.
- A three day workshop on scripting language HTML, CSS, PHP, JAXX by Mar Ephraem Digital Solutions and a Seminar on Agile Methodology by Sanquine Info Technologies were organised by the Department of Computer Science & Engineering.
- A Seminar on Fundamentals and research in 3D printing by Dr. S. Senthil Murugan, Rajalakshmi Engineering College, Chennai and A Workshop

on Automobile Practice by G G Maruti and Athen Bajaj were organised by the Department of Mechanical Engineering.

- The Department of Electrical & Electronics Engineering organised A Product Development Course – Square Wave Inverter by Mr. Sreeraj, Emcog Solutions, in addition to the Workshops on PCB Design, Assembling and Installation of Personal Computer and Electrical Wiring.
- A Seminar on Entrepreneurship was organised by the Department of Business Administration.
- Workshops on AURDINO – UNO microcontroller and PCB design were organised for the students of the department of Electronics & Communications Engineering.

Industrial Visits/Internships

- All the Departments have organized industrial visits for their students, to gain industrial experience and practical training. The students belonging to the Department of Electrical & Electronics Engineering visited Papanasam Hydro Electric Power Plant, Papanasam. The students of the Mechanical Engineering Department visited TNSTC, Nagercoil and ISRO, Mahendragiri. The students from Science and Humanities visited Water Treatment Section in Wonderla, Kochi. The Department of Computer Science & Engineering has carried their students to HAL, Bangalore, and BSNL, Marthandam. The students of Civil Engineering visited Ambika Construction, Bangalore and SG Construction, Goa. The Department of Business Administration has taken their students to Southern Petrochemical Industries Corporation (SPIC), Thoothukudi.
- The Third-year students belonging to the Department of Civil Engineering were taken for a 10-day Survey Camp to Courtallam by a team of eminent faculty.

- Our students were sent for internships in more than 50 reputed industries like TNSTC, KSRTC, PWD and KWA to improve their employability skills.

International Internship

- Mr. Edwin and Mr. Akash of Final Year Civil underwent an international internship at Abu Zakriya Construction and TRAD, Sultanate of Oman.

Professional Development of Faculty:

- 45 faculty members of various departments attended Faculty Development Programmes (FDP), 24 faculty members participated in Workshops, 26 faculty members have taken part in Seminars, 12 faculty members took part in various national and international Conferences, and 8 faculty members from various departments have completed NPTEL/SWAYAM online certification course.

PUBLICATION OF JOURNAL, BOOKS & BOOK CHAPTERS:

- A total of 14 articles in peer-reviewed journals and 6 book chapters were published by reputed publishers by the faculty of various departments.
- Dr. R. Leo Bright Singh, Department of Mechanical Engineering, has published a book titled “Competitive Manufacturing” with Cosmos Publications.

FUNDED RESEARCH

Mar Ephraem College of Engineering and Technology received Rs.8,82,53,200/- for Research and Development from the Ministry of Science and Technology; Government of India, NITI Aayog, Government of India during this academic year.

RESEARCH AND DEVELOPMENT (R&D):

Mar Ephraem Received Rs.3,21,09,200 /- for the project entitled “Technological Intervension for the Preservation of Tribal Food Processing Technologies and Heritage” from the ministry of Science and Technology, Government of India, in which Prof.Dr. A.Lenin Fred is the Principal

Investigator, Dr. Leo Bright Singh, Dr. Anish John Paul, Dr, Lalin Laudis and Mr. Gigin Durai are the Co-Principal Investigators.

Mar Ephraem Received Rs.46,44,000/- for the project entitled” An IOT Administered UAV with Deep Learning Models for Spotting and Spraying Pesticides to avoid But – rot in Palm Varieties” from the ministry of Science and Technology, Government of India, in which Prof. Dr. A.Lenin Fred is the Principal Investigator, Dr. Leo Bright Singh, Dr. Anish John Paul, Dr, Lalin Laudis and Dr. Jerusalin Carol are the Co-Principal Investigators.

Mar Ephraem Received Rs.15 Lakhs for the project entitled” Coconut Leaf Midrib Extractor” from the MSME, Government of India, in which Dr. Anish John Paul, HoD EEE is the incubate and Prof.Dr.V.Suresh, HoD ECE is the Mentor.

