Advt. No: IIITS/Acad/Ph.D./2025/03/6182 06 March 2025

PhD Admissions (Full-Time) - MONSOON 2025

Indian Institute of Information Technology Sri City Chittoor (IIITS) was established by Government of India as an Institute of National Importance under the Act of Parliament along with Government of Andhra Pradesh and Industry Partners-Sri City Foundation and Sri City Pvt. Limited.

IIITS is located in Sri City (www.sricity.in), a decade-old state of the art industrial city located about 60 KMs North of Chennai on "Chennai – Nellore – Kolkata highway" (AH45). Sri City is spread over 8000 acres encompassing a multi-product Special Economic Zone (SEZ), Domestic Tariff Zone (DTZ), Free Trade & Warehousing Zone (FTWZ) and Electronics Manufacturing Cluster. Sri City is hosting over 120 companies from 27 countries. The institute has access to the industries and social infrastructure available in Sri City through the Industry Partner.

Established in 2013, IIIT Sri City Chittoor (IIITS) has emerged to be one of the top institutes among its peers due to academic and research advancements. The institute presently offers UG programmes in two disciplines- Computer Science and Engineering (CSE) and Electronics and Communication Engineering (ECE). It is proposed to offer Minors in the UG programmes in thrust areas such as Cyber Security, Smart Manufacturing, AI & Machine Learning, FinTech, Cyber-Physical Systems, Data Analytics, and so on. IIITS has a significant focus on research demonstrated through sponsored projects and scholarly publications. The institute offers MS and PhD programmes in both disciplines.

IIITS envisions to be a globally known institution for IT education, research and development. The institute has special thrust to attract and retain talented faculty members who can make a mark in teaching and research at the international level. The current faculty members at IIITS are from leading universities from India and abroad with excellent teaching and research credentials.

Candidates who got admission to PhD Programme (Full-Time) are eligible for the fellowship as per the institute/MHRD norms (At present INR 37,000 to 42,000)

1. PhD-Areas of Research:

CSE:

Agent based modeling & simulations, Algorithms, Authentication and Access Control, Cognitive modeling - relational patterns, Computational Geometry, Computer Architecture, Computer networks, Cryptography and Network Security, Cloud/SDN Security, Cybersecurity, Cyber Physical Systems, Data Analytics, Design

Automation of Electronic Systems, Distributed Algorithms, EEG Data Analysis, Embedded Systems, System architecture, Healthcare informatics, High performance computing, Human Computer Interaction, Image Processing and Computer Vision, Intelligent Control, Machine/Deep Learning, , Multi-objective optimization, Natural Language Processing, Security and Blockchain, Self Organizing and Self-Assembly Systems, Soft Computing, Spatial/Spatio Temporal/Multivariate Statistical modeling, Statistical and machine learning models for Environmental Applications, Text Data Mining / Information Retrieval, VR/AR, Wireless Sensor Systems, Human Robot Interaction, Unmanned Aerial Vehicles, Advanced Cryptography, AI driven intrusion Detection System, Bioinformatics and Computational Biology with Deep Learning, Bio-Medical Image/Data Analysis using Artificial Intelligence, Industrial Internet of Things, Edge Computing, Quantum Computing, Federated Learning, Document image and Video analysis, and OCR, AI and ML / DL for Data Science.

ECE:

Adaptive Driver Assistance System, Applications of Pattern Recognition, Biomedical Signal Processing, Cyber Physical Systems, Deep learning, Electromagnetic scattering, Energy harvesting, MEMS and VLSI Technology, Microfabrication, Microfluidics and micropumps, Passive components, Propagation modeling, Protocols for IoT, Sensor Technology, Speaker recognition, Speech/voice activity detection, Statistical Signal Processing, Vehicular Communication, Wireless Networks, Quadrotor Control, Renewable Energy, Performance analysis of nano scale molecular communication system with different channel conditions, Interfacing of Terahertz communication with in body communications for health care applications, 5G-OFDM Communication Systems, MIMO Communication system.

Mathematics and Data Science:

Theoretical and Applied Statistics, Remote Sensing, Geostatistics, Spatial and Spatio-temporal Statistics, Environmental Statistics, Non-stationarity and Non-Gaussianity Problems, Machine Learning, Neural Networks, Applied Mathematics, Numerical Solution of Partial Differential Equations - Neural Network Finite Difference/Element/Volume Methods, Computational Fluid Dynamics, Asymptotic Preserving IMEX-DG Schemes on Adaptive Grids for Multiscale Compressible Flows.

