VERMONT TECH

ELEMENT	CONTENT
DEPARTMENT	CIS
AUTHOR (S)	Jean F. Hakim
COURSE NUMBER	**CIS 3250**
COURSE TITLE	**Advanced Network Architectures**
SHORT TITLE	Adv Net Architecture
COURSE LEVEL	3000
SHARED VSC COURSE	No
DATE CREATED	1/3/2013
CHECKED/CHANGED	3/6/2018
PREREQUISITES	CIS 2151
	Prerequisite must be taken previously ☒
COREQUISITES	
	Corequisite must be taken concurrently ☐
RESTRICTIONS	
SPECIAL FEES	No
CREDITS	4
CROSS-LIST	
HOURS	3 hours of lecture, 2 hours of lab per week
SEMESTER	Fall
COURSE DESCRIPTION	In this course, the student implements, monitors, deploys, and maintains a network in a converged enterprise environment. It covers the secure integration of VLANs, WLANs, security, and video into networks and network implementations such as HSRP, STP, EtherChannel, wireless technologies, advanced OSPF, EIGRP, and frame relay. The student plans, configures, and verifies the implementation of complex enterprise switching solutions.
SUGGESTED TEXTS	*Scaling Networks Companion Guide*
OPTIONAL TEXTS	
COURSE OUTCOMES	The successful student will be able to: 1. Design, deploy, and manage a high-availability network (EPO 5, 9) 2. Manage networks including security and privacy constraints (EPO 7, 9) 3. Understand critical high-availability network technologies (EPO 7, 9) 4. Understand port aggregation (EPO 9) 5. Implement WAN technologies (EPO 9) 6. Understand STP and advanced routing technologies (EPO 9)
COURSE CONTENT	1. Network design 2. LAN redundancy 3. EtherChannel 4. Network high availability 5. Wireless LANs 6. Advanced OSPF 7. EIGRP 8. IOS licensing 9. Hierarchical network design 10. Frame relay 11. Point-to-point connections 12. Broadband solutions 13. Securing site-to-site connectivity
LAB/STUDIO OUTCOMES	The successful student will be able to: 1. Demonstrate experience with Cisco equipment 2. Set up configurations (EPO 2, 9) 3. Demonstrate collaboration and coordination in setting up network architectures (EPO 1, 2, 4, 8, 9)
LAB/STUDIO CONTENT	1. Network design 2. VLANS 3. STP 4. Etherchanncel 5. HSRP 6. EIGRP 7. Advanced EIGRP 8. OSPF 9. Multi-area OSPF 10. PPP 11. WAN technologies 12. ACLs 13. SNMP
LECTURE CAPACITY	32

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LAB CAPACITY	16
GRADED OR P/NP	Graded
EVALUATION	Attendance, exams, written assignments, project
DELIVERY METHOD	HYB, LAB
ROOM REQUIREMENTS	CIS lab for LAB
AUTHOR'S NOTES	