ETRO 247 : Multilayer Switching

Credits: 3
Class Hours: 6 lecture/lab
Prerequisites: "C" or higher in ETRO 140B, ETRO 140C, ETRO 240B, and ETRO 240C or valid CCNA certification, or approval of instructor.
Comments: May be repeated for a maximum of 6 credits.
Description: This course focuses on the development of knowledge and skills in monitoring and maintaining complex enterprise routed and switched Internet Protocol (IP) networks. Skills learned include the planning and execution of regular network maintenance, as well as support and troubleshooting using technology-based processes and best practices, in a systematic approach. Extensive labs emphasize hands-on learning and practice to reinforce configuration and troubleshooting skills.
Semester Offered: Spring
Course Student Learning Outcomes (CSLOs):
1. Identify and explain the services that enable connectivity and traffic transport in a multi-layer switched campus design.
2. Identify and classify the factors needed to prepare a campus infrastructure to support voice and video, and Wireless Local Area Networks (WLANs) in an Enterprise network.
3. Identify the principles of and implement a functional switched network, demonstrating Virtual Local Area Network (VLAN), trunking, and Spanning-Tree Protocol (STP) technologies.
4. Implement high availability technologies and techniques using multilayer switches in a campus environment.
5. Demonstrate and configure monitoring and security of a switched network.