Course Syllabus

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NET 3300 Advanced LAN Security Management | Fall 2019

Instructor

Instructor:	Matt Paulson
Office:	WSU Davis D2 308G
Office Hours:	T 0900-1100 WSU Davis D2 308G **Google Hangout: https://meet.google.com/pwu-kkbf-zxr** (https://meet.google.com/pwu-kkbf-zxr) T 1600-1730 WSU Davis D2 308G Google Hangout: https://**meet.google.com/vap-hsux-oib** (https://meet.google.com/vap-hsux-oib) R 1830-2000 WSU Davis D2 308G **Google Hangout: https://meet.google.com/gys-xrwr-nie** (https://meet.google.com/gys-xrwr-nie)
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My preferred method of contact is email. I respond to weber.edu email or Canvas conversations. Please give me 24-48 hours for a reply to your message. I do not generally check email on weekends or holidays, so please plan ahead. **Please include your W# in all correspondence.**

You may also call me at my office phone or through the Google Hangout listed during my office hours.

This course utilizes WSU's online learning environment, called Canvas. All course documents and resources are available through Canvas and all coursework and learning activities (unless otherwise stated) will be submitted via Canvas.

Course Description

This course is a comprehensive examination of the hardware and software components of a network and the practical techniques for designing and implementing computer systems in a network.

Topics will include the purpose and use of various wide and local area Networks, Ethernet, TCP/IP, UDP, TCP and other protocols, media types and structures (repeaters, bridges, switches, hubs, routers with routing algorithms, and gateways), signaling/data encoding, multiplexing, error detection/correction and flow control, packet formats, network classes, and subnetting and network security.

LEARNING RESOURCES

Textbook & Reading Materials

The text for this class will be:
Cover image for CompTIA® Security+ SY0-501 Cert Guide, Academic Edition, Second Edition by David L. Prowse

ISBN: 9780134845906

You may purchase this book at the **WSU Bookstore (http://bookstore.weber.edu/)** or online.

You may also access these books through the Stewart Library's Safari database for free.

Canvas

Canvas is where course content, grades, and communication will reside for this course.

- https://weber.instructure.com
- For Canvas-related technical support, please click the HELP link in the top right corner of your screen.
- You can also call WSU Online at (801) 626-6499 or email **wsuonline@weber.edu (mailto:wsuonline@weber.edu)**
  - Your **username** is your **W#**, and your **password** is your password (the same one you use for the eWeber portal).
- For **Passwords (http://www.weber.edu/help)** , or any other computer-related technical support contact the **IT Service Desk (http://www.weber.edu/help)** .
  - (801) 626-7777
  - 1-800-848-7770 - option 2 - ask for extension 7777
  - **http://www.weber.edu/help (http://www.weber.edu/help)**
  - **csupport@weber.edu (mailto:csupport@weber.edu)**

LEARNING ACTIVITIES

Modules

Your learning activities are contained in the class modules. Please refer to them often to access the required readings, videos, and assignments.

Assignments

All assignments will be submitted via Canvas. You will be presented with tasks to accomplish, and you will submit the results of those tasks. Assignments account for 50% of your total grade.

All assignments are due on the date indicated on the assignment. Late assignments will be accepted up to one week after the due date with a 5% per day late penalty. Please be mindful of this deadline, and make every effort to turn in assignments well before the deadline.

Quizzes

There are quizzes after each week's instruction to help reinforce concepts discussed during lectures and assigned readings. Quiz instructions are provided with each quiz. Quizzes account for 20% of your total grade.

Exams

Exams must be taken from a **WSU Testing Center** **(http://www.weber.edu/testingcenter/)** location or if you are located out of the area, from an **approved proctor** **(http://departments.weber.edu/ce/distancelearning /testing.aspx)** . Please check the testing center operating hours. Additionally, you must be at the testing center at least one hour before closing or you will not be able to take the exam. Exams account for 30% of your total grade.

All tests must be taken no later than the last day of final exams.

