INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY
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INNOVATION & LEADERSHIP
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IGNOU

M.Tech. IN ADVANCED INFORMATION TECHNOLOGY WITH SPECIALIZATION IN NETWORKING AND TELECOMMUNICATIONS (MTECHTC)

2 years, full-time and residential

FOCUS AREAS
▶ Internet Technologies
▶ Telecom Technologies
▶ Wireless Networking Technologies
▶ Next Generation Networks
▶ Broadband Communication Technologies
▶ Network Planning, Design, and Optimization
▶ Network Management and Security
▶ Communication Software Development

"Global lP traffic will increase five fold by 2013 to two-thirds of a zettabyte (a zettabyte is a trillion gigabytes)" - CISCO

To meet increasing demands on fast growing communication infrastructures, large carrier class wire-line and wireless networks for convergence of voice, data and video are being designed. 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 corporates, 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 have gained high velocity. Service providers are actively moving towards IP-based Next Generation Networks (NGNs), where transport over existing TDM infrastructure is being replaced with transport over IP infrastructure with very high QoS quality. IP Multimedia Subsystem (IMS) is emerging as the industry standard of choice for the NGNs. The great success of the Internet and wireless communications have opened a new vista for future all-IP applications. Such convergence of communication networks is posing interesting technological and business challenges, as the deployment of broadband networks grows aggressively. Service providers are focusing on revenue enhancement opportunities by offering 'Multi Play' (data, voice, video and wireless) over broadband wired and wireless networks. As networks become more complex and use multiple converged technologies, it is now imperative for service providers to manage these networks efficiently. This 2 years / 4 semesters regular face to face residential M.Tech. Program is devised to prepare the students to handle all such challenges in the fastest growing networking and telecom industry. The program provides comprehensive, theoretical, practical and real life knowledge of advanced networking and telecom technologies as demanded by the industry today and for the future.

ELIGIBILITY
B.E. / B.Tech with minimum 55 percent marks or equivalent grades) in Electrical / Electronics / Instrumentation / Communication / Information Technology / Computer Science or equivalent. Basic knowledge of Data Communication and Networking, Programming background in C and C++.

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COURSE STRUCTURE

SEMESTER	CODE	COURSE NAME	CREDITS
SEMESTER I			
	MINI-018	Computer Communication Networks	6
	MINI-019	Statistical Signal Analysis	6
	MINI-020	Programming Methodologies	6
	MINI-021	Routing Algorithms and Protocols	6
	MINI-022	Wireless Communications	6
	MINI-023	Network Management and Security	6
	MINI-024	Seminar	4
	MIN-001	Life Skills Development I	6
		Total	46
SEMESTER II			
	MINI-025	Special Topics in Networking and Telecommunication	6
	MINI-026	Broadband and Multimedia Technologies	6
	MIN-002	Life Skills Development II	6
		Select any 4 from the following Courses:	
	MINE-033	Network Programming	6
	MINE-034	Wireless Networks	6
	MINE-035	Network Design & Optimization	6
	MINE-036	Advanced Wireless Networks	6
	MINE-037	Next Generation Networks	6
	MINE-038	Advanced Network Management and Security	6
	MINE-039	Queuing Theory & Traffic Engineering	6
	MINE-040	Telecom Software Development	6
	MINE-041	Storage Area Networks	6
	MINE-042	Protocol Architecture & Applications	6
	MINE-043	OSS & BSS	6
		Total	42
SEMESTER III			
	MINP-003	Project Phase I	36
SEMESTER IV			
	MINP-004	Project Phase II	48
Total Credits			172

Delivery of an elective will be subject to availability of domain expert / faculty as well as minimum number of students for that particular elective