Eligibility:

I. Admission to Ph.D. in CSE:

a) Any branch (in BTech) with relevant MS/MTech degree; with Master's degree (M.E. /M.Tech) or MS by Research in CSE or related specializations and Bachelor's degree (B.E./B.Tech) or MCA, MSc in CS, Maths, statistics, or equivalent with a minimum of 60% (or above) aggregate marks (CGPA ≥ 6.5/10)

in UG and PG for admission under GEN/GEN-EWS/OBC-NCL category and 55% (or above) aggregate marks (CGPA of ≥ 6.0/10) for SC/ST/PwD candidates.

b) Direct PhD admission: Good Candidates having B.E / B.Tech in CSE or equivalent disciplines from CFTIs or Institute of National Importance or Top 200 NIRF ranking institutions with CGPA of 8.0 and above with demonstrated research potential by means of research papers, IPs and similar research outcomes may also be considered

II. Admission to Ph.D. in ECE:

a) Master's degree (M.E. /M.Tech) or MS by Research in Electronics, ECE, Instrumentation, EEE or related specializations and Bachelor's degree (B.E./B.Tech)/MSc Physics, Electronics or equivalent with a minimum of 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in UG and PG for admission under GEN/GEN-EWS/OBC-NCL category and 55% (or above) aggregate marks (CGPA of ≥ 6.0/10) for SC/ST/PwD candidates.

b) Direct PhD admission: Good Candidates having B.E / B.Tech in ECE or equivalent disciplines from CFTIs or Institute of National Importance or Top 200 NIRF ranking institutions with CGPA of 8.0 and above with demonstrated research potential by means of research papers, IPs and similar research outcomes may also be considered.

III. Admission to Ph.D. in Mathematics and Data Science:

Bachelor's and Master's degree in Mathematics/Statistics or equivalent discipline with a minimum of 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in UG and PG for admission under GEN/GEN-EWS/OBC-NCL category and 55% (or above) aggregate marks (CGPA of ≥ 6.0/10) for SC/ST/PwD candidates with a valid score in GATE or CSIR/UGC NET(JRF)/NBHM/INSPIRE. As of date, students selected under Mathematics and Data Science would work and get a degree under the CSE group.

PhD (Full-Time) Admission Process:

1. Candidates recommended by the Ph.D. Admissions Committee will be called to appear for a written test*.
2. The candidates shortlisted based on the written test performance need to appear for a personal interview before the Ph.D. Admissions Interview panel.

* Syllabus for the written test is given in Appendix I.

2. Application Fee:

Application Fee of Rs. 500/- for GEN/GEN-EWS/OBC-NCL category and Rs. 200/- for SC/ST/PwD candidates (to be paid through SB Collect only) and the transaction receipt must be uploaded in google form and attach a hard copy with the application. The details on the payment through SB collect are given below.

3. Last date for all Applications:

Candidates may submit the detailed application using the Google Form:

CSE Application form:

https://forms.gle/14VDwkNySb1bD41d6

ECE Application form:

https://forms.gle/CVs89xStNodagubo7

Mathematics and Data Science:

https://forms.gle/3V1hjNo8sXsTLHW1A

Last date for submission of applications via online with relevant documents is **10th April 2025**.

For any further queries, you may write an email to phd.admissions@iiits.in

4. Fee Payment Through SB Collect:

- Payment through State Bank Collect portal only
- Applicants have to visit **the below link** and follow the process https://www.onlinesbi.sbi/sbicollect/icollecthome.htm
- Select - Educational institutions
- Select - Andhra Pradesh
- Select - Indian Institute of Information Technology Sri City Chittoor
- Select - PhD Application Fee
- Enter Name and other details. Click Submit
- Choose your Payment option
- Pay Application Fee
- Please download receipts generated in SB collect for record
- Please upload SB collect payment receipt while filling up the application form (Google Form link is given above) for the payment confirmation

5. Additional Information:

The Fee structure for the candidates who got admission (Full-Time) is given below. Admission fee and caution deposit has to be paid only when joining the PhD program. Further, applicable fees must be paid at the beginning of each semester.

Fee Structure:

Fee Category	Amount
Admission Fee	Rs. 17,000.00 (non-refundable) - one time payment
Caution Deposit	Rs. 20,000.00 (refundable after successful completion of the program)
Tuition Fee	Rs. 25,000.00 per Semester
Hostel Fee	Rs. 33,000.00 per semester
Accidental insurance and other benefits	Rs. 2600.00 per annum
Mess Fee*	Rs. 35,000.00 per semester
Note:	
1. Hostel and Mess Fees are applicable only if the candidate is using the IIIT Sri City accommodation and Mess facility.	
2. These fees are subject to revisions from time to time.	
3. Hostel charges include Rent, Electricity and Maintenance charges (subject to actuals)	
*Mess Fee is subject to actuals.	

Contact us:

Mr. Jothish	phd.office@iiits.in

Disclaimer: The Institute reserves the right to accept/reject any or all applications without assigning any reason and also the institute reserves the right to modify/cancel the application/admission process at any point in time without assigning any reason.