GRADES

Your grade is based on the following:

Assignments	50%
Quizzes	20%
Exams	30%
Total Possible	100%

Grading Scheme

Grades will be assigned based on the following percentages:

A	=	94.0-100%	C	=	74.0-76.9%
A-	=	90.0-93.9%	C-	=	70.0-73.9%
B+	=	87.0-89.9%	D+	=	67.0-69.9%
B	=	84.0-86.9%	D	=	64.0-66.9%
B-	=	80.0-83.9%	D-	=	61.0-63.9%
C+	=	77.0-79.9%	E	<	60%

COURSE POLICIES

Academic Honesty/Ethical Conduct

Students are expected to maintain academic ethics and integrity in regards to performing their own work. The WSU Student Code states clarifies cheating.

1.   Cheating, which includes but is not limited to:

    a.   Copying from another student's test paper;

    b.   Using materials during a test not authorized by the person giving the test;

    c.   Collaborating with any other person during a test without authority;

    d.   Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of any test, without authorization of the appropriate official;

    e.   Bribing any other person to obtain any test;

    f.   Soliciting or receiving unauthorized information about any test;

    g.   Substituting for another student or permitting any other person to substitute for oneself to take a test.

2.   Plagiarism, which is the unacknowledged (uncited) use of any other person or group's ideas or work. This includes purchased or borrowed papers;

3.   Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit;

4.   Falsification, which is the intentional and unauthorized altering or inventing of any information or citation in an academic exercise, activity, or record-keeping process;

5.   Giving, selling or receiving unauthorized course or test information;

6.   Using any unauthorized resource or aid in the preparation or completion of any course work, exercise or activity;

7.   Infringing on the copyright law of the United States which prohibits the making of reproductions of copyrighted material except under certain specified conditions;

CS Department policy dictates that any verifiable evidence of student academic cheating, as defined and determined by the instructor, will result in: 1) an automatic failing grade for the class and 2) a report to the Dean of Students that will include the student's name and a description of the student's dishonest conduct.

Accommodations for Students with Disabilities

In compliance with the American Disabilities Act (ADA), Weber State University seeks to provide equal access to its programs, services, and activities for persons with disabilities. Any student requiring accommodations or services due to a disability must contact the Services for Students with Disabilities (SSD) office. SSD can also arrange to provide course materials (including the syllabus) in alternative formats if necessary. For more information about the SSD contact them at voice: (801) 626-6413, TDD (801) 626-7283, **ssd@weber.edu (mailto:ssd@weber.edu)** or **http://departments.weber.edu/ssd**

(http://departments.weber.edu/ssd)

Syllabus Changes

This syllabus is subject to change. I will notify the class regarding all changes. In the event of any discrepancy between this syllabus and content found in Canvas, the information in **CANVAS WILL TAKE PRECENDENCE**.

Late Work

All assignments are due on the date indicated on the assignment. Late assignments will be accepted up to one week after the due date with a 5% per day late penalty. Please be mindful of this deadline, and make every effort to turn in assignments well before the deadline.

The "I REALLY, REALLY NEED TO GET A C" Policy

The most effective method for obtaining a C or above in this class is to submit assignments when they are due and to stay current with course topics. The curriculum is carefully designed to fit the number of course weeks. In order to uphold academic rigor and integrity, student grades must be based on the degree to which the course requirements listed in the syllabus are fulfilled. Extra credit assignments are not allowed. If you approach me anytime during the term claiming that special allowance should be made because you need a C to move forward in the program, graduate, receive financial aid, etc., I will decline your request and refer you to this clearly worded policy.

Course Fees

Course fees are designed to cover the costs of lab equipment maintenance and replacement including desktop and server computer systems and software; consumable materials and supplies; and support for lab aides, student tutors, and online instructional resources.

Additional WSU Resources

- **WildCat Mail (http://mail.weber.edu/)**
- **WSU Library (http://library.weber.edu/)**
- **Stewart Library EReserve (http://ereserve.weber.edu/)**
- **WSU Online Home (http://wsuonline.weber.edu/)**

