

About the Course

The short-term course “Trusted Circuits: Foundations and Frontiers of Hardware Security” offers an intensive five-day exploration of the principles and practices that protect modern electronic systems. From understanding cyber threats and hardware attacks to learning secure chip design with Verilog, the program combines expert lectures, hands-on labs, and future-focused discussions. Participants will gain practical skills in safeguarding integrated circuits, firmware, and trusted hardware primitives — empowering them to help “Secure the Chip, Secure the Future.”

Course Content

This course is intended to cover the following topics:

- Introduction to Cybersecurity and Hardware Security
- Attacks on Hardware Systems: IC, PCB, Memory, and Firmware
- Hardware Design Lifecycle Threats
- Hardware Trojans: Insertion, Detection, and Impact
- Logic Locking and Obfuscation
- Side-Channel Attacks and Countermeasures
- Introduction to Verilog for Secure Hardware Design
- Hands-on Lab: Verilog Programming for Security Applications
- Physical Unclonable Functions (PUFs) and Trusted Hardware Primitives
- Future Directions in Hardware Security and Trust

Go Beyond the Course!

Excel here and you could secure your future at NIT Rourkela. We offer potential opportunities for M.Tech research, internships, and PhD programs to our most promising participants.

About NIT-Rourkela



The National Institute of Technology, Rourkela (NITR), formerly the Regional Engineering College, is a premier public institution dedicated to higher learning in engineering, science, and technology. Located in the industrial "Steel City" of Rourkela, Odisha, it is one of India's 31 National Institutes of Technology and is officially recognized as an Institute of National Importance. Affirming its status as a top-tier university, NIT Rourkela secured the 13th rank among Indian engineering institutions in the NIRF Rankings 2025, cementing its reputation for academic and research excellence in the nation.

Patron

Prof. K.Umamaheshwar Rao
(Director of NIT Rourkela)

Chairman

Prof. Bibhudatta Sahoo
(HoD, Dept. of CSE, NIT Rourkela)



इलेक्ट्रॉनिक्स एवं सूचना प्रौद्योगिकी मंत्रालय
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
सत्यमेव जयते

One-Week Short-term Course
(Hybrid)

On

Trusted Circuits (TCF2HSec25)
Foundations & Frontiers of Hardware Security



Dec 1st 2025 to Dec 5th 2025

Organized by:

Department of Computer Science and Engineering
National Institute of Technology Rourkela

www.nitrkl.ac.in

About Department of Computer Science & Engineering



The Department of Computer Science & Engineering, NIT Rourkela was established in 1982. Since its inception, the Department is under dynamic progress and is able to establish the reputation for imparting quality education both at undergraduate and graduate programs. The department also offers Ph.D. for regular as well as sponsored candidates. The department has well-equipped modern laboratories such as Software Engineering, Distributed Object Systems, Information Security & Data Communication, Image Processing & Cluster Computing and Advanced Database Engineering Labs for pursuing research keeping in view of the technological advancement.

Targeted Participant

The course is highly relevant for UG, PG, and Ph.D. students interested in Hardware Security. Participants from Computer Science, Electronics, Electrical Engineering, and related fields will benefit greatly. It is also valuable for academicians and industry professionals seeking to deepen their understanding of emerging trends and challenges in hardware security.

Note : 60 seats available on First Come First Serve Basis

Pre-requisite

- Laptop (with Internet)

Important Dates

Last date of Registration	15th November 2025
Course Schedule	1-5 December 2025

About Location

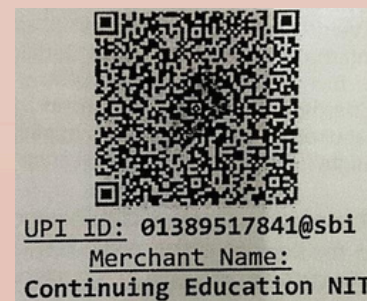
NIT-Rourkela is well connected by Rail. This institute is located at a distance of about 7 KMs from Rourkela Railway Station in Odisha State. Rourkela station is well connected by Kolkata, Chennai and Mumbai and Bhubaneswar.

Registration details

- The students of NIT Rourkela are exempted from the payment of the registration fee. (Max Seat 10)
- **Registration fee:**
 1. **Non-NITR students : INR 1000+GST.**
 2. **Academician : INR 2000+GST.**
 3. **Industry Personal : INR 3000+GST.**

Amenities offered

- Welcome Kit (for Offline Candidates)
- Refreshments during the course
- Accommodation (Non-NITR) on Payment basis
- Certificates upon completion of the course



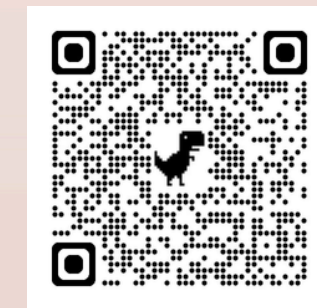
Payment Details

Account Name	CONTINUINGEDUCATION NIT ROURKELA
Account No.	10138951784
Bank	State Bank of India
Branch	NIT Campus Rourkela
IFS Code	SBIN0002109

Registration Form

To complete online registration, the participants need to fill out the following google form:

<https://forms.gle/5C6Be8hYdoGbTyhr6>



Certificates will be provided to the registered participants upon successfully completing the course.

Course Coordinator :

Prof. Shyamapada Mukherjee

Contact : 0661-2462357

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Course Co-Coordinator:

Prof. Sumanta Pyne

Prof. Dev Narayan Yadav

Student Coordinator:

Ishank Yadav

Indhira Aaradhya

Contact : 9993933902