

CIT 405. MULTI-LAYER SWITCHED NETWORKS (Cisco #7).

Credit Hours: 5

Scheduled hours per week

Lecture: #

Lab: #

Other: #

Catalog Course Description: This course is the second in a series of three required to prepare the student for a career in networking and the Cisco CCNP certification. Topics covered include LAN media, advanced switch configuration, VLAN’s spanning tree protocol and redundant links, routing between switches, multi-layer switching, hot standby routing protocol, multi-casting, and restricting network access.

Pre-requisites: Grade of “C” or better in CIT 206

Co-requisites: N/A

Course Learning Outcomes:

- Describe and discuss key characteristic of switching technologies
- Describe and discuss network design using a hierarchical model
- Demonstrate ability to implement and configure Spanning-Tree Protocol
- Describe and apply various inter-VLAN routing techniques
- Demonstrate ability to implement high availability and gateway redundancy protocols
- Describe, discuss, and apply various network management techniques and security

Topics to be studied:

- Network Design Fundamentals
- Campus Network Architecture
- Spanning Tree in Depth
- Inter-VLAN Routing
- First-Hop Redundancy
- Network Management
- Switching Features and Technologies for the Campus Network
- High Availability
- Campus Network Security

Relationship of Course to Program or Discipline Learning Outcomes:

	Ability to understand, plan, and execute good Project Management
	Ability to recognize and apply industry recognized code of ethics to various situations
X	Ability to understand and apply Information Security concepts and best practices
X	Ability to plan, implement, and troubleshoot Advanced Routing and Switching technologies
	Ability to plan, implement, and troubleshoot Advanced Systems Administration technologies
	Ability to plan, implement, and troubleshoot Advanced Security Systems

Relationship of Course to General Education Learning Outcomes:

Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
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Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

N/A

Additional information:

N/A

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