



**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY KOTTAYAM**  
(An Institution under the Ministry of Education, Govt. of India governed by an Act of parliament)  
**Valavoor (PO), Pala, Kottayam, Kerala - 686635**

**Admission to Ph.D. Programme – January 2024**

**IMPORTANT DATES**

ONLINE APPLICATION PORTAL OPENS	23 <sup>rd</sup> October 2023
LAST DATE FOR RECEIVING APPLICATIONS	30 <sup>th</sup> November 2023
WRITTEN TEST/ INTERVIEW	14 <sup>th</sup> -20 <sup>th</sup> December 2023
CLASSES BEGIN	4 <sup>th</sup> January 2024

IIIT Kottayam invites applications from motivated and research-oriented students for the Ph.D. programmes starting in January 2024.

The major areas of research are as follows:

<b>Computer Science and Engineering</b>	Theoretical computer science, Cloud Data Security, Attack analysis using ML/DL, Health Informatics, NLP, IDS using ML/DL, Authentication protocol: Design and Analysis, Attack detection, analysis & mitigation using ML/DL, memory data security, Information Privacy and Security, Smart Home Automation Security, Network Vulnerability Detection and Intrusion Prevention, Digital Forensics and Crime Investigation, Hardware security, Cryptography, Applied Cryptography, IoT, Security and Privacy in IoT, Machine Learning, Deep Learning, AI in Agriculture, AI in IT Operations, Convergence of Machine Learning Blockchain and IoT, Evolutionary algorithms and their applications in ML/AI domains, Machine Learning/ Deep Learning for Social Good, Deep Learning /Medical imaging/Underwater Imaging/AI in agriculture, Responsible AI, Explainable AI, Data Science, Data Analytics, Data Mining, Optimization algorithms, Supply chain Optimization, Bioinformatics, Intelligent Transportation, Graph Learning, Distributed Computing, Federated Learning, Fog/Edge computing, Distributed Computing, Next Generation Wireless Networks, FPGA designs, Computer vision.
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<b>Electronics and Communication Engineering</b>	Signal Processing, Image Processing, Speech Processing, Machine Learning, Artificial Intelligence, Deep Learning, Materials Engineering, Nanoelectronics, Laser additive manufacturing, Optoelectronics, Ocean Optics, Instrumentation, Vibration Engineering, RF and Microwave Antenna Design, VLSI Design, Wireless Communications, Wireless Sensor Networks.
<b>Mathematics</b>	Deep learning Algorithms to Differential equations, Evolutionary algorithms and their applications in ML\AI domains, Mathematical & Computational Finance, Artificial Neural Network (ANN) Approximation Methods for Partial Differential Equations (PDE), Fluid Mechanics, Bio Fluid Mechanics (CFD), Applied Cryptography.

## **Categories of Ph.D. Students**

### **i) SCHOLARSHIP HOLDERS (FULL-TIME)**

A candidate with an assistantship/fellowship from INSPIRE/CSIR /UGC /NBHM/KSCSTE or any other recognized funding agency to do Ph.D can apply under this category. Such a candidate receives the assistantship or fellowship from the concerned funding agencies. The Institute does not provide any financial assistantship/fellowship to such candidates.

### **ii) SPONSORED (FULL-TIME)**

A candidate in this category is sponsored by a recognized R&D organization, academic institution, government organization, or industry or QIP candidates for doing research in the Institute on a full-time basis. The candidate must be a regular employee of the sponsoring organization with at least **one year** of professional experience in the respective field. The Institute does not provide any financial assistantship/fellowship to such a student. A sponsorship letter must be attached with the application.

### **iii) SELF-FINANCED (FULL-TIME)**

A candidate in this category works full-time towards the Ph.D. Programme. The Institute does not provide any financial assistantship/fellowship to such a student except teaching assistantship to a limited number, on a case-to-case/need basis.

### **iv) EXTERNAL REGISTRANTS**

A candidate of this category working in Industries/Institutes/Research Organisations can register as an External registrant and can pursue a Ph.D. Programme at IIIT Kottayam while continuing the duties of his/her service at the parent organization. The Institute does not provide any financial assistantship/fellowship to such a candidate. No Objection Certificate in the prescribed format must be attached with the application. An external registrant scholar is required to spend a one-semester residential program preferably in the first year, during the course work. Other academic regulations are the same as those applicable to regular students.

## **Eligibility Criteria for Admission into Ph.D. Programme**

For admission to the Ph.D. Programme, a candidate must satisfy the following criteria:

Computer Science and Engineering:	(i) Master's degree in Computer Engineering/Information Technology/Computer Applications/ECE or equivalent area with a minimum CGPA of either 6.5 on a 10-point scale or 60% of marks in appropriate branches. OR (ii) Four-year Bachelor's degree in Computer Science and Engineering/ Information Technology/Electronics and Communication Engineering from any IITs, NITs, IIITs
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	/ Other Institutions of National Importance with a minimum CGPA of either 8.0 in a 10 point scale or 75% of marks. Such students will be awarded both MS and Ph.D. degrees on completion of Ph.D. Programme without any exit option during the programme.
Electronics and Communication Engineering:	(i) Master's degree in ECE/EEE or equivalent area with a minimum CGPA of either 6.5 on a 10-point scale or 60% of marks in appropriate branches.  OR  (ii) Four-year Bachelor's degree in Electronics and Communication Engineering /Electrical Engineering from any IITs, NITs, IIITs /Other Institutions of National Importance with a minimum CGPA of either 8.0 in a 10 point scale or 75% of marks. Such students will be awarded both MS and Ph.D. degrees on completion of Ph.D. Programme without any exit option during the programme.
Computational Mathematics:	2 years M.Sc./Integrated M.Sc. in Mathematics/Mathematics and Computing/ Applied Mathematics/Statistics or an equivalent degree with a minimum of 60% aggregate in the qualifying examination.

### **APPLICATION FEE**

An application fee of Rs.**1000/-** for general/OBC and Rs.**500/-** for SC/ST/PWD/Female candidates will have to be paid through State Bank Collect.

### **SELECTION CRITERIA**

Selection of the candidate will be based on the performance in the written test and /or interview. Appearing for the test and/or interview does not entitle any candidate to admission to the Ph.D. programme.

Registrar