





CREATING TECHNOLOGY LEADERS OF TOMORROW ESTD 2002

# Jyothi Engineering College

Jyothi Engineering College (JEC), set up in 2002, under the aegis of Trichur Educational Trust, founded by the Catholic Archdiocese of Trichur, is one of the leading engineering colleges in Kerala. This college is affiliated to Kerala Technological University and offer various BTech, MTech, PhD programme in Engineering and Technology. The Archdiocese of Trichur has illustrious track record of a century and a quarter in the education sector.

The worlds of study and work have changed dramatically. Students of today require different sets of skills than those of previous generations. We are in the midst of the fourth industrial revolution and the predictions are that 85% of the jobs that will exist in 2030 have not been invented yet.

Jyothi Engineering College prepares students to become T-Shaped professionals, i.e., professionals who have in-depth expertise in their discipline as well as a breadth of competencies required in the twenty-first century. Industry seeks engineers with these skills. In order to train our students to become "T" shaped professionals, so that they are "future ready", we have set up an incubation centre, Integrated Industrial Incubation Centre (IIIC), in association with TATA Technologies.

Additionally for students desirous of being "job creators" rather than "job seekers", Jyothi Engineering College has also set up a Technology Business Incubator, JEC TBI, to help students create technology based new enterprises, foster an entrepreneurial spirit among students and commercialize R&D output.

Jyothi Engineering College offers a vibrant, beautiful, and green environment-friendly campus, and excellent infrastructure to students, to aid the teaching and learning process.





Creating eminent and ethical leaders through quality professional education with emphasis on holistic excellence.



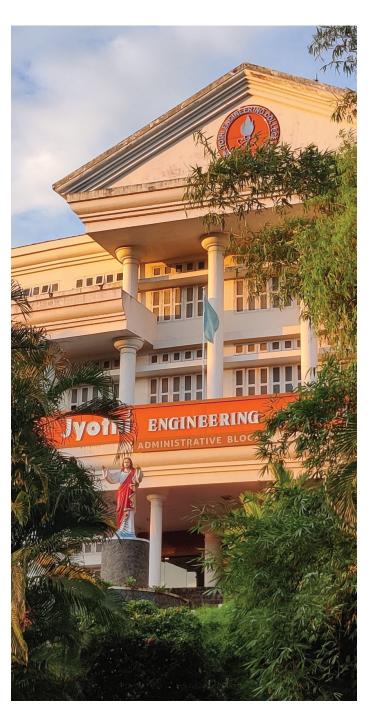
- To emerge as an institution par excellence of global standards by imparting quality engineering and other professional programmes with state-of-the-art facilities.
- To equip students with appropriate skills for a meaningful career in the global scenario.
- \* To inculcate ethical values among students and ignite their passion for holistic excellence through social initiatives.
- To participate in the development of society through technology incubation, entrepreneurship and industry interaction.



Creating Technology Leaders of Tomorrow.



- \* Faith in God and Man
- \* Love of Fellow Beings
- \* Belief in Universal Citizenship
- \* Moral Integrity
- \* Social Commitment



# Management Team



His Grace Mar Andrews Thazhath



Msgr. Jose Konikkara



Rev. Fr. Thomas Kakkassery Executive Manager



Rev. Dr. Jose Kannampuzha Director - Academics



Dr. Sunny Joseph Kalayathankal

# Courses Offered

#### BTech | MTech | PhD

#### Bachelor of Technology courses (BTech)

- 1. Civil Engineering
- 2. Computer Science and Engineering
- 3. Electronics and Communication Engineering
- 4. Electrical and Electronics Engineering
- 5. Mechanical Engineering
- 6. Mechatronics Engineering
- 7. Artificial Intelligence and Data Science
- 8. Robotics and Automation

#### Master of Technology courses (MTech)

- 1. Computer Science and Engineering
- 2. Power Electronics
- 3. Transportation Engineering
- 4. Communication Engineering and Signal Processing
- 5. Industrial Automation and Robotics

#### Doctor of Philosophy (PhD)

- 1. Computer Science and Engineering
- 2. Electronics and Communication Engineering
- 3. Electrical and Electronics Engineering
- 3. Mechanical Engineering
- 4. Mathematics