ENTREPRENEURSHIP

ACIC Mar Ephraem Incubation Forum

Mar Ephraem has established an “ACIC Mar Ephraem Incubation Forum” in our campus, supported by the NITI Aayog. Government of India with the objective of converting grass-root innovators to entrepreneurs. Dr. Anish John Paul is the CEO and Mr.C.Gigin Durai is the Incubation manager. ACIC Conducted 10 outreach events in various places like Geetha Jeevan College, Vettikonam Village, Thandikudi Village, Holy Cross College Nagercoil, MCC, Mariagiri, Govt Higher Secondary School Kalkulam, Kattathurai, Munchiri and Orunooramvayal Village, 10 Ideathon events, 6 IP awareness events, 11 Capacity building Programs in various colleges, schools and in our Incubation Centre. We are having 15 partnerships with academic institutions and industries. Our incubation centre is supporting 20 physical and virtual starts-ups and 25 mentors are on boarded to support our incubates.

New Gen IEDC

In order to turn the innovative ideas of students into Business start-ups, The National Science & Technology Entrepreneurship Development Board (NSTEDB) the Government of India granted 2.87 crores for setting up NewGen IEDC in Mar Ephraem Campus. A total of 65 innovative student projects were supported.

Entrepreneurship Awareness Camp

- An Entrepreneurship Awareness Camp sponsored by the Government of India was conducted to promote entrepreneurial activities on the campus.

CAMPUS COMPANY:

- Mar Ephraem has a campus company named “Mar Ephraem Digital Solution” to develop software for Nithi limited and hospitals. The company has successfully implemented software for 6 branches of Marthandam People development nithi Ltd. under the Diocese of Marthandam, and 1 branch of Thuckalay nithi ltd under the Diocese of Thuckalay. The Company has been maintaining the website of ACIC Mar Ephraem and MIS of Mar Ephraem

CONSULTANCY:

- Department of Civil Engineering has carried out Research consultancy for Southern railway, Ideal construction and PWD, Government of Tamil Nadu.
- Department of Mechanical Engineering has carried out Research consultancy with Mookambika Dental College, Matrix Technology Solutions, Holy Cross College Nagercoil, University College of Engineering, Nagercoil, St.Xaviers Catholic College of Engineering and Rajalakshmi Engineering College for mechanical Design, Testing and Fabrication.

COLLABORATION/MOU

- This academic year we have signed MoUs with Malankara Catholic College, Mariagiri, Annai Vellankanni College (AVC), Tholayavattam, Association for Women's Education and Development (AWED), Marthandam Integrated Development Society (MIDS), Hallow Green Energy Solutions, JTR Fibres, and Vintech Systems for Promotion Start-Ups, Community Innovation, training, Incubation and related Services.

PROFESSIONAL BODIES

The professional bodies in Mar Ephraem specifically IET, IEEE, SAE and ISTE were active and have conducted various activities on the campus.

IEEE:

IEEE Chapter at Mar Ephraem, which is functioning under the leadership of Dr. Manjusha, Department of EEE, has organized a workshop on Introduction to PCB Design, Seminars on recent Computing & Wireless Sensor Technology and a guest lecture on Verilog Programming.

ISTE:

ISTE Chapter in Mar Ephraem, Coordinated by Dr. Reeba Rex, Department of ECE, has conducted various activities like Technical Quiz, Poster Presentation and Paper Presentation.

SAE:

SAE Collegiate Club Mar Ephraem, is Coordinated by Dr. John Irudhaya Raj , Department of Mechanical Engineering, has conducted various activities like Seminar and Automobile workshops.

IET:

IET Chapter in Mar Ephraem, Coordinated by Mr. Gijin Durai, Department of Mechanical Engineering, has conducted ASPIRE -22 Poster Presentation and Paper Presentation.

CELLS AND CLUBS

- NCC, NSS, Fine Arts Club, Youth Red Cross, Eco Club, Sports Club, Placement and Training Cell, Career Guidance Cell, Alumni Association, Counselling Cell, Green Energy Cell, Grievance Redressal Cell, OBC Cell, SC/ST Cell, Literary Club, Institute Induction Cell, Institutional Value Cell, IPR Cell, Entrepreneurship and Development Cell, Language Development Cell, and Jesus Youth are active in the campus aiming at the all-round development of each student.

Training and placement cell

- The Training and Placement Cell has organized various training programs to the students for enhancing their potentials and make them employable. Prof. Jackson Thanga Roy has been serving as the Training and Placement Officer.
- The Training and Placement Cell has organized training programmes in association with Gelbero IT Solutions and Moorthy's Training Academy, Bangalore.
- An industry institute interaction programme by Er. Navaneetha Selven, Senior Vice President of Essel Propack, Poland and a Career Awareness Programme by Mr. R. Sudarshan, Head – Livewire, Chennai were also conducted.