Appendix I

Syllabus for Written Test:

Computer Science and Engineering:

Discrete Mathematics: Propositional and First-order Logic. Sets, Relations, Functions, Partial Orders, and Lattices, Groups, Graphs: Connectivity, Matching, Coloring Combinatorics: Counting, Recurrence Relations, Generating Functions.

Probability: Random Variables. Uniform, Normal, Exponential, Poisson, and Binomial Distributions. Mean, Median, Mode, and Standard Deviation. Conditional Probability and Bayes Theorem.

Computer Programming: Programming in C, Scope of Variables, Loops, Functions, Structures, Pointers, Dynamic Memory Allocation, File Management.

Data Structures: Stacks, Queues, Linked Lists, Trees, Binary Search Trees, Binary Heaps, Graphs.

Algorithms: Searching, Sorting, Hashing. Asymptotic Worst-case Time and Space Complexity, Algorithm Design Techniques: Greedy, Dynamic Programming, and Divide-and-Conquer. Graph Search, Minimum Spanning Trees, Shortest Paths.

Operating System: Processes, Threads, Interprocess Communication, Concurrency, and Synchronization, Deadlock, CPU Scheduling, Memory Management, and Virtual Memory, File Systems.

Computer Networks: Concept of Layering, LAN Technologies (Ethernet), Switching, TCP/UDP and Sockets, Congestion Control, Application Layer, Network Security: Authentication, Basics of Public Key and Private Key Cryptography, Digital Signatures and Certificates

Electronics and Communication Engineering:

Basic electronics
Circuit laws, theorems (superposition, thevenin and norton, max power), passive elements, transients (RL and RC circuits) and op-amps and applications, filters active and passive). Diode characteristics, half-wave and full-wave rectifier. Transistors, and amplifiers.

Electromagnetics
Maxwell's equation, boundary conditions, time-varying fields, wave propagation in different media, transmission line basics, terminated transmission line and the special cases, antenna characteristics, FRIIS transmission equation and radar range equation.

Digital logic design
Combinational logic: Logic circuits of Code Converters such as Binary to Gray Code Converter, BCD converter etc., K-maps, multiplexers, decoders, PROMs and PLAs Sequential circuits: Latches and flip-flops, counters and shift-registers Data converters: sample and hold circuits, ADCs and DACs; Memories.

Signal Processing
Classification of signals and systems, basic deterministic signals, Linear systems and convolution, frequency domain representation of continuous and discrete signals, sampling theory, z-transform, circular convolution, discrete Fourier transform, Fast Fourier Transform, Digital filter design and implementation.

Analog and Digital Communication
Basics of Analog and Digital modulation, Basics of Cellular, Interference, Noise, Channel, Wireless channel fading, Shannon Capacity.

Embedded Systems
Basic Definitions, Embedded - C concepts, Python Programing, Real-Time Operating systems, microcontroller and its submodules. Additional topics: Knowledge on hardware boards like Arduino and Raspberry Pi, sensors and actuators.

Mathematics and Data Science:

Algebra
Groups, subgroups, normal subgroups, quotient groups, homomorphisms, cyclic groups, permutation groups, Cayley's theorem, class equations, Sylow theorems. Rings, ideals, prime and maximal ideals, quotient rings, unique factorization domain, principal ideal domain, Euclidean domain. Polynomial rings and irreducibility criteria. Fields, finite fields, field extensions.

Linear Algebra
Vector spaces, subspaces, linear dependence, basis, dimension, algebra of linear transformations. Algebra of matrices, rank and determinant of matrices, linear equations. Eigenvalues and eigenvectors, Cayley-Hamilton theorem. Matrix representation of linear transformations. Change of basis, canonical forms, diagonal forms, triangular forms, Jordan forms. Inner product spaces, orthonormal basis. Quadratic forms, reduction and classification of quadratic forms.

Real Analysis
Elementary set theory, countable and uncountable sets, Real number system as a complete ordered field, Archimedean property, supremum, infimum. Sequences and series, convergence, limsup, liminf. Bolzano Weierstrass theorem, Heine Borel theorem. Continuity, uniform continuity, differentiability, mean value theorem. Sequences and series of functions, uniform convergence. Riemann sums and Riemann integral.

Complex Analysis
Analytic functions, Cauchy-Riemann equations. Contour integral, Cauchy's theorem, Cauchy's integral formula, Liouville's theorem, Maximum modulus principle, Schwarz lemma, Open mapping theorem. Taylor series, Laurent series, calculus of residues.

Ordinary differential equations
Existence and uniqueness of solutions of initial value problems for first order ordinary differential equations, singular solutions of first order ODEs, system of first order ODEs. Systems of first order differential equations, equations with regular singular points, stability of linear systems.

Probability
Random Variables. Uniform, Normal, Exponential, Poisson, and Binomial Distributions. Mean, Median, Mode, and Standard Deviation. Conditional Probability and Bayes Theorem.