Harassment/Discrimination

Weber State University is committed to providing an environment free from harassment and other forms of discrimination based upon race, color, ethnic background, national origin, religion, creed, age, lack of American citizenship, disability, status of veteran of the Vietnam era, sexual orientation or preference or gender, including sexual/gender harassment. Such an environment is a necessary part of a healthy learning and working atmosphere because such discrimination undermines the sense of human dignity and sense of belonging of all people in the environment. Thus, students in this class should practice professional deportment, and avoid treating others in a manner that is demeaning or derisive in any respect. While diverse viewpoints and opinions are welcome in this class, in expressing them, we will practice the mutual deference so important in the world of work. Thus, while I encourage you to share your opinions, when

appropriate, you will be expected to do so in a manner that is respectful towards others, even when you disagree with them. If you have questions regarding the university's policy against discrimination and harassment you may contact the university's AA/EO office (626-6239) or visit its website: **http://www.weber.edu/aaeo** **(http://www.weber.edu/aaeo)**

Threat to Self or Others

Any disclosure by a student, orally or in writing, whether related to class assignments or not, that communicates the possibility of imminent danger to the student or others will be shared with the appropriate authorities.

Course Summary:

Date	Details	
Mon Aug 26, 2019	📅 **Introduction to Security** (https://weber.instructure.com /calendar?event_id=968185&include_contexts=course_486633)	12am
Wed Aug 28, 2019	📅 **Computer Systems Security Pt 1** (https://weber.instructure.com /calendar?event_id=968186&include_contexts=course_486633)	12am
Sun Sep 1, 2019	📝 **Class Introductions** (https://weber.instructure.com/courses/486633 /assignments/4151639)	due by 11:59pm
	📝 **Computer Systems Security Pt 1 Quiz** (https://weber.instructure.com/courses/486633/assignments /4176605)	due by 11:59pm
	📝 **Introduction to Security Quiz** (https://weber.instructure.com /courses/486633/assignments/4153667)	due by 11:59pm
	📝 **Lab and Challenge Setup** (https://weber.instructure.com/courses /486633/assignments/4196169)	due by 11:59pm
	📝 **Syllabus Quiz** (https://weber.instructure.com/courses/486633 /assignments/4153588)	due by 11:59pm
Mon Sep 2, 2019	📅 **LABOR DAY - NO CLASS** (https://weber.instructure.com /calendar?event_id=968187&include_contexts=course_486633)	12am
Wed Sep 4, 2019	📅 **Computer Systems Security pt 2** (https://weber.instructure.com /calendar?event_id=968188&include_contexts=course_486633)	12am
Sun Sep 8, 2019	📝 **Computer Systems Security Pt 2 Quiz** (https://weber.instructure.com/courses/486633/assignments /4176625)	due by 11:59pm

Date	Details	
	📝 **NICE Challenge: Dangerous Drives (Complexity 1) (https://weber.instructure.com/courses/486633/assignments/4196422)**	due by 11:59pm
Mon Sep 9, 2019	📅 **OS Hardening and Virtualization (https://weber.instructure.com/calendar?event_id=968189&include_contexts=course_486633)**	12am
Wed Sep 11, 2019	📅 **OS Hardening and Virtualization (https://weber.instructure.com/calendar?event_id=968190&include_contexts=course_486633)**	12am
Sun Sep 15, 2019	📝 **Connecting a Remote System Lab (https://weber.instructure.com/courses/486633/assignments/4178107)**	due by 11:59pm
	📝 **OS Hardening and Virtualization Quiz (https://weber.instructure.com/courses/486633/assignments/4176639)**	due by 11:59pm
Mon Sep 16, 2019	📅 **Application Security (https://weber.instructure.com/calendar?event_id=968191&include_contexts=course_486633)**	12am
Wed Sep 18, 2019	📅 **Application Security (https://weber.instructure.com/calendar?event_id=968192&include_contexts=course_486633)**	12am
Sun Sep 22, 2019	📝 **Host, Data, and Application Security Lab (https://weber.instructure.com/courses/486633/assignments/4178109)**	due by 11:59pm
Mon Sep 23, 2019	📅 **Network Design Elements (https://weber.instructure.com/calendar?event_id=968198&include_contexts=course_486633)**	12am
Wed Sep 25, 2019	📅 **Network Design Elements (https://weber.instructure.com/calendar?event_id=968199&include_contexts=course_486633)**	12am
Sun Sep 29, 2019	📝 **NICE Challenge: Group Policy Protections (https://weber.instructure.com/courses/486633/assignments/4196423)**	due by 11:59pm
Mon Sep 30, 2019	📅 **Networking Protocols and Threats (https://weber.instructure.com/calendar?event_id=968204&include_contexts=course_486633)**	12am
Wed Oct 2, 2019	📅 **Networking Protocols and Threats (https://weber.instructure.com/calendar?event_id=968205&include_contexts=course_486633)**	12am
Sun Oct 6, 2019	📝 **Analyze and Differentiate Types of Attacks and Mitigation Techniques Lab (https://weber.instructure.com/courses/486633**	due by 11:59pm

