

## Faculty Development Programon

### Network Security

(Course offered by IIT/ NIT Faculty with NIT Raipur as Remote Center through NKN)

#### About Courses

Faculty Development Programmes in core areas of Electronics and Information & Communication Technology (ICT) streams have been planned by academies for delivery during summer. **Network Security** course will be delivered at **NIT Raipur** as remote centres through NKN infrastructure/video conferencing from IIT/ NIT.

S. No	Course Name	Principal Coordinating - Academy	Co-principal Coordinating - Academy	From date	To date
1	Network Security	MNIT Jaipur	NIT Warangal	20.05.2019	24.05.2019

#### Target Beneficiaries:

Interested faculty of engineering/technical institutions are eligible to attend this course.

#### Course duration:

Each course is designed as 3 credit equivalent for 40 hours (Theory Lectures, Hands-on/Design orientation/Activity linked problems/Assignments Problem Solving/Case Studies sessions/Quiz Tests)

#### Travel:

No Travel Allowance will be paid to the participants.

#### Registration Fee for the Course:

No Registration fee is charged for attending this programme planned at any designated academies/Remote centres. However, candidate should submit a **refundable Demand Draft** of Rs.1000/- along with application form and the same will be handed over to the participant on the last day of the training. Satisfactory Certificate will be given to the participants subject to fulfilment of attending all sessions, submission of assignments and clearing the test(s).

#### Mode of Payment:

Academy Name	Payment through DD
IIT Guwahati	Demand Draft in favor of " <b>Registrar, IIT Guwahati</b> " Payable at Guwahati

#### How to apply:

- Please keep the following scan documents ready before registering (maximum size of file up to 1 MB):
  - 1) Scan copy of institutional ID (file name as "full name\_id.pdf")
  - 2) Scan copy of Demand Draft, if applicable (file name as "full name\_dd.pdf")

For Registration of the course go to the following link:

Under <https://bit.ly/2JCWI9W>, it would take you to google doc where you can make necessary entries and upload the scanned documents.

- Address of Local coordinator:  
Dr. Rakesh Tripathi, Assistant Professor, Dept of Information Technology, NIT Raipur.

E-mail: rtripathi,it@nitrr.ac.in, Mobile:9340105510

	Network Security (20-24, May 2019)
<b>Last Date for Submission of Application form</b>	<b>17th May, 2019</b>
<b>Selection list Intimation by E-mail/Display in web site</b>	<b>18th May, 2019</b>

## Module Details of Network Security

S.No	Module Name	Topics
1.	Network – Basics	Introduction to computer networks, Why TCP/IP model?, Introduction to Security; What are different securities? Basic Concepts - Network layers, attacks and securities.
2.	Blockchain Security and Websecurity	Introduction to blockchain technology and why it is so important? for networks. Introduction to web security model– why web security is important?, Web attacker, Network attacker and malware attacker, application layer protocols - HTTP, SMTP and etc.Document Object Model (DOM), Port scanning behind the firewall, Remote scripting, Isolation, and etc. Browser security, Communication, security user interface- When is it safe to type password? Mixed content, HTTP and HTTPS, Lock Icon 2.0 and cookie security policy.Block chain technology for Networks; Web application security - SQL injection, CSRF, XSS and etc.
3.	Network Security - I	Security issues in IP protocols- HTTPS, TCP, DNS and etc Network defense tools: Firewalls, VPNs, Intrusion Detection, and filters
4	Network Security - II	Routing layer attacks - ICMP, SBGP, MPLS and etc. and modern networks and security issues.Case studies/Demo- Modern Network security applications (IP Sec, SDN, NFV and etc.)
5.	Cloud and Future Networks security	Software defined network and attacks, NFV and etc. Cloud security Issues; IoT based attacks; Next Generation security issues
6.	Electronic Mail Security; Firewalls and Web Security	Distribution lists Establishing keys Privacy, source authentication, message integrity, non-repudiation, proof of submission, proof of delivery, message flow confidentiality, anonymity o Pretty Good Privacy (PGP); Packet filters Application level gateways Encrypted tunnels Cookies Web security problems