

DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

**Advanced Certificate Programme in Networking and Wireless Communications
(ACP-NWT)**

9-Months, Full-time

To meet increasing demands on fast growing communication requirements, large carrier class wire-line and wireless networks need to be designed with convergence of voice, data and video. Such Wide Area Networks (WANs), Metropolitan Area Networks (MANs) and Local Area Networks (LANs) must provide multiple services with high Quality of Service (QoS) and security as demanded by corporate, institutions and individuals. Convergence is redefining the boundaries of data, voice, multimedia and video services. Consumer market for broadband applications such as combined voice, data, multimedia, video gaming, voice over Internet Protocol (VoIP) and entertainment signal transport puts huge demand on the network infrastructure, Network Management and the allied services. To cater for this demand, service providers are actively moving towards IP-based Next Generation Networks (NGNs), where transport over IP networks is done by using optical fibre networks, fast routing algorithms and traffic engineering using Multi-protocol Label Switching (MPLS) and other techniques. Also content development and providing large storage capacity are the challenges for the service providers. There are possibilities of revenue enhancements by offering multi-play services over broadband and wireless networks and also challenges to cater for huge customer demands maintaining Quality of Service. This 9-months Advanced Certificate Programme is designed to prepare students in terms of value addition in the upcoming areas and getting industry ready. Our institute has signed Memorandum of Collaboration (MoC) with Red Hat Academy, HP Institute, ORACLE University, Airtight Networks and EMC² as knowledge partners so that students can acquire additional certification as per their interest, work for internship/projects to get hands-on experience to get industry ready for the challenging opportunities.

Course Structure

Level - I

Course code	Course name	Credits
NWT-001	Communication Networks	[2 T+1 L]
NWT-002	Programming / Scripting Languages	[2 T+1 L]
NWT-003	Switching & Routing technologies	[2 T+1 L]
NWT-004	Wireless Networks	[2 T+1 L]
NWT-005	Server & Systems Administration	[2 T+1 L]
NWT-006	Operating Systems & Database technologies	[2 T+1 L]
SSD-001	Soft Skills Development - I	2 T
Total credits		20

Level - II

Course code	Course name	Credits
NWT-007	Storage Area Networks	[2 T+1 L]
NWT-008	Network Management & Security	[2 T+1 L]
NWT-009	Network Programming	[2 T+1 L]
	Electives (Any two)	[4 T+ 2 L]
NWT-010	Mini-Project	3
SSD-002	Soft Skills Development - II	2
Total credits		20

Electives

Course code	Course name	Credits
NWT-011	Next Generation Networks	[2 T+1 L]
NWT-012	Voice Over IP	[2 T+1 L]
NWT-013	3G and 4G Networks	[2 T+1 L]
SCT-008	Linux Kernel Programming	[2 T+1 L]
NWT-014	Network Design	[2 T+1 L]

Note: One credit of theory (T) equals 16 hrs. of teaching contact hours & one credit of lab (L) equals 32 hrs. of laboratory work.



Lab Infrastructure

• Hardware

- CISCO 2600, 2900 series routers
- CISCO 1900, 2950 series switches
- GSM, GPS and CDMA training kits
- Linksys and D-link wireless routers and bridges
- Nano-stations (point to point communication)
- Wireless Access points

• Software

- Linux MPLS test bed
- NS-2 simulator
- Ubbuntu and Red Hat Linux
- GNS simulator
- JAVA Development Kit (JDK 7.0)

Certification / Knowledge Partners



Eligibility

- B.E. / B.Tech. / M.E. /M.Tech in Electronics & Telecommunications / Electronics/ Electrical / Instrumentation / Computer Engineering / Computer Science / Information Technology or equivalent with 55% aggregate marks from a recognized university.
- M.Sc in Electronics / Computer / Information Technology or equivalent with 55% aggregate marks from a recognized university.
- MCS/ M.C.A in relevant discipline with 55% aggregate marks from a recognized university.

Faculty

- Prof. Ravindra Joshi
- Prof. Vinayak Patil
- Prof. Nilesh Deshmukh
- Visiting Faculty (Industry Experts)

Contact - HoD

Prof. Ravindra Joshi : +91 20-22934590/91
Email: nwt@isquareit.com



*For application & selection process, please visit www.isquareit.com
You can also contact Admissions Department*

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DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

Advanced Certificate Programme in Networking and Wireless Technologies (ACP-NWT) 6-Months, Full-time

Foreword

To meet the increasing demands on fast growing communication requirements, large carrier class wire-line and wireless networks need to be designed with convergence of voice, data and video. Such Wide Area Networks (WANs), Metropolitan Area Networks (MANs) and Local Area Networks (LANs) must provide multiple services with high Quality of Service (QoS) and security as demanded by corporate, institutions and individuals. Convergence is redefining the boundaries of data, voice, multimedia and video services. Consumer market for broadband applications such as combined voice, data, multimedia, video gaming, Voice over Internet Protocol (VoIP) and entertainment signal transport puts huge demand on the Network Infrastructure, Network Management and the allied services. To cater for this demand, service providers are actively moving towards IP-based Next Generation Networks (NGNs), where transport over IP networks is done by using optical fibre networks, fast routing algorithms and traffic engineering using Multi-Protocol Label Switching (MPLS) and other techniques. Also, content development and providing large storage capacity are the challenges for the service providers. There are possibilities of revenue enhancements by offering multi-play services over broadband and wireless networks and also challenges to cater for huge customer demands maintaining Quality of Service.