Date	Details	
	/assignments/4178108)	
	📝 **Networking Protocols and Threats Quiz (https://weber.instructure.com/courses/486633/assignments/4176590)**	due by 11:59pm
Mon Oct 7, 2019	📅 **Network Perimeter Security (https://weber.instructure.com/calendar?event_id=968206&include_contexts=course_486633)**	12am
Wed Oct 9, 2019	📅 **Midterm Exam Review (https://weber.instructure.com/calendar?event_id=968228&include_contexts=course_486633)**	12am
	📅 **Network Perimeter Security (https://weber.instructure.com/calendar?event_id=968207&include_contexts=course_486633)**	12am
Sun Oct 13, 2019	📝 **NICE Challenge: The Network is Down (https://weber.instructure.com/courses/486633/assignments/4196457)**	due by 11:59pm
Mon Oct 14, 2019	📅 **Securing Network Media and Devices (https://weber.instructure.com/calendar?event_id=968208&include_contexts=course_486633)**	12am
Wed Oct 16, 2019	📅 **Securing Network Media and Devices (https://weber.instructure.com/calendar?event_id=968209&include_contexts=course_486633)**	12am
Sun Oct 20, 2019	📝 **Securing Wireless Networking Quiz (https://weber.instructure.com/courses/486633/assignments/4176570)**	due by 11:59pm
	📝 **Wireless Traffic Analysis Lab (https://weber.instructure.com/courses/486633/assignments/4151648)**	due by 11:59pm
Mon Oct 21, 2019	📅 **Physical Security and Authentication Models (https://weber.instructure.com/calendar?event_id=968211&include_contexts=course_486633)**	12am
Wed Oct 23, 2019	📅 **Physical Security and Authentication Models (https://weber.instructure.com/calendar?event_id=968212&include_contexts=course_486633)**	12am
Sun Oct 27, 2019	📝 **Physical Security and Authentication Quiz (https://weber.instructure.com/courses/486633/assignments/4176441)**	due by 11:59pm
Mon Oct 28, 2019	📅 **Access Control Methods and Models (https://weber.instructure.com/calendar?event_id=968214&include_contexts=course_486633)**	12am

Date	Details	
Wed Oct 30, 2019	📅 **Access Control Methods and Models (https://weber.instructure.com /calendar?event_id=968215&include_contexts=course_486633)**	12am
Sun Nov 3, 2019	📝 **Access Control Quiz (https://weber.instructure.com/courses /486633/assignments/4176438)**	due by 11:59pm
	📝 **NICE Challenge: Domain Organization and Access Controls (https://weber.instructure.com/courses/486633/assignments /4196567)**	due by 11:59pm
Mon Nov 4, 2019	📅 **MATT OUT OF TOWN - NO CLASS (https://weber.instructure.com /calendar?event_id=968216&include_contexts=course_486633)**	12am
	📅 **Vulnerability and Risk Assessments (https://weber.instructure.com /calendar?event_id=968219&include_contexts=course_486633)**	12am
Wed Nov 6, 2019	📅 **MATT OUT OF TOWN - NO CLASS (https://weber.instructure.com /calendar?event_id=968217&include_contexts=course_486633)**	12am
	📅 **Monitoring and Auditing (https://weber.instructure.com /calendar?event_id=968220&include_contexts=course_486633)**	12am
Sun Nov 10, 2019	📝 **Monitoring and Auditing Quiz (https://weber.instructure.com /courses/486633/assignments/4176730)**	due by 11:59pm
	📝 **Threats, Attacks, and Vulnerabilities Lab (https://weber.instructure.com/courses/486633/assignments/4178111)**	due by 11:59pm
	📝 **Vulnerability and Risk Assessments Quiz (https://weber.instructure.com/courses/486633/assignments /4176715)**	due by 11:59pm
Mon Nov 11, 2019	📅 **Encryption and Hashing Concepts (https://weber.instructure.com /calendar?event_id=968222&include_contexts=course_486633)**	12am
	📅 **MATT OUT OF TOWN - NO CLASS (https://weber.instructure.com /calendar?event_id=968218&include_contexts=course_486633)**	12am
Wed Nov 13, 2019	📅 **PKI and Encryption Protocols (https://weber.instructure.com /calendar?event_id=968223&include_contexts=course_486633)**	12am
Sun Nov 17, 2019	📝 **Encryption Concepts Quiz (https://weber.instructure.com/courses /486633/assignments/4176775)**	due by 11:59pm
	📝 **PKI Concepts Quiz (https://weber.instructure.com/courses/486633 /assignments/4176777)**	due by 11:59pm
Mon Nov 18, 2019	📅 **Redundancy and Disaster Recovery (https://weber.instructure.com**	12am

Date	Details	
	[/calendar?event_id=968224&include_contexts=course_486633)](#)	
Wed Nov 20, 2019	📅 **Redundancy and Disaster Recovery** [(https://weber.instructure.com/calendar?event_id=968225&include_contexts=course_486633)](#)	12am
Sun Nov 24, 2019	📝 **Disaster Recovery Quiz** [(https://weber.instructure.com/courses/486633/assignments/4176439)](#)	due by 11:59pm
	📝 **Incident Reponse Lab** [(https://weber.instructure.com/courses/486633/assignments/4151644)](#)	due by 11:59pm
Mon Nov 25, 2019	📅 **Social Engineering** [(https://weber.instructure.com/calendar?event_id=968226&include_contexts=course_486633)](#)	12am
Wed Nov 27, 2019	📅 **Policies and Procedures** [(https://weber.instructure.com/calendar?event_id=968227&include_contexts=course_486633)](#)	12am
Sun Dec 1, 2019	📝 **NICE Challenge: Raising The Stakes: Security By The Book** [(https://weber.instructure.com/courses/486633/assignments/4207955)](#)	due by 11:59pm
	📝 **Policies and Procedures Quiz** [(https://weber.instructure.com/courses/486633/assignments/4153945)](#)	due by 11:59pm
	📝 **Security Administration Lab** [(https://weber.instructure.com/courses/486633/assignments/4151646)](#)	due by 11:59pm
Wed Dec 4, 2019	📅 **Final Exam Review** [(https://weber.instructure.com/calendar?event_id=968229&include_contexts=course_486633)](#)	12am
Fri Dec 6, 2019	📅 **Last Day of Fall Semester Classes** [(https://weber.instructure.com/calendar?event_id=968221&include_contexts=course_486633)](#)	12am
	📝 **Application Security Quiz** [(https://weber.instructure.com/courses/486633/assignments/4176645)](#)	
	📝 **Connecting a Remote System Lab** [(https://weber.instructure.com/courses/486633/assignments/4151641)](#)	
	📝 **Cryptography Lab** [(https://weber.instructure.com/courses/486633/assignments/4178113)](#)	
	📝 **Final Exam Placeholder** [(https://weber.instructure.com/courses/486633/assignments/4206741)](#)	
	📝 **Log Analysis Lab** [(https://weber.instructure.com/courses/486633/assignments/4178112)](#)	

Date	Details
	Midterm Exam Placeholder (https://weber.instructure.com/courses/486633/assignments/4206740)
	Network Design Elements Quiz (https://weber.instructure.com/courses/486633/assignments/4176711)
	NICE Challenge: Dangerous Drives (Complexity 1) (https://weber.instructure.com/courses/486633/assignments/4176564)
	NICE Challenge: Domain Organization and Access Controls (https://weber.instructure.com/courses/486633/assignments/4176471)
	NICE Challenge: Group Policy Protections (https://weber.instructure.com/courses/486633/assignments/4176712)
	NICE Challenge: The Network Is Down (https://weber.instructure.com/courses/486633/assignments/4176472)