Network Communications 2023-2024 Catal

[ARCHIVED CATALOG]

NETI 100 - Network Communications

PREREQUISITES: Demonstrated competency through appropriate assessment or earning a grade of "C" or better in ENGL 093 - Introduction to College Writing and ENGL 083 - Reading Strategies for College or ENGL 095 - Integrated Reading and Writing.
PROGRAM: Network Infrastructure
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 3
DATE OF LAST REVISION: Fall 2019

Introduces the evolution of telecommunications and its effect on data communication systems. Topics covered will include the basic components of a communications system, a study of electrical signals used to represent data, the importance of error control when transmitting information, and the functions of network systems and role in the communication of information. Students will also have an opportunity to explore data communications topics through research.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Identify the basic components and the evolutionary steps that have contributed to today's data communications systems.
2. Describe how electrical signals are transmitted and translated into valid data.
3. Identify telecommunications standards organizations.
4. Describe the OSI Model.
5. Identify media and methods of data transmission.
6. Describe error types and methods for detecting errors.
7. Identify the functions of a local and wide area network.
8. Discuss network topologies and hardware.
9. Describe network operating systems.
10. Describe network software utilities, tools, and applications.
11. Describe the required functions of protocols, their importance, and the software for the utilization of protocols, emphasizing TCP/IP.
12. Identify and discuss Voice over Internet Protocol.
13. Discuss the importance of security in data communications.
14. Explore data communications topics through research.

COURSE CONTENT: Topical areas of study include -

- Telecommunications technology
- Network transmission methods
- Signaling and switching
- Network software and support systems

- Physical transmission media
- Wide area networks
- Wireless transmission and services
- Internet
- Multiplexing
- Network security
- Error detection and error control
- Network design and management
- Local area network basics
- Convergence of voice, video, and data
- Network connectivity
- Mobile communications
- SmartGrid communications

Course Addendum - Syllabus (Click to expand)
