

## **EE6108                    COMPUTER NETWORKS**

Acad Unit:            3  
Prerequisite:        Nil  
Effective:            Acad Year 2000-2001  
Last update:        Oct 2002

### **OBJECTIVE**

The course is designed to

1. provide graduate students with an in-depth understanding of the underlying concepts of computer networks,
2. extend the students knowledge of computer networks in the areas of multiple access techniques, network protocols and the upper layers of the OSI model, and
3. treat certain key related areas, such as performance, internetworking and current and emerging trends in networking technologies, in some detail.

### **DESIRED OUTCOME**

Upon completion of this course, the student should have (i) a comprehensive understanding of network concepts and inter-operability and (ii) in-depth knowledge of the state-of-the art of a variety of networking topics.

### **OTHER RELEVANT INFORMATION**

A first course in Data Communications & Networking would be desirable.

### **CONTENT**

Network protocols and services. Transport protocols and services. Local area networks. Wide area networks and internetworking. Broadband and Asynchronous Transfer Mode (ATM) networks.

### **ASSESSMENT SCHEME**

Continuous Assessment    20%  
Final Examination            80%

### **TEXTBOOKS**

1. Andrew S Tanenbaum, Computer Networks, 3rd Edition, Prentice Hall, 1996.
2. Rainer Handel, Manfred N Huber and Stefan Schroder, ATM Networks: Concepts, Protocols, Applications, 3rd Edition, Addison Wesley, 1998.

### **REFERENCES**

1. James Martin, Local Area Networks: Architecture and Implementations, 2nd edition, Prentice Hall, 1994.
2. T.N. Saadawi, M.H. Ammar and A.El. Hakeem, Fundamentals of Telecommunication Networks, John Wiley & Sons, 1994.
3. W. Richard Stevens, TCP/IP Illustrated, Volume 1: The Protocols, Addison Wesley, 1994.