Course Syllabus

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NET 3300 Advanced LAN Security Management | Fall 2020

Instructor

Instructor:	Matt Paulson
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Office Hours:	TBD
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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.**

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 provides an in-depth look into the field of network security. Specific topics to be examined include networking protocols and threats, authentication models, cryptography, layer 2 security, application security, social engineering, access control lists, firewalls, risk management, and OS hardening.

LEARNING RESOURCES

Textbook & Reading Materials

The text for this class will be:
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.

Labs

All labs will be submitted via Canvas. You will be presented with tasks to accomplish, and you will submit the results of those tasks. Labs 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's 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:

Labs	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 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 PRECEDENCE**.

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 24, 2020	**Introduction to Security (https://weber.instructure.com/calendar?event_id=1011942&include_contexts=course_503650)**	12am
Wed Aug 26, 2020	**Computer Systems Security Pt 1 (https://weber.instructure.com/calendar?event_id=1011943&include_contexts=course_503650)**	12am
Sun Aug 30, 2020	**Class Introductions (https://weber.instructure.com/courses/503650/assignments/4453660)**	due by 11:59pm
	Computer Systems Security Pt 1 Quiz (https://weber.instructure.com/courses/503650/assignments/4453636)	due by 11:59pm

Date	Details	
	Introduction to Security Quiz (https://weber.instructure.com/courses/503650/assignments/4453647)	due by 11:59pm
	Lab and Challenge Setup (https://weber.instructure.com/courses/503650/assignments/4453655)	due by 11:59pm
	Syllabus Quiz (https://weber.instructure.com/courses/503650/assignments/4453644)	due by 11:59pm
Mon Aug 31, 2020	LABOR DAY - NO CLASS (https://weber.instructure.com/calendar?event_id=1011944&include_contexts=course_503650)	12am
Wed Sep 2, 2020	Computer Systems Security pt 2 (https://weber.instructure.com/calendar?event_id=1011945&include_contexts=course_503650)	12am
Sun Sep 6, 2020	Computer Systems Security Pt 2 Quiz (https://weber.instructure.com/courses/503650/assignments/4453657)	due by 11:59pm
Mon Sep 7, 2020	OS Hardening and Virtualization (https://weber.instructure.com/calendar?event_id=1011946&include_contexts=course_503650)	12am
Wed Sep 9, 2020	OS Hardening and Virtualization (https://weber.instructure.com/calendar?event_id=1011947&include_contexts=course_503650)	12am
Sun Sep 13, 2020	Connecting a Remote System Lab (https://weber.instructure.com/courses/503650/assignments/4453631)	due by 11:59pm
	OS Hardening and Virtualization Quiz (https://weber.instructure.com/courses/503650/assignments/4453646)	due by 11:59pm
Mon Sep 14, 2020	Application Security (https://weber.instructure.com/calendar?event_id=1011948&include_contexts=course_503650)	12am
Wed Sep 16, 2020	Application Security (https://weber.instructure.com/calendar?event_id=1011949&include_contexts=course_503650)	12am
Sun Sep 20, 2020	Host, Data, and Application Security Lab (https://weber.instructure.com/courses/503650	due by 11:59pm

Date	Details	
	/assignments/4453634)	
Mon Sep 21, 2020	Network Design Elements (https://weber.instructure.com/calendar?event_id=1011950&include_contexts=course_503650)	12am
Wed Sep 23, 2020	Network Design Elements (https://weber.instructure.com/calendar?event_id=1011951&include_contexts=course_503650)	12am
Sun Sep 27, 2020	NICE Challenge: Group Policy Protections (https://weber.instructure.com/courses/503650/assignments/4453653)	due by 11:59pm
Mon Sep 28, 2020	Network Perimeter Security (https://weber.instructure.com/calendar?event_id=1011967&include_contexts=course_503650)	12am
	Networking Protocols and Threats (https://weber.instructure.com/calendar?event_id=1011952&include_contexts=course_503650)	12am
Wed Sep 30, 2020	Networking Protocols and Threats (https://weber.instructure.com/calendar?event_id=1011960&include_contexts=course_503650)	12am
Sun Oct 4, 2020	Analyze and Differentiate Types of Attacks and Mitigation Techniques Lab (https://weber.instructure.com/courses/503650/assignments/4453658)	due by 11:59pm
	Networking Protocols and Threats Quiz (https://weber.instructure.com/courses/503650/assignments/4453656)	due by 11:59pm
Mon Oct 5, 2020	Midterm Exam Review (https://weber.instructure.com/calendar?event_id=1011965&include_contexts=course_503650)	12am
Mon Oct 12, 2020	Midterm Exam Attempt (https://weber.instructure.com/calendar?event_id=1011970&include_contexts=course_503650)	12am
	Securing Network Media and Devices (https://weber.instructure.com/calendar?event_id=1011953&include_contexts=course_503650)	12am
Sun Oct 18, 2020	NICE Challenge: The Network is Down (https://weber.instructure.com/courses/503650	due by 11:59pm

Date	Details	
	/assignments/4453633)	
	Securing Wireless Networking Quiz (https://weber.instructure.com/courses/503650/assignments/4453652)	due by 11:59pm
	Wireless Traffic Analysis Lab (https://weber.instructure.com/courses/503650/assignments/4453672)	due by 11:59pm
Mon Oct 19, 2020	Physical Security and Authentication Models (https://weber.instructure.com/calendar?event_id=1011954&include_contexts=course_503650)	12am
Sun Oct 25, 2020	NICE Challenge: Dangerous Drives (Complexity 1) (https://weber.instructure.com/courses/503650/assignments/4453642)	due by 11:59pm
	Physical Security and Authentication Quiz (https://weber.instructure.com/courses/503650/assignments/4453640)	due by 11:59pm
Mon Oct 26, 2020	Access Control Methods and Models (https://weber.instructure.com/calendar?event_id=1011955&include_contexts=course_503650)	12am
Sun Nov 1, 2020	Access Control Quiz (https://weber.instructure.com/courses/503650/assignments/4453659)	due by 11:59pm
	NICE Challenge: Domain Organization and Access Controls (https://weber.instructure.com/courses/503650/assignments/4453637)	due by 11:59pm
Mon Nov 2, 2020	MATT OUT OF TOWN - NO CLASS (https://weber.instructure.com/calendar?event_id=1011956&include_contexts=course_503650)	12am
	Monitoring and Auditing (https://weber.instructure.com/calendar?event_id=1011959&include_contexts=course_503650)	12am
	Vulnerability and Risk Assessments (https://weber.instructