eict
IIT Roorkee

ELECTRONICS
&
ICT ACADEMY
IIT ROORKEE

Ministry of Electronics
&
Information Technology
Government of India

❖ Empowering Faculty and Working Professionals
❖ Building Technical Excellence

ELECTRONICS INDIA
Billion Needs Million Chips

सत्यमेव जयते

About Electronics and ICT Academy

Electronics & ICT Academy IIT Roorkee (E&ICT IITR), provides certification courses with emphasis on hands-on learning in basic/advanced topics and emerging technologies in the Electronics and ICT domain. It is sponsored by the Ministry of Electronics and Information Technology, Govt. of India. We conduct certification courses/short courses/FDPs in emerging areas to enrich & upgrade subject knowledge and technical skills benefiting students, working professionals, Govt. employees, and Faculty members.

India is fast emerging as a world power in Electronics and Information & Communication Technology. To complement the growth of this sector, there is an increasing demand for competent and trained talent. At IIT Roorkee, we are happy to be a part of this national initiative to enable upgradation and upskilling of faculty and working professionals, supported by MeitY. The programs of E&ICT Academy at IIT Roorkee are aimed at filling the gap between industry and academia by promoting an industry oriented approach to learning, as well as a greater interaction of the participants with specialists and professionals in the emerging areas of E&ICT.

Prof. Kamal Kishore Pant
Chairman E&ICT Academy

Electronics & ICT Academy IIT Roorkee offers industry oriented handson courses in the emerging areas of ICT. In addition to the experts from academia, the Academy has signed MoUs with well-known industry partners in different domains, who collaborate and work with us in conducting the programs. Academy also facilitates the interaction between beneficiaries and industry experts to enable collaboration and finding opportunities for parent institutions. and finding opportunities for parent institutions.

Prof. M.V. Kartikeyan
Chairperson, E&ICT Academy

The E&ICT courses lay special emphasis on hands-on learning with participation from industry in the emerging areas of E&ICT domain. The programs are conducted by well-known industry partners, resource persons from leading academia, and experts from R&D organizations. Our programs enable the participants and institutes to build industry connects, upgrade lab facilities and create opportunities for collaboration. As of now we have conducted more than 175 courses and trained over 15000 + beneficiaries successfully.

Prof. Sanjeev Manhas
Principal Investigator, E&ICT Academy

COORDINATORS

Prof. M.V. Kartikeyan
Prof. Sanjeev Manhas
Prof. Anand Bulusu
Prof. Meenakshi Rawat
ECE Department, IIT Roorkee
Prof. Sudip Roy
CSE Department, IIT Roorkee

Features of the
Academy

- ❖ Offers Short term & Advance Courses in the emerging areas of Electronics & ICT such as AI, ML, IoT, 5G. Embedded Systems, Renewable Energy, etc.

- ❖ Emphasis on hands-on learning with experts from the industry using the latest tools and hardware with experts from industry.

- ❖ Exposure to industry focused learning with experts from academia as well as industry and opportunities to interact or connect with industry /R&D experts.

- ❖ Enhance teaching and research capabilities by upgrading knowledge and skills in emerging technologies.

- ❖ Courses offered both at IIT Roorkee and through activity centers locally at Institute/Organisations.

- ❖ Creating state of the art facilities in participant's parent institute.

- ❖ Continuing Education Programs for engineering graduates and working professionals to transform their knowledge and technical proficiency.

Lab Facilities

- ❖ Smart Classroom
- ❖ Multipurpose Lab
- ❖ AI Lab
- ❖ Advanced Microwave Laboratory
- ❖ Solid State Devices Laboratory
- ❖ VLSI Design Laboratory
- ❖ Information Security Lab
- ❖ Network Security Lab
- ❖ Data Mining Lab
- ❖ Communication Systems Laboratory
- ❖ Signal Processing Laboratory
- ❖ Wireless Communications Laboratory
- ❖ Digital Electronics Laboratory
- ❖ Radio Frequency Integrated Circuit Laboratory
- ❖ High Performance Computing Lab
- ❖ Microelectronics Laboratory
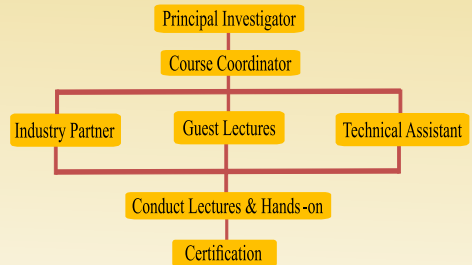- ❖ Institute Computer Center
- ❖ Central Library

- Artificial Intelligence
- Machine Learning
- Deep Learning
- Cloud Computing
- IoT and its Applications
- HPC and Parallel Programming
- Big Data Developer
- Data Analytics with Python
- Network & Cyber Security
- Ethical Hacking
- Nature-Inspired Optimization Techniques
- 5G Communication
- HDLs and FPGA based Design
- CAD for VLSI
- VLSI Circuit Design
- VLSI Devices and Technology
- IC and Nano Fabrication Techniques
- ARM & Embedded Systems
- Renewable Energy
- Testing & Verification
- Programming
- Mobile app development with iOS, Android, and Windows

- ⱱ Full Stack Software Development
- ⱱ Cloud Computing and DevOps
- ⱱ Applied Data Science & Machine Learning with Python
- ⱱ Advanced Certificate in Data Science & AI
- ⱱ Advanced Certificate in Machine Learning & AI
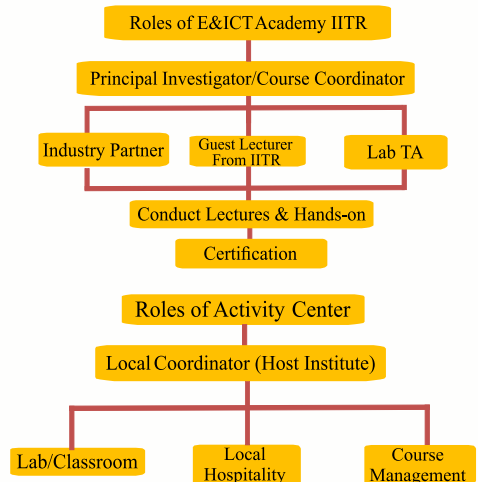
Mode of Conducting Courses

Hybrid Mode
- Conventional classroom courses
- Course duration one week (40 Hrs.)
- Program is split into lectures and hands-on sessions equally.
- Certificates to participants by E&ICT Academy IIT Roorkee

Hybrid (Activity Centers/ Advanced Certificate Programs)

- ⱱ Conventional Classroom Courses
- ⱱ Online (Instructor–led) Courses
- ⱱ Activity Center should provide minimum 40 participation count
- ⱱ Lab/Classroom with sitting capacity of 40–45 participants
- ⱱ Course duration evening/week day (40 Hrs)
- ⱱ Certificates to participants by E&ICT Academy IIT Roorkee

E&ICT at A Glance

Address to the participants for the course on "High Performance Computing, Parallel Programming and Administration" with our industry partner Wipro, at IPEC Ghaziabad.

Valedictory program for short term course on "Wireless and Mobile Communication" at Indian Institute of Technology Roorkee, Uttarakhand.

E&ICT Multi-Purpose Lab fully equipped with FPGA, IoT, ARM kits and server facilities.

E&ICT Smart Classroom with video conferencing, recording and streaming facilities.

Testimonials

Tripti Goel
National Institute of Technology, New Delhi

This was the really good experience of learning in the field of pattern recognition and image analysis the course content was really very good, starting from the basic to the more innovative research ideas on biometrics and image analysis. Excellent learning in short time.

Ashok Kumar
GBPUAT Pantnagar, Uttarakhand

Excellent faculty development program for beginners and scholars too. Good lab demo and excellent instructors in E&ICT IITR. People may join any FDP/Workshop conducted by E&ICT Academy, they will never disappointed. iI personally liked it.

Sheena Baburaj
School of Engg., Cochin Univ. of Sc. & Tech., Kochi

Really informative learning platform ,full of experts. Good course not only for beginners in research but also helpful to meet many image processing research experts. Excellent experience of attending this course.

Harshal Gunwant
The Doon School, Dehradun

This was wonderful experience of learning in the field of " Machine learning and Deep learning ". The course content was very good , I can also implement in my research . Overall the program was very good in short duration, thanks to the brilliant team.

Dr. Jagpal Singh Ubhi
Sant Longowal Institute of Engineering & Technology, Punjab

The hand-on practice on the cadence tool was excellent and complemented what has been taught in the theory session. All the theory session was very good and the module on memory organization and peripheral was excellent

INDUSTRY PARTNERS

ACTIVITY CENTERS

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