# Options available to JEC graduates

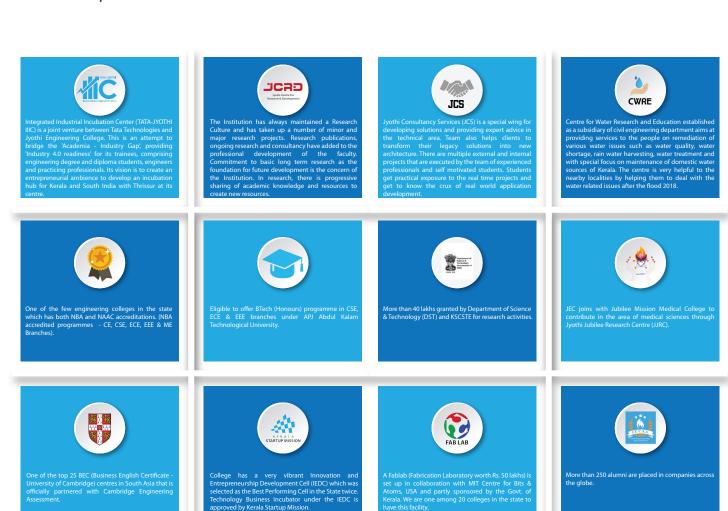
- \* Career opportunities in corporates
- \* Entrepreneurship
- \* Higher studies

# We would like to address three key questions:

- \* Why should a student join JEC?
- \* What will he or she gain?
- \* Why should industry place our students?



- \* Very good infrastructure
- \* Committed management
- \* Intellectual capital in the form of competent faculty
- \* NBA and NAAC accreditations
- \* Integrated Industrial Incubation Centre (TATA-JYOTHI IIIC)
- \* T shaped professional holistic development of the student
- \* Technology Business Incubator (TBI)
- \* Fabrication Laboratory (FABLAB)
- \* Host of student activities
- \* Safe and secure environment
- \* Beautiful green, environment-friendly campus spread over 30 acres of land
- \* Dedicated placement cell



# Jyothi Infrastructure

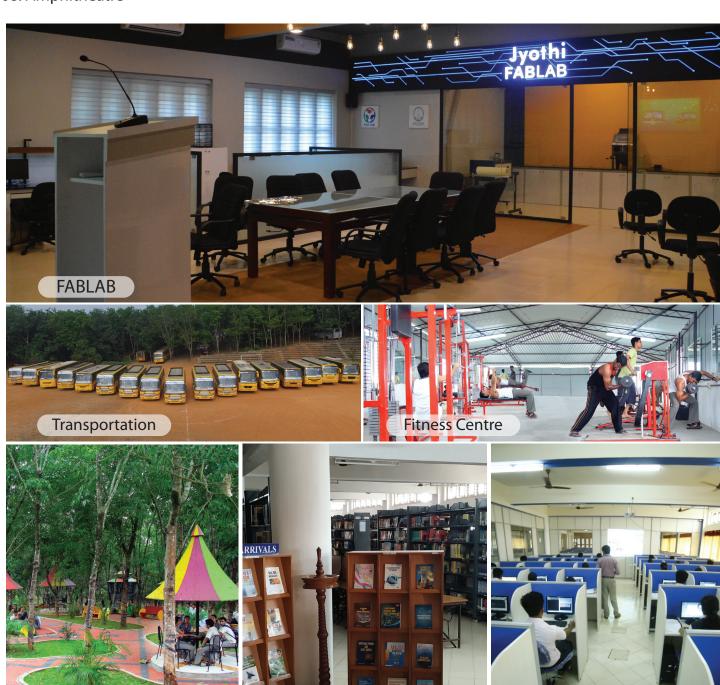
- 01. FABLAB
- 02. Computer Centre
- 03. Central Library
- 04. Gents and Ladies Hostels
- 05. Transportation
- 06. Canteen
- 07. South Indian Bank Extension Counter
- 08. Amphitheatre

Canteen

- 09. Fitness Centre
- 10. Centre for Water Research and Education
- 11. Technology Business Incubator
- 12. Language Lab
- 13. 63.7kWP Solar Power Plant for a green campus

Computer Centre

- 14. College Auditorium
- 15. Sports Complex



**Central Library** 

# **Committed Management**

- \* Jyothi Engineering College is a Centre of Excellence in Science & Technology founded by the Catho lic Archdiocese of Trichur situated in Cheruthuruthy, Trichur.
- \* The Archdiocese of Trichur has illustrious track record of a century and a quarter in the education sector. St. Thomas High School was established in 1889.
- \* St. Thomas College (Autonomous), Thrissur, is one of the leading centres of higher education in Kerala since 1919. This institution is older than all the Universities in Kerala and currently is one of the largest and most reputed Arts and Science Colleges in the State.
- \* The Archdiocese of Trichur has also set up Jubilee Mission Medical College & Research Institute.

