

# IST 154C : Introduction to Networks

Introduces the architecture, structure, functions, components, and models of the modern internet and computer networks. Configuration of IPv4 and IPv6 addresses is covered. Other topics of discussion include ethernet protocol, media access control, routing principles, subnetting, and variable length subnet masking. By the end of the course, students will be able to build simple LANs that include basic router and switch configurations, successful implementation of IP addressing schemes, and network attack mitigation. A grade of C or higher must be achieved to continue to the next Cisco C2 Course.

**Credits 3**

**Lab/Practicum/Clinical Hours 2**

**Lecture Hours 2**

## **Learning Outcomes**

- Configure switches and end devices to provide access to local and remote network resources.
- Explain how physical and data link layer protocols support the operation of Ethernet in a switched network.
- Configure routers to enable end-to-end connectivity between remote devices.
- Create IPv4 and IPv6 addressing schemes and verify network connectivity between devices.
- Explain how the upper layers of the OSI model support network applications.
- Use security best practices to configure a small network.
- Troubleshoot connectivity in a small network.