WILMINGTON UNIVERSITY
COLLEGE OF TECHNOLOGY
MASTERS OF SCIENCE - INFORMATION SYSTEMS TECHNOLOGIES
BASIC COURSE INFORMATION

COURSE TITLE: Data Communications and Networking
COURSE NUMBER: IST 7040

I. RATIONALE

This course provides the student with foundation knowledge and concepts regarding telecommunication fundamentals. The course provides both an understanding and a balance between the technical aspects of data communications and its everyday practical aspects.

II. MAJOR INSTRUCTIONAL GOALS

This course develops a managerial level of technical knowledge and terminology for data, voice, image, and video communications and computer networks to effectively communicate with technical, operational and management people in telecommunications. Students are expected to understand and apply data communications concepts to situations encountered in industry; learn general concepts and techniques of data communications; understand the technology of the Internet; and understand the regulatory environment:

GOAL A. Gain an understanding of how data communications and computer networks impact the business function

Learning Outcomes: The student will be able to:
A-1 describe current trends in developing and supporting a ‘business’ network
A-2 identify network configurations that best support and meet specific business needs
A-3 identify new techniques and approaches technologist use to provide network security in a business environment

GOAL B. Understand conceptual requirements of computer networks

Learning Outcomes: The student will be able to:
B-1 differentiate between network components
B-2 describe software and practices of currently installed computer networks

Syllabus is sole property of Wilmington University
B-3 differentiate between advantages and disadvantages of the primary functions of networks
B-4 identify, examine, evaluate, and chose a set of available components and software that an organization can buy and/or build to satisfy business requirements

GOAL C. Understand the functionality of network technology, components, and software.

Learning Outcomes: The student will be able to:
C-1 identify, examine, evaluate, and chose a set of components and software that best meet technical requirements of the network
C-2 estimate initial and recurring costs for network support, components, and operations
C-3 differentiate between networking requirements of a global and/or enterprise-wide system and a functional informational system

GOAL D. Gain an understanding of current and future trends in the use of data communications and computer networks in managing information technology systems

Learning Outcomes: The student will be able to:
D-1 identify developmental aspects of projects for computer communications for both short (2-5 years) and long range (greater than 5 years) planning
D-2 forecast feasibility, capability, and market projections
D-3 identify the components of network management systems and numerate the uses of network modeling and capacity planning tools

III. CLASS PARTICIPATION:

Students are expected to attend class and participate actively and in a positive way. Questions and relevant observations are encouraged and enrich the experience of the entire class.

Computers in the classrooms are intended to be used as tools to enhance the students' learning experience. Instant messaging, gaming, emailing, and surfing the web are distractions to the student, the surrounding students, and the instructor and constitute inappropriate behavior. Students are ethically obliged to avoid these and similar practices.

IV. CLASS SCHEDULE - OUTLINES – READINGS:

A “structured external assignment” will constitute the closing activity for this course. Students will be asked to submit a topic for instructor approval that integrates IT concepts.
discussed in class into the student’s vocational or educational interests or workaday environment. Ideally, a “planning paper” will result that is topical, and possesses significant utility within the student’s job-related responsibilities or educational/vocational interests.

*Instructor will include weekly outline to reflect what has to be achieved by the student in the 5 hours Out-of-Classroom project (Structured External Assignment) including submission deadline and grading criteria.*

*Semester = 15 weeks with a reading week at Week 8*

*Blocks= 7 weeks, with a Reading Week between Blocks I and II.*

*The syllabus must reflect which preliminary reading all students should complete during the week prior to the start of the course.*

*Note: Grades are due five (5) working days after your last class session and are to be submitted directly to the registrar.*

Note: A cooperative and participative learning strategy will be deployed with every expectation that the student will contribute heavily, in a self-directed action-learning mode, to this educational experience. Students should anticipate that assignments, and this syllabus, will be adjusted to match the pace of the course, the class size, and to meet the needs of individual students.