# **Intellectual Capital**

- \* 125 + faculty with rich experience in academics and industry.
- \* Over 40 PhD holders.

### **Accreditations**

We at Jyothi Engineering College are aware that our stake- holders, including students and recruiters, look for reliable information on quality education offered. Jyothi Engineering College is a NAAC accredited institution affiliated to APJ Abdul Kalam Technological University, Kerala. The NAAC instrument is developed to objectively assess and grade institutions of higher education. Five of the undergraduate programs offered by Jyothi Engineering College have NBA accreditation, which indicates that we are well recognized for the quality of education we offer. We are periodically evaluated for this stringent NBA accreditation criteria to ensure we sustain the mandated quality levels.

### JEC is NAAC Accredited College

- \* The NAAC has been set up to facilitate the volunteering institutions to assess their performance vis-a-vis set parameters through introspection and a process that provides space for participation of the institution.
- \* NAAC's instrument is developed to assess and grade institutions of higher education through a clearly defined process and make the outcome as objective as possible.

### **JEC has NBA Accredited Programmes**

Accreditation is a process of quality assurance and improvement, whereby a programme in an approved Institution is critically appraised to verify that the institution or the programme continues to meet and/or exceed the norms and standards prescribed by regulator from time to time. It is a kind of recognition which indicates that a programme or institution fulfills certain standards.

#### **Our Accredited Programmes**

- \* Civil Engineering
- \* Computer Science and Engineering
- \* Electronics and Communication Engineering
- \* Electrical and Electronics Engineering
- \* Mechanical Engineering



### TATA-JYOTHI IIIC

- \* In line with our stated vision to be an innovation driven institution, JEC has set up an incubation centre, Integrated Industrial Incubation Centre (IIIC), in association with TATA Technologies. IIIC will offer various hi-tech courses to help make students industry ready.
- \* It is Tata's sixth IIIC in the country and the first in South India.
- \* The venture will introduce state-of-the-art knowledge and skills for students. It will enhance job opportunities. Students will also get internship opportunities in Tata Group of companies.

#### **IIIC Courses: 120 Hours**

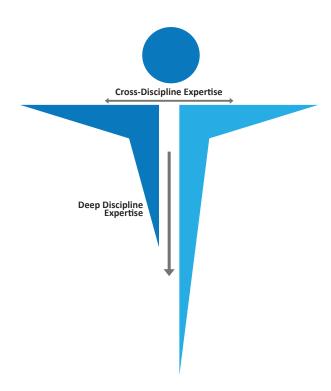
- \* Product Design and Development
- \* Design Engineering
- \* PLM Application Engineering
- \* Product Verification Analysis
- \* Electric Vehicle and Connected Autonomous Vehicle
- \* Electric Vehicle Repair and Maintenance
- \* IIoT Engineering
- \* Advanced Industrial Robotics
- \* Advanced Manufacturing Engineering
- \* Machine Tool Operator / CNC Operator



# **JEC "T" Shaped Professional**

The rise of "knowledge-based" businesses is fueling demand for a new type of employee. Organizations ideally want to hire employees with specialized technical knowledge, but who can also think broadly across disciplines, and apply their knowledge to new settings. These people are known as "T-shaped" workers – someone whose skills and knowledge are both deep and broad.

- \* T-shaped skills: T-shaped persons have qualities that make that employee valuable; they possess excellent knowledge of and skills in specific areas and are good at working with others in a collaborative way.
- \*T-Shaped professionals have in-depth expertise in their discipline as well as a breadth of competencies required in the twenty-first century. Industry seeks engineers with these skills. The vertical bar on the T-shaped person is an indication of the depth of knowledge and skills in their chosen engineering stream whereas the horizontal bar represents the person's competencies in interdisciplinary areas and life skills. This contextual knowledge helps in giving students a broader perspective.



- \* Deep knowledge only (I-shaped) experts are on their way out: specific knowledge can be bought. Experts with both in-depth expertise and broad general knowledge and skills, however, are in demand. These are the T-Shaped Professionals, who combine their knowledge with both strong right and left-brain skills, and the know-how to balance those effectively.
- \* The framework of the "T" shaped student is widely accepted in higher education.
- \* The vertical bar of the T represents a person's deep understanding of one subject matter mechanical engineering history, for example as well as one industry, perhaps automotive.
- \* The horizontal stroke of T-shaped people is the ability to work across a variety of complex subject areas with ease and confidence.
- \* The vertical bar on the 'T' represents the depth of skills and expertise in a single field. The horizontal cross-bar represents the ability to collaborate across disciplines with experts in other areas and to apply knowledge in fields of expertise other than one's own.

The annexure gives the entire list of Add-on courses being offered by Jyothi Engineering College.

# Jyothi Engineering College's curriculum will ensure the following programme outcomes to create "Future Ready" engineers:

- \* an ability to apply knowledge of mathematics, science, and engineering
- \* an ability to design and conduct experiments, as well as to analyse and interpret data
- \* an ability to design a system, component, or process to meet desired needs
- \* an ability to function on multi-disciplinary teams
- \* an ability to identify, formulate, and solve engineering problems
- \* an ability to communicate effectively
- \* a broad education necessary to understand the impact of engineering solutions in a global and societal context
- \* a knowledge of contemporary issues
- \* an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
- \* an understanding of professional and ethical responsibility



# **Technology Business Incubator (TBI)**

#### JEC TBI is promoted to achieve the following objectives:

- \* Creating Technology based New Enterprises
- \* Creating Value Added Jobs and Services
- \* Fostering the Entrepreneurial Spirit

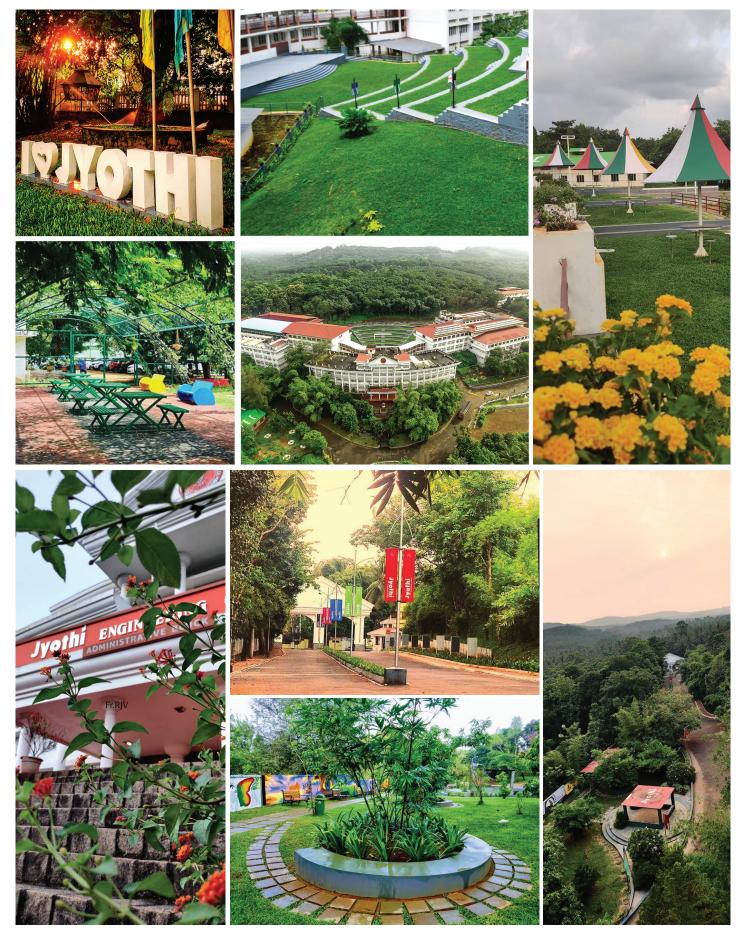
#### JEC TBI can provide following types of services:

- \* Market Survey/ Marketing Assistance
- \* Business Planning and Training
- \* Organizing Management/Technical Assistance
- \* Assistance in Obtaining Statutory Approvals
- \* Information Dissemination on Product Ideas/Technologies
- \* Help in Obtaining Finances
- \* Arranging Legal and IPR Services
- \* Using Facilities of JEC at Nominal Charges, including Workspace

# **Host of Student Activities**



# **Beautiful Green, Environment-Friendly Campus**



# Jyothi Placement





# Jyothi Scholarships (2022-23)

### Management Merit Scholarships to KEAM Rank Holders#

Rank	Scholarships
Rank 1 - 5000	Rs. 75,000/- per annum* *Full amount of tuition fee free
Rank 5001 - 10,000	Rs. 37,500/- per annum
Rank 10,001 - 15,000	Rs. 20,000/- per annum
Rank 15,001 - 20,000	Rs. 15,000/- per annum
Rank 20,001 - 25,000	Rs. 10,000/- per annum

# applicable for CE, ECE, EEE, ME, MR, RB branches



# Jyothi Engineering College: Add-on Courses (2021-2022)

#### TATA-JYOTHI IIIC Courses

- \* Product Design and Development
- \* Design Engineering
- \* PLM Application Engineering
- \* Product Verification Analysis
- \* Electric Vehicle and Connected Autonomous Vehicle
- \* Electric Vehicle Repair and Maintenance
- \* Mechatronics and Industrial Internet of Things (IIoT) Engineering
- \* Advanced Industrial Robotics
- \* Advanced Manufacturing Engineering
- \* Machine Tool Operator / CNC Operator

### Department of Artificial Intelligence and Data Science

- \* Data science and Machine Learning using Python
- \* Amazon Web Services (AWS) Training
- \* Big Data Analytics

#### Department of Civil Engineering

- \* Total Station
- \* Draftsman
- \* Project Management
- \* Certified AUTOCAD + Rivet
- \* Certified Civil Quality Controller
- \* Extended Three-Dimensional Analysis of Building System (ETABS)
- \* Mechanical, Electrical and Plumbing (MEP)
- \* Microsoft Supplier Program (MSP) Software Training
- \* Tekla

### Department of Computer Science and Engineering

- \* Data Science using Python
- \* Web Development Django
- \* Full Stack Web Development
- \* REACT JS/GIST
- \* Mobile App Development
- \* Cisco Certified Network Associate (CCNA)
- \* Cisco Certified Network Professional (CCNP)
- \* Cyber Security and Ethical hacking
- \* Advanced Programming
- \* Redhat Linux Administration

#### Department of Electronics and Communication Engineering

- \* Introduction to Arduino
- \* Design and Fabrication of PCB
- \* PSPICE Software
- \* VLSI Programming Courses-VHDL
- \* Introduction to MATLAB

### Department of Electrical and Electronics Engineering

- \* LED Lamp Assembling
- \* Electrical Equipment Repair and Maintenance
- \* Introduction to Energy Auditing
- \* Programmable Logic Controller (PLC) Programming
- \* Mechanical, Electrical and Plumbing (MEP)

### Department of Mechanical Engineering

- \* Introduction To Welding and Inspection
- \* Automotive Engine Systems and Alternative Fuels
- \* Computer Aided Design and Introduction to SolidWorks
- \* High Temperature Materials
- \* Mechanical, Electrical and Plumbing (MEP)
- \* Non-Destructive Testing Course
- \* Introduction to Automation
- \* Introduction to LabVIEW

## Department of Mechatronics

- \* Introduction To Automation
- \* Introduction to LabVIEW

### Department of Robotics

\* Drone and Humanoid Robots

#### **General Courses**

- \* Communication Skills and Personality Development
- \* Entrepreneurship and New Venture Creation
- \* Programming for Beginners
- \* Basics of Quality Engineering
- \* Business Analytics Basics
- \* Cost Engineering



# Educational Concerns Under The Aegis of Archdiocese of Trichur







Jyothi Engineering College Jyothi Hills, P. O. Vettikkattiri Cheruthuruthy, Thrissur Kerala, India - 679531









