

East Carolina University
College of Technology and Computer Science
Department of Technology Systems

ICTN 2158: Computer Networking Technology

General Information:

Catalogue Description:	Advanced network routing technology in industry. Topics include Layer 2 protocols, spanning-tree protocol, VLANs, VLAN trunking protocols, wide area networks, frame-relay, Ethernet, and traffic control over LAN and WAN. This course covers material from Cisco networking academy CCNA3 LAN Switching and Wireless and CCNA Accessing the WAN and helps to prepare for the 2 nd part of the CCNA exam
Prerequisites:	ICTN 2154
Major Requirement:	Required for ICT Networking majors
Program Outcomes:	This course meets the ICT program outcomes by providing students knowledge in the networking field and preparing them for this area.

Texts and Laptops:

Academy course material can be found in the assignments area of blackboard in zip format for downloading, or on Cisco's academy website at cisco.netacad.net.

Recommended for further study:

CCNA Preparation Library (7th Edition) (Self-Study Guide) by Stephen McQuerry (**Hardcover** - Mar 28, 2008)

Laptops are required for this course.

Instructional Tools:

During this course we may use the following tools for collaboration, communication, and learning enhancement. Second life, YouTube, Camtasia, Centra, Blackboard.

Course Objectives:

- Configure, verify and troubleshoot VLANs and interswitch communication
- Implement IP addressing scheme and IP services
- Configure and troubleshoot basic operation and routing
- Implement, verify, and troubleshoot NAT and ACLs
- Implement and verify WAN links

- Achieve Cisco CCNA Certification

Topics Covered in this Course:

	Topic(s) Covered
Intro	Introduction to the Course, Materials, and Requirements
Chapter 1	LAN Design
Chapter 2	Basic Switch Concepts and Configuration
Chapter 3	VLANs
Chapter 4	VTP
Chapter 5	STP
Chapter 6	Inter-VLAN Routing
Chapter 7	Basic Wireless Concepts and Configuration
CCNA 3	Exams (Midterm)
Chapter 1	Introduction to WANs
Chapter 2	PPP
Chapter 3	Frame Relay
Chapter 4	Network Security
Chapter 5	ACLs
Chapter 6	Teleworker Services
Chapter 7	IP Addressing Services
Chapter 8	Network Troubleshooting
CCNA 4	Exams (Finals)

A weekly breakdown of topics can be found in the blackboard site for this class.

Grading:

93 - 100 = A

85 – 92 = B
77 – 91 = C
69 – 76 = D
Below 68 = F

CCNA Certification exam score	30%
CCNA 3 Final Practical (HOSF) exam	10%
CCNA 4 Final Practical (HOSF) exam	10%
CCNA 3 Final Written exam	10%
CCNA 4 Final Written exam	10%
Class Participation	30%

Submitting Assignments:

All assignments are submitted in the assignments section of blackboard unless otherwise instructed. Do not email any assignments.

Computer and Software Programs:

The Department of Technology Systems requires that all students buy a computer for use in their classes. A laptop is recommended and **is required** by some degree programs. You can go to the ACE departmental guidelines at <http://www.ecu.edu/ace/departments.htm> to find out more about the required computer for your specific degree program. It is also advisable to contact your advisor or program coordinator as well. Note: for this course you should have a laptop available.

Academic Integrity:

Academic honesty is a serious issue and students are expected to follow the University guidelines for academic honesty. All information included in assignments should be properly cited and referenced. Students are expected to avoid plagiarism and cite sources completely, including all electronic sources. The following web sites are provided for clarification on plagiarism and how to avoid it.

ECU's Writing Center, section on Plagiarism:
<http://www.ecu.edu/cs-acad/writing/writingcenter/guides.cfm>.

ECU Student Handbook, section III on Academic Integrity:
<http://www.ecu.edu/studenthandbook/policies.htm>

Disabilities:

East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Department for Disability Support Services located in Slay 138. Contact number for Disability Services is 252.737.1016 (Voice/TTY).