EEE.6.4 Computer Networks

The Computer Network course aims to provide students with the necessary knowledge on how computer data networks operate. The course covers theoretical and practical issues related to how computer systems are interconnected to exchange information, how they are organized within a global network, architectures and protocols used to securely exchange data and the use of applications over networks. Emphasis is given on data networks that use the IP protocol and on the Internet.

Upon successful completion of the course the student will be able to:

• Comprehend on how to operate and organize Computer Networks and use applications above them.

• Use specific tools to create and manage local networks, connect computers on the Internet, and learn how the most popular Internet protocols work.

• Use network protocol analysis tools and scheduling and setting up network parameters for computing and information routing systems.

• Analyze and calculate the basic communication system features over a local network based on Internet protocols, and how they interface with each other and with the public Internet.

• Work alone or work with fellow students or engineers in computer network installation and maintenance and analyze information that is trafficked over the Internet over popular protocols.

Keywords: Computer Networking, Information Transmission, Internet, Packet Networks, Protocols.