

# AUGUST 2025 e-M.Tech.

ADMISSIONS

# ADMISSION OPEN

Indian Institute of Information Technology Kottayam



In the year 2025, the Indian Institute of Information Technology Kottayam launched the e-M.Tech. programme, a flexible, <u>self-paced</u> postgraduate programme comprising 60 credits, to be completed over a duration of 2 to 4 years. In the first year, students are expected to complete 26 credits of coursework. The second year is dedicated to a project carried out in two phases, with each phase carrying 14 credits. The programme allows students the flexibility to spread out their coursework across multiple semesters within the 2 - 4 years period, depending on their pace. However, the project component can be undertaken only after the completion of the required coursework. The total number of credits completed under the e-M.Tech. programme is equivalent to that of the full-time M.Tech. programme, ensuring parity in academic rigor and learning outcomes.

### Significance

The demand for engineers is steadily rising each year, and with the increasing competition in this field, possessing the right skill set has become a critical factor for selection. Skilled engineers are essential to building a knowledgeable and capable workforce for any country. They play a key role in enhancing existing technologies and introducing innovations aimed at reducing human effort and improving efficiency. Pursuing an M.Tech. degree after a Bachelor's allows individuals to explore both technical specialization and managerial roles in the engineering domain. The Indian Institute of Information Technology Kottayam offers and M.Tech. programme designed to help eligible graduates strengthen their technical expertise and enhance their career opportunities. A Master's degree not only deepens expertise in a specific technical area but also provides a competitive advantage in the professional landscape.

### **Programme Highlights**

- IIITK offers two programmes in e-M.Tech. -
  - M.Tech. in Artificial Intelligence, Machine Learning and Data Science
  - M.Tech. in Cyber Security and Digital Forensics
- Proficient faculty members with Research & Industry experience.
- Benefit from Case Studies, Simulations, Virtual Labs & Remote Labs that allow learners to apply concepts to simulated and real-world situations.
- Encourage and prepare engineers to present journal or conference publications during the duration of the programme.



- The thesis (Project Work) in the final two semesters enables students to apply concepts and techniques learned during the programme.
- <u>Course break</u> is possible by keeping the enrolment active.
- The programme uses a Continuous Evaluation System that assesses the learners over convenient and regular intervals.
- This programme can be extended to an integrated Ph.D. programme.

### Why IIIT Kottayam?

### • Entrepreneurial Ecosystem

IIIT Kottayam is designed to impart an entrepreneurial ecosystem on the campus. For instance, The Gyaan Innovation Lab of IIIT Kottayam is a powerhouse offering a range of services to support the product development process from ideation to design and prototyping to manufacturing. AIC-IIIT Kottayam, an incubation centre of IIIT Kottayam, is a vital resource to IIIT Kottayam students; AIC-IIIT Kottayam is a 10000 sq. feet incubation unit supported by AIM-NITI Aayog of India to the tune of Rs.3.46 crores. It has attracted connections with leading industries, including RELIANCE JioGenNext (Entrepreneurial Unit), to motivate our student start-ups and promote student/faculty exchange. In addition, it has established an Entrepreneurial Innovation Club jointly with Wadhwani Foundation, an MNC from Silicon Valley, USA. IIIT Kottayam, thus, helps students to continue championing their careers and attain goals with entrepreneurial support. It provides tens of thousands of opportunities for them to develop their business ideas or thesis to products through MSME schemes – For each successful business idea, our MSME Business Incubation unit could offer Rs.15 lakhs for students.

### • Memorandum of Understanding with top universities/industries

IIIT Kottayam has already established MoU with some leading industrial/academic institutions to ensure placements or organize knowledge transfer programmes. MoUs with the Government of India, and the Government of Kerala, have manifested the organization of the knowledge transfer programme. Indian Institute of Information Technology Kottayam and the University of Glasgow, United Kingdom are jointly working on a collaborative project titled "Internet of Things (IoT) for Intelligent Systems", funded by the British Council through its Going Global India Exploratory Grant. An MOU is made between the Indian Institute of Information Technology Kottayam (IIITK) and the Taiwan-India Joint Research Center on Artificial Intelligence ("CCU AI Center"), a research center supported by the Ministry of Science and Technology, Taiwan with the scope of collaboration on research activities include joint research projects on Artificial Intelligence and related technologies, online classes, student exchanges, faculty development programs, co-



supervision of Master Thesis and Ph.D. dissertations. In addition, IIIT Kottayam has signed an MOU with Berlin-based Edu Tech company, the German Academy of Digital Education (DADB).

