Course Code	Course Name	Teaching Scheme			Credits Assigned			
		Theory	Practical	Tutorial	Theory	Practical	Tutorial	Total
ETE802	Telecom Network Management	04	--	--	04	--	--	04

Course Code	Course Name	Examination Scheme							
		Theory Marks				Term Work	Practical	Oral	Total
		Internal assessment			End Sem. Exam				
		Test 1	Test 2	Ave. Of Test 1 and Test 2					
ETE802	Telecom Network Management	20	20	20	80	-	-	-	100

Prerequisite: ETC 603: Computer Communication and Networks

Course Objective:

- To familiarize the student with the design, analysis operation and management of modern data communications networks.
- To provide the student with a working knowledge of the types of communications network management systems and their strengths and limitations in solving various information network management problems.

Course Outcomes: The students will be able to:

- Demonstrate broad knowledge of fundamental principles and technical standards underlying
- Understand basic of telecommunication, networking and information technologies.
- Architect and implement networked informative systems.
- Continuously improve their technology knowledge and communication skills.
- Anticipate the way technological change and emerging technologies might alter the assumptions underlying architectures and systems.

Module No.		Topics	Hrs
1.		**Overview of Network Management**	06
	1.1	Case histories on network, system and service management, challenges of IT managers	
	1.2	Network Management: Goals, organization and functions	
	1.3	Network management architecture and organization network management perspectives	
2		**OSI Network Management**	08
	2.1	Network management standards	
	2.2	Network management models	
	2.3	Organization model	
	2.4	Information model	
	2.5	Communication model and functional model	
	2.6	Abstract syntax notation – encoding structure, macros functional model CMIP/CMISE	
3		**Internet Management (SNMP)**	13
	3.1	SNMP-organizational model-	
	3.2	System overview.	
	3.3	Information model, communication model, functional model	
	3.4	SNMP proxy server, Management information, Protocol	
	3.5	Remote monitoring. RMON	
4		**Broadband Network Management**	10
	4.1	Broadband networks and services, ATM Technology – VP, VC, ATM Packet, Integrated service, ATM LAN emulation, Virtual LAN	
	4.2	ATM Network Management – ATM network reference model, integrated local management interface. ATM management information base, role of SNMP and ILMI in ATM management.	
	4.3	M1, M2, M3, M4 interface. ATM digital exchange interface management	
5		**Network Management Applications**	08
	5.1	Configuration management.	
	5.2	Fault management	
	5.3	Performance management	
	5.4	Event correlation techniques	
	5.5	Security management	
	5.6	Accounting management, report management, policy based management services	
	5.7	Level management	
6		**Telecommunication Management Networks(TMN)**	07
	6.1	Need for TMN	
	6.2	Conceptual model	
	6.3	TMN standards	
	6.4	TMN management services architecture and TMN implementation	
Total			**52**

Recommended Books:

1. Mani Subramaniam, "*Network Management Principles and Practise"*, Addison Wisely, New York, 2000.
2. Lakshmi G. Raman, " *Fundamental of Telecommunications Network Management"* Eastern Economy Edition, IEEE Press New Delhi.
3. Salh Aiidarons, Thomas Plevoyak "*Telecommunications Network Technologies and implementations"* Eastern Economy Edition, IEEE press New Delhi-1998.

Internal Assessment (IA):
Two tests must be conducted which should cover at least 80% of syllabus. The average marks of both the test will be considered as final IA marks

End Semester Examination:
1. Question paper will comprise of 6 questions, each of 20 marks.
2. Total 4 questions need to be solved.
3. Question No.1 will be compulsory and based on entire syllabus wherein sub questions of 2 to 5 marks will be asked.
4. Remaining question will be selected from all the modules.