CSCE 4535, Introduction to Network Administration

This class will be offered on Zoom for Fall 2020. Students will be required to have access to a laptop / desktop with Webcam for this class. Webcam will be required for Respondus Lockdown Browser for Quizzes and tests for this class. We will use OneDrive for storage instead of USB drive for this class.

Instructor: CR Chevli Fall 2019
Office: by Appointment only
Office Hours: Tu (5:30-8:30 pm) Meeting Place: Classroom
Email: chevli@unt.edu

Current Catalog Description:

CSCE 4535 - Introduction to Network Administration

3 hours

Students explore topics in network administration in theoretical and practical ways, study different software platforms, control, shared resources, administration, security, anti-virus procedures and methodologies.

Prerequisite(s): CSCE 3530.

Required Text book:

UNIX and Linux System Administration Handbook (5th Edition) by Evi Nemeth (Author), Garth Snyder (Author), Trent R. Hein (Author), Ben Whaley (Author)

Other References:

2. Introduction to Computer Networks and Cybersecurity 1st Edition by Chwan-Hwa (John) Wu (Author), J. David Irwin (Author)
3. Various Network Administration online resources

Course Outcomes:

- Demonstrate understanding of IP addressing, sub-netting and networks configuration by configuring and setting up a network across a heterogeneous group of computers.
- Describe network planning and design of local-area-network (LAN) and wide-area-network (WAN) networks.
- Describe quality of service (QoS) parameters and how they relate to network availability.
• Configure, operate and troubleshoot routing protocols such as Open-Shortest-Path-First (OSPF) and Border-Gate-Protocol (BGP).
• Install and configure simple network security tools such as Intrusion-Prevention-System (IPS), Intrusion-Detection-System (IDS), firewalls and virus scanners.
• Evaluate network performance both by simulation and by designing, gathering, and analyzing experiments.

Major Topics Covered in the Course (subject to change):

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Comments: Lecture# (L#) Chapter# (C#)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/24/20</td>
<td>Introduction to Network Administration, Networks (Hardware)</td>
<td>L1, C14, VDI, Teams</td>
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<tr>
<td>8/31/20</td>
<td>Network Hardware, TCP/IP, Lab Packet Tracer</td>
<td>L2, C14, C13, Lab1</td>
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<tr>
<td>9/7/20</td>
<td>Network (TCP/IP), Lab Cisco CLI Config</td>
<td>L3, C13, Lab2</td>
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<td>9/14/20</td>
<td>Network (TCP/IP), Lab Vlan Trunking</td>
<td>L4, Lab3</td>
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<tr>
<td>9/21/20</td>
<td>Quality of service (QoS), Test1 Review, Lab Basic Routing</td>
<td>L5, Lab4</td>
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<tr>
<td>9/28/20</td>
<td>Test 1 (Week of 9/28/20), Quality of service (QoS)</td>
<td>L6, Test 1</td>
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<tr>
<td>10/05/20</td>
<td>Routing, Lab &amp; HW 3-4 Review</td>
<td>L7, C15, C16, Review</td>
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<td>10/12/20</td>
<td>DNS/DHCP, Lab5 DHCP</td>
<td>L8, Lab5</td>
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<td>10/19/20</td>
<td>DNS/DHCP, Lab6 VOIP</td>
<td>L9, C16, C27, Lab6</td>
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<td>10/26/20</td>
<td>Network Security, Routing HW5 Review</td>
<td>L10, HW5 Review</td>
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<tr>
<td>11/02/20</td>
<td>Routing Protocols, Routing Lab7-8,</td>
<td>L11, Lab7-8</td>
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<td>11/09/20</td>
<td>IDS, IDP, Test2 Review</td>
<td>L12, Web</td>
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<tr>
<td>11/16/20</td>
<td>Test 2 (Week of 11/16/20), ACL Lab9</td>
<td>L13, Test 2, Lab9</td>
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<tr>
<td>11/23/20</td>
<td>Thanksgiving Break - UNT Closed – No Class</td>
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<td>11/30/20</td>
<td>Firewall, Firewalls Lab10</td>
<td>L14, C28, Lab10</td>
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GRADING SCHEME

60% -- Quiz, Class Participation, Homework
   (Homework questions must be answered in your own words. Cut-and-paste answers from any resource are not acceptable and will receive a grade of zero.)

40% -- Tests

We will use Canvas for all assignments for this class. All submittals will be on Canvas. Students will be responsible to make sure that their submittals are accepted on Canvas. Students are responsible to verify that their submittals are on canvas within the stated deadline. We will make every attempt to grade your work in timely manner. If you disagree with a grade it is your responsibility to dispute it within a week of posting of the grade.
Graduating Students requiring a minimum grade of “C” are encouraged to consult with the instructor early in the semester by the 12th class day to receive the necessary coaching. I am unable to provide any coaching towards the end of the semester to help you improve your grade.

COURSE POLICIES

Attendance for this course and primary textbook is mandatory. I may be covering topics that are not in the book. It is at the best interest of students to attend all classes. It is student’s responsibility to contact other students for notes/announcements for the missed classes. Course assignments will be posted on Canvas. It is student’s responsibility to keep track of due dates.

- **ABSOLUTELY, NO LATE homework/projects/term paper graded.**
- All homework/projects/term paper and experimental reports must be turned in at the START of class on the date due. DO NOT email your homework/project report to me unless an exception is granted for an assignment.
- All students will be trusted to pursue their academic careers with honesty and integrity. Academic dishonesty includes, but not limited to, cheating on a test or other course work, plagiarism, unauthorized collaboration with other persons. Students found guilty of dishonesty will be subject to penalties that may include suspension from the university.
- You should track your own progress using Canvas and be aware of current grades throughout the term.
- Final grading will be done as follows. A: >= 90%, B: >= 80% and < 90%, C: >= 70% and < 80%, D: >= 60% and < 70% and F: < 60%. Grades will be curved if necessary.
- Grades cannot be changed after they have been electronically entered into the university’s system except for instructor error.
- Any extenuating circumstances that may adversely affect your grade must be brought to my attention before the final course grades are recorded. To be considered, such circumstances must be unusual, unavoidable, and verifiable.
- Instructor reserves the right to modify course policies, the course contents and the order in which the topics are covered.

Disabilities Accommodation:

The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.