

The NaSA program prepares graduates for careers and research opportunities in a world where scalability and interoperability of services compete with aspects of security and reliability.

The *Networking and System Administration* major is a timely program aimed at preparing graduates for careers and research opportunities in all fields related to reliable and distributed network computing.

Career Paths Include:

- **Network Administrator**
- **Computer Systems Administrator**
- **Computer Security Specialists**
- **Network Security Specialists**
- **Technical Support Specialist**

“Employment of systems administrators is expected to increase much faster than average as firms will continue to invest heavily in securing computer networks. Companies are looking for workers knowledgeable about the function and administration of networks. Such employees have become increasingly hard to find as systems administration has moved from being a separate function within corporations to one that forms a crucial element of business in an increasingly high-technology economy. Also, demand for computer security specialists will grow as businesses and government continue to invest heavily in ‘cyber-security,’ protecting vital computer networks and electronic infrastructure from attack.”

— Bureau of Labor and Statistics,
<http://stats.bls.gov/oco/ocos268.htm>

**Culminating Courses
of the NaSA Major**

810:140(g). System Administration

Concepts and mechanisms associated with computer system administration. The main focus is on issues surrounding user management, the configuration of services, and the coordination of distributed resources.

810:141(g). System Security

Security services, basics of cryptology, historical ciphers, public key paradigms, hardware and software implementations, and standard protocols used for securing mail, web, and electronic commerce. Network monitoring, intrusion detection, sensor deployment, forensics and managing services in hostile networks.

810:147(g). Networking

Network architectures and communication protocol standards. Topics include communication of digital data, data-link protocols, local-area networks, network-layer protocols, transport-layer protocols, applications, network security, and management.

Research Opportunities include:

- **High Performance Computing**
- **High Performance Networks**
- **Distributed Environments**
- **Parallel Computing**
- **System Security**
- **Network Security**
- **Data Encryption and Integrity**
- **Grid Computing**

For further information on the Networking and System Administration major at UNI, please contact:

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