

CIT 305. ADVANCED ROUTING (Cisco #5).

Credit Hours: 5

Scheduled hours per week

Lecture: 4

Lab: 2

Other: 0

Catalog Course Description: This course is the first in a series of four required to prepare the student for a career in networking and the Cisco CCNP certification. Topics covered include scalable networks, advanced IP addressing management, advanced routing, OSPF, multi-area OSPF, EIGRP, route optimization, BGP, scaling BGP, and security.

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

Co-requisites: N/A

Course Learning Outcomes:

- Network and Routing Concepts
- Implementing EIGRP
- Implementing OSPF
- Routing Update Manipulation
- Path Control
- Enterprise Internet Connectivity
- Implementing BGP
- Routers and Routing Protocols Hardening

Topics to be studied:

- Describe and discuss scalable internetworks
- Describe and discuss managing traffic and access
- Explain how to managing IP traffic
- Implement and explain queuing to manage traffic
- Demonstrate an understanding of differing routing protocols
- Demonstrate an ability to extend IP addressing using VLSM
- Implement and configure OSPF
- Implement and configure EIGRP
- Describe and discuss optimization of routing updates and their operation
- Implement and configure BGP

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
	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
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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