

Course Code	Course Title	L	T	P	C
1152EC130	NETWORK MANAGEMENT	3	0	0	3

a) Course Category

Program elective

b) Preamble

This course provides the informations about data communications and network management, SNMP, network management, tools, systems, engineering and applications. Also highlights information on broadband access networks

c) Prerequisite

Nil

d) Related Courses

Data communication and networks, Internet of things

e) Course Outcomes

On successful completion of this course, students will be able to

CO Nos.	Course Outcomes	Knowledge Level (Based on Revised Bloom's Taxonomy)
CO1	Explain the concept of data communications, communication protocols and networks architecture	K2
CO2	Discuss Network management organization models and functional models	K2
CO3	Describe about the n/w management tools , system utilities ad design	K2
CO4	Discuss about n/w management, architecture and application	K3
CO5	Explain about ATM, broad band access and wireless network management.	K2

a) Correlation of COs with POs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	L	L	L	-	-	-	-	-	-	-	-	L	-	-
CO2	M	-	L	L	-	-	-	-	-	-	-	-	-	-
CO3	L	M	L	L	M	-	-	-	-	-	-	-	-	-
CO4	L	-	-	-	H	-	-	-	-	-	-	-	-	-
CO5	M	L	-	-	-	-	-	-	-	-	-	L	-	-

f) Course Content

UNIT I DATA COMMUNICATIONS AND NETWORK MANAGEMENT 9

Data communications and network management overview: Analogy of telephone network management - Data and telecommunication network - Distributed computing - TCP/IP based networks - communication protocols and standards - network systems and services [with case histories]- Network management goals , organization architecture and perspectives

UNIT II SNMP AND NETWORK MANAGEMENT 9

Review of information network and technology - SNMP and network management - basic foundations: Standards, models and languages - network management organization and information models - communication and functional models

UNIT III NETWORK MANAGEMENT TOOLS , SYSTEMS AND ENGINEERING 9

System utilities management: basic tools - SNMP tools - Protocol analyzer - Network statistics measurement systems - MIB engineering - NMS design - Network management systems

UNIT IV NETWORK MANAGEMENT AND APPLICATIONS 9

TMN - TMN conceptual model - standards - architecture - management service architecture - integrated view and implementation.
Network management applications: configuration management - fault management - performance management - event correlation techniques – security management

UNIT V ATM AND BROADBAND NETWORK MANAGEMENT 9

ATM Technology - ATM network management - cable modem technology - cable access network management - DOCSIS standards - fixed broad band wireless access networks - mobile wireless networks.

Total 45 Hrs

g) Learning Resources

Text Books

1. M. Subramanian, "Network management: principles and practice", Addison-Wesley, 2000

Reference Books

1. James F. Kurose and Keith W. Rose, "Computer networking", Pearson Education, LPE, 2003
2. J. Burke, "Network management concepts and practice, A Hands-on approach", Pearson Education, 2000.
3. Larry L. Peterson and Bruce S. Davie, "Computer networks, a system approach", 3rd edition, Elsevier.

Websites.

1. <http://www.networkcomputing.com/>
2. <http://www.networkonlineresources.com/>