- As a harvest of the training programs conducted in our college, we have placed a total of 79 students so far in various reputed companies such as Essel Propack Poland, TCS, and Capestart.

NCC

NCC is functioning effectively in our campus under 11th Tamil Nadu Battalion NCC Nagercoil (11 TN BN NCC Nagercoil), since 25/11/2021, with a total intake of 80 cadets with the motto of Unity and Discipline. Prof. M. Manoj is the care taker of the Mar Ephraem NCC. Mar Ephraem NCC has organized special programmes on International Yoga Day, International Youth Day, Gandhi Jayanti Celebration, Swachh Bharat Abhiyan, National Unity Day, and Puneet Sagar Abhiyan.

NSS

National Service Scheme is active in Mar Ephraem campus Coordinated by Mr.Jerrrome, Department of Civil Engineering has implemented frequent activities during this academic year such as Voters ID registration for eligible students, Celebration of social justice day, Clean India and green campus program for faculty, students and local community.

Alumni Association:

Mar Ephraem Alumni Association is coordinated by Mr. G.L. Abishek, and the office bearers are Mr. Antony Kurien, Mrs. Sindhuja, and Mr. V. Bravin Ebanesh. The Executive committee meets once in every six months and General body meets once in every year. A virtual Alumni meet was conducted on 30/09/2022 and a total of 123 alumni were participated to sharing their industrial experiences with students and cherishing their memories.

Sports:

Mar Ephraem Sports Club is headed by Mr. Sam J Paulson organized various activities for the students to enhance the potentials in sports.

- Our College fencing team accomplished the Bronze medal in the Interzone Level conducted by Anna University.
- Our College Kho-Kho & Tennis teams are the Zonal winners and Hockey & Basketball Teams are the Zonal Runners in the Anna University Zonal Sports Meet 2023.
- We have secured the third place in Shuttle Badminton (Women) & Football in the Anna University Zonal Sports Meet 2023.
- Apart from this we have won two first, four second and seven third places in Zonal Athletics.
- We have bagged the Overall Second Prize for the first time in the Zonal Athletics meet conducted by Anna University.
- Our college Kho-Kho team has won the second prize in the Kanniyakumari Day Intercollegiate Kho-Kho Tournament.
- Our college Hockey team has won the second prize in the CM Trophy Hockey Tournament Conducted at Anna Stadium, Nagercoil.

The Literary Club

The literary club was inaugurated on 21 October 2022 by Thiru. Kumari Ezhilan . Ms.Shiny, Department of Science and Humanities is actively coordinating the club .Various activities were arranged to make the students aware on the importance of literature.

Women Grievance Redressal Cell:

Women Grievance Redressal Cell, coordinated by Dr. Seema, Department of Science and Humanities, has organized an awareness

programme on Today's importance for tomorrow's health and an introductory talk about functions of Women Grievance Redressal Cell.

Fine Arts Club

Mar Ephraem Fine Arts Club has coordinated by Mrs. Asha, Department of Science and Humanities,. The Club organized Pongal and Onam Celebrations. Kumari Day was celebrated on 1 Nov 2022 and was graced by the presence of Honourable IT Minister Mr. Mano Thankaraj, The honorable Vice Chancellor of Anna University Prof. Dr. Velraj, Mr. Vijay Vasanth, the honourable MP of Kanniyakumari Constituency and MLA's from Kanniyakumari and Tirunelveli District.

MAR EPHRAEM INSTITUTIONAL SOCIAL RESPONSIBILITY:

- Mar Ephraem organized 40 career guidance programs by Public Relation Department of our college, headed by Dr. Leo Bright Singh, Department of Mechanical Engineering, in the nearby schools and have also hosted training programs for the school teachers of Kanyakumari district.
- Mar Ephraem hosted Robotics training camp for the nearby rural school students. The training was carried out by the Mar Ephraem Robotics cell headed by Prof.Dr.V.Suresh, HoD ECE. More than 1000 students are benefitted.

From the inception of the Institution, Mar Ephraem College of Engineering and Technology has taken a lot of initiatives to uphold its goals for providing value-based education, general, specific and soft skills, initiating research activities, participating in community activities, establishing linkages and MoUs.

Successful and fruitful completion of each academic year is the result of the dedicated work of everyone on the campus. The management, teaching & non-teaching staff and the students have contributed their might unflinchingly. All

these have been made possible by the grace of the Almighty God who always leads our way Towards Light (ERGA LUMEN)

Let me conclude my report by thanking one and all for your co-operation and efforts.

Thank You