As part of this MOU, a digital learning centre has been established at the IIITK campus, which aims to facilitate AR/VR immersive blended learning programmes for training for graduate engineers, academicians, and working professionals on 5G and advanced wireless communication skills. IIIT Kottayam is one of the few institutes from India which is working along with Microsoft for the benefit of the common man in the domains of Agriculture, and climate change and to make the world a better place to live in. The institute has also signed an MoU with the University of Agder (UiA), Norway, and the University of New Brunswick (UNB) Canada. IIIT Kottayam and UNB shall promote collaboration through a broad range of strategies such as Staff exchange, student exchange and study abroad programs at the undergraduate level, postgraduate level and summer schools, and joint programmes at both undergraduate and postgraduate. Aimed at associating with the Kerala Police in various cyber- and information technology-based projects, the Indian Institute of Information Technology (IIIT), Kottayam, has joined hands with the Kerala Police Cyberdome. IIITK has active Industry Tie-ups with IBM, TCS, UST Global, and NeST Digital. Other Active Collaborations include National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, Manorama Horizon for Online Certification Programs, etc.

### • Faculty Strength

IIIT Kottayam is composed of world-class, qualified faculty members who are eager to continue research and contribute to the Indian/International society along with their wards. They design the courses per the partnered industries' needs and international requirements.

They are passionate enough to mentor/guide students apart from their working hours while ensuring the technological growth of individuals.

### **Programmes**

### • Artificial Intelligence, Machine Learning and Data Science

In today's digital era—particularly in the post-pandemic world—a data-driven culture is crucial for the transformation and growth of enterprises globally. The strategic integration of Artificial Intelligence (AI) into business operations enables organizations to unlock new opportunities and gain a competitive advantage through intelligent decision-making.



The M.Tech. programme in Artificial Intelligence, Machine Learning, and Data Science at the Indian Institute of Information Technology Kottayam is designed to bridge the gap between theoretical knowledge and real-world application. The programme goes beyond traditional academic exposure to learning algorithms, recognizing that designing effective AI systems requires not only foundational knowledge but also practical skills, tools, and industry-relevant expertise.

This programme offers a comprehensive perspective on AI technologies, machine learning methodologies, and data analytics techniques. With a strong focus on hands-on experience and the programming tools central to data science, the curriculum is carefully curated to deliver a balanced blend of technological capability and business insight—empowering students to confidently pursue impactful careers in the evolving data science landscape.



#### • Cyber Security and Digital Forensics

Cyber Security and Digital Forensics play a vital role in safeguarding the digital infrastructure of modern society. While cyber security focuses on preventing unauthorized access, attacks, and data breaches across critical systems and networks, digital forensics involves the investigation and analysis of cyber incidents to uncover evidence and understand the nature of the breach. Together, they ensure not only the protection of data and systems but also support legal and regulatory frameworks by enabling traceability and accountability.



With increasing cyber threats in sectors such as finance, healthcare, government, education, and industrial systems, there is a growing demand for professionals skilled in both proactive defense and post-incident analysis. The e-M.Tech. programme in Cyber Security and Digital Forensics is designed to offer a comprehensive blend of theoretical foundations, hands-on technical training, and exposure to real-world scenarios. It equips students with the expertise to design secure systems, conduct forensic investigations, and contribute meaningfully to cyber resilience and justice in the digital world.

### Eligibility

Duration	Self-paced over Two to Four years
Intake	Maximum 60
Eligibility	The candidate must hold a B.Tech./BE/AMIE degree in any discipline, or an MCA, MSc/MS in CS/IT/Mathematics/Physics/Statistics, or a 4-year undergraduate degree (Hons. or Hons. with Research) in relevant subjects, with at least 60% aggregate in the qualifying examination.

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### **Important Dates**

Registration opens	05 May 2025
Release of online application form	20 May 2025
Last date for submitting online applications	23 June 2025
Announcement of Selection List for written test and interview	30 June 2025
Date of written test and interviews	01-06 July 2025
Announcement of selected candidates	07 July 2025
Last date for fee payment	12 July 2025
Online verification	14 & 15 July 2025
Orientation & Commencement of classes	01 August 2025

### **Course Mode**

- The classes, virtual lab sessions, and mid-semester exam shall be conducted in online mode.
  - End Semester Exam, as well as Final Project Review, shall be conducted in Offline mode. The offline exam centres will be the Off-Campus centre in Trivandrum, Main campus in Kottayam, Other centres such as Cochin, or Bangalore, subject to the availability of sufficient candidates and administrative feasibility.
- The time slot in which a course would be taught would be informed to students beforehand to help them in deciding on electives.
- Live recording, submission, and internal assessment will be under the in-house developed platform.

### To know more about us

Please visit us @

emtech.iiitkottayam.ac.in



### **Detailed Course Structure**

### e-M.Tech. in AI, ML and Data Science

Course Code	Course	L-T-P	Credits	
Semester I				
DSC511	Statistical Foundations for Data Science	2-0-0	2	
DSC512	Programming and Data Structures	2-0-2	3	
DSC513	Introduction to Data Science	2-0-2	3	
DSC522	Artificial Intelligence Engineering	2-0-2	3	
DSC523	Data Mining	3-0-0	3	
			14	
	Semester II			
DSC521	Mathematical Foundations for Data Science	2-0-0	2	
DSC611	Machine Learning: Principles and Practice	3-0-0	3	
DSCXXX	Designing MLOps for Enterprises	3-0-0	3	
DSCXXX	AI and ML for Big Data	1-0-0	1	
DSC613	Big Data Analytics	2-0-2	3	
			12	
Semester III				
DSC612	Neural Networks and Deep Learning	3-0-0	3	
DSC624	Natural Language Processing and Large Language Models	2-0-2	3	
CSE711	Project (Phase I)		14	
			20	
Semester IV				
CSE721	Project (Phase II)		14	
Total Credits			60	



### e-M.Tech. in Cyber Security and Digital Forensics

Course Code	Course	L-T-P	Credits
Semester I			
CBM511	Mathematical Foundations for Cyber Security	2-0-0	2
DSC512	Programming and Data Structures	2-0-2	3
CBM513	Computer Networks and Security	2-0-2	3
CBM524	AI, Machine Learning and Security	2-0-2	3
CBM613	Operating System Security	3-0-0	3
			14
	Semester II		
CBM521	Secure Software Engineering	3-0-0	3
CBM522	Information Security and Applied Cryptography	2-0-2	3
CBM616	Network, Wireless, IoT, Mobile & Security	2-0-2	3
CBMXXX	Digital Forensic	2-0-2	3
			12
Semester III			
CBMXXX	Malware, and Penetration Testing	2-0-2	3
CBM615	Blockchain Architecture and Applications	2-0-2	3
CBE711	Project (Phase I)		14
			20
Semester IV			
CBE721	Project (Phase II)		14
Total Credits	·		60



### **Frequently Asked Questions**

### 1. Who conducts the classes?

All classes are conducted by the IIIT Kottayam faculty. Industry experts are also invited for sharing their valuable experiences.

### 2. What is the Teaching Methodology?

The pedagogy is highly interactive and incorporates expansive teaching methods and approaches.

### 3. What PG Degree do we get?

On successful completion of the course, the candidates will be awarded <u>M.Tech. in Artificial</u> <u>Intelligence, Machine Learning and Data Science / M.Tech. in Cyber Security and Digital</u> <u>Forensics</u>.

### 4. Can I visit the campus and have face-to-face interaction with the faculty members?

Participants are welcome to visit the campus and meet the faculty members, with prior appointments.

### 5. What is the duration of the course?

*Four semesters,* which should be completed within a duration of a minimum of two years and a maximum of four years from the date of admission.

### 6. What do the minimum and maximum durations refer to?

Minimum duration is the minimum period required to get your degree. Maximum duration indicates that you have to finish your degree within that period failing which your academic programme will be terminated unless Senate approves any extension.

### 7. As a student enrolled for e-M.Tech., can I get any form of assistantship?

While the institute does not currently offer assistantships for e-M.Tech. students, you are welcome to explore financial support through external institutions.

Details: https://www.iiitkottayam.ac.in/#!/scholarship

### 8. What is the fee structure?

The course fee is ₹5,000 per credit (project work as well as coursework). The students are required to earn a minimum of 60 credits for the award of the M.Tech. Degree. Thus, the course fees come to a total of **3,00,000/-**



# 9. What is the eligibility for applying to MTech in (1) AI, ML & Data Science, (2) Cyber Security and Digital Forensics?

The candidate must hold a B.Tech./BE/AMIE degree in any discipline, or an MCA, MSc/MS in CS/IT/Mathematics/Physics/Statistics, or a 4-year undergraduate degree (Hons. or Hons. with Research) in relevant subjects, with at least 60% aggregate in the qualifying examination (as per **R 11.5** of Public-Notice-UG-and-PG-Regulations-2025, UGC, NCRF).

# **10.** Is the e-M.Tech. degree officially recognized and valid for academic or professional purposes?

Yes, the e-M.Tech. degree awarded by IIIT Kottayam is officially recognized, as the institute is an Institute of National Importance under the Ministry of Education, Government of India. The degree is valid for all academic and professional purposes.

Details: **<u>IIITK Statutes</u>** 

### 11. Is the e-M.Tech. degree equivalent to a regular M.Tech. degree?

Yes, the e-M.Tech. programme follows the same credit structure and academic rigor as the regular M.Tech., and the degree awarded holds the same academic and professional value.

- Equivalence of degree through ODL and Online Mode UGC Public Notice (2022)
- <u>Guidelines regarding Equivalency/Recognition Kerala State Higher Education</u> <u>Council (2018)</u>

# 12. I still have questions regarding admissions/PG degree programmes at IIIT Kottayam, whom shall I contact?

Please drop an email to pgadmissions@iiitkottayam.ac.in / registrar@iiitkottayam.ac.in

For more information or assistance, feel free to reach out to us:		
•	:	Indian Institute of Information Technology Kottayam Valavoor, Pala, Kottayam – 686635, Kerala.
<b>C</b> Phone	:	0482-220 2161 / 2268 / 2140 / 2149 / 2174 / 2200
🖂 Email	:	pgadmissions@iiitkottayam.ac.in, registrar@iiitkottayam.ac.in
Wisit us	s :	emtech.iiitkottayam.ac.in