

# Undergraduate Certificate - Computer Systems and Networks

The undergraduate certificate in Computer Systems and Networks provides the education and skills necessary to configure, install, manage, and administer basic network infrastructures. In this online program, you will learn to build, repair, and troubleshoot networks, PCs, and peripherals. Employers require this knowledge if you seek entry-level positions as a helpdesk support analyst, network administrator, PC specialist, or systems analyst. Some courses in this program aligned with the requirements of A+ and Network+ certification.

## Certificate Objectives

Upon successful completion of this certificate, the student will be able to:

- Evaluate CPU architectures.
- Evaluate the organization of the motherboard and the processes for monitoring and managing Windows client operating systems.
- Appraise memory subsystems and bus architectures in computer systems.
- Analyze the formatting, protocols, and latency of storage subsystems.
- Examine the component architecture of notebook computers.
- Appraise the directory, file, registry, and event management systems and the methods to mitigate risk by minimizing the exposure of information and by improving access control.
- Investigate the processes for analyzing problems, synthesizing solutions, tracking progress, and managing customer relationships related to computer hardware systems.
- Investigate the process to configure Local Area Networks (LAN) and to optimize the utilization of memory, storage, and CPU resources.
- Assess the methodology to harden and secure operating systems and computer information.
- Analyze the layers of the Open Systems Interconnect (OSI) reference model, wireless and mobile networks, and multimedia networking, security in computer networks, and network management.
- Appraise the impact of computer systems and networks on global commerce and analyze the related societal, legal, and economic issues.

## Certificate Requirements (18 semester hours)

Code	Title	Semester Hours
ISSC221	Intermediate Computer Systems	3
ISSC322	Computer Systems Organization: Advanced	3
ISSC323	Computer Hardware Systems	3
ISSC231	Networking Concepts	3
ISSC343	Wireless Networks	3
ISSC421	Computer and Network Security	3
Total Semester Hours		18