This Advanced Certificate Programme in Networking and Wireless Technologies is designed to educate aspirants in terms of value addition in the potential areas and equipping the aspirants to the needs of the growing industry. Also, the aspirants get the opportunity to work for Internship / Project requirement with knowledge partners such as Airtight Networks, EMC² among many others to get hands-on experience to get industry ready for the challenging opportunities.

Course Structure

Level - I

Course code	Course Name	Credits
NWT-001	Communication Networks	[2 T+1 L]
NWT-002	Programming / Scripting Languages	[2 T+1 L]
NWT-003	Routing technologies	[2 T+1 L]
NWT-004	Wireless Networks	[2 T+1 L]
NWT-005	Server & Systems Administration	[2 T+1 L]
SSD-001	Soft Skills Development - I	2 T
Total Credits		17

Level - II

Course code	Course Name	Credits
NWT-007	Storage Area Networks	[1 T+1 L]
NWT-008	Network Management & Security	[2 T+1 L]
NWT-009	Network Programming	[2 T+1 L]
NWT-011	Next Generation Networks	[1 T+1 L]
NWT-014	Network Design	[2 T+1 L]
SSD-002	Soft Skills Development - II	2 T
NWT-010	Project	2 L
Total Credits		17

Note: One credit of Theory (T) equals 1 Hr. of teaching contact hour per week | One credit of Lab (L) equals 2 Hrs. of laboratory work per week

Lab Infrastructure

• Hardware

- CISCO 2600, 2900 series routers
- CISCO 1900, 2950 series switches
- GSM, GPS and CDMA training kits
- Linksys and D-link wireless routers and bridges
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• Software

- Linux MPLS test bed
- NS-2 simulator
- Ubuntu and Red Hat Linux
- GNS simulator
- JAVA Development Kit (JDK 7.0)



Distinctive Features

- Strategic location of the Institute in the midst of top technology giants in the Pune Infotech Park
- Over 12+ years of quality experience in delivering technology programmes in niche and emerging areas
- Well qualified and committed faculty with rich teaching, research and industry experience
- Curriculum evaluated by industry experts
- State-of-the-art Laboratory to gain hands on experience on various technological tools and platforms
- Wired broadband internet connectivity of 8 Mbps
- Digital campus learning environment
- Dedicated placement team to facilitate the students for career counseling & placement assistance
- Active interface with technology and user companies
- Excellent on-campus hostel facility available (optional)
- Cafeteria facility available (on cash and carry basis)

Knowledge / Certification Partners



Faculty

- Prof. Ravindra Joshi
- Prof. Suresh S S
- Prof. Vinayak Patil
- Prof. Anil Dudhe
- Prof. Nilesh Deshmukh
- Prof. Aparna Khandekar
- Prof. Kundan Kumar Jha (VS)
- Industry Experts

For any programme related queries, please email us at :

nwt@isquareit.com

Recruiters (Abridged List)

Cable & Wireless

www.cw.com

Sungard

www.sungard.com

Bharti Airtel

www.airtel.in

TCS

www.tcs.com

CISCO

www.cisco.com

ROLTA India

www.rolta.com

BSNL India

www.bsnl.co.in

Airtight Networks

www.airtightnetworks.com

Reliance Communications

www.rcom.co.in

Avaya India

www.avaya.com

Eligibility

- B.E. / B.Tech. / M.E. /M.Tech in Electronics & Telecommunications / Electronics/ Electrical / Instrumentation / Computer Engineering / Computer Science / Information Technology or equivalent with at least 55% aggregate marks from a recognized university.
- M.Sc in Electronics / Computer / Information Technology or equivalent with at least 55% aggregate marks from a recognized university.
- MCS/ M.C.A in relevant discipline with at least 55% aggregate marks from a recognized university.

For more details about the Programmes, Admission, Application & Selection process, please visit www.isquareit.com or call any of our student counselors between 9 AM & 6 PM on: +91 9372121253 / 9372121254

INTERNATIONAL INSTITUTE OF
INFORMATION TECHNOLOGY

I²IT

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INNOVATION & LEADERSHIP

I²IT Trust & Society's CENTRE FOR ADVANCED STUDIES

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Disclaimer:

- The courses and course contents, lab hardware and software environment are subject to change without prior notice keeping in mind the new advances in technology and industry requirements.
- Advanced Certificate Programmes /Electives mentioned will be offered depending on the number of students opting for the respective courses.
- Due to any unforeseen circumstances, the Institute reserves the right to delay / postpone the commencement of the programme.
- The images and pictures used in this leaflet are for illustration purposes only, and in no way constitute or represent the exact location, service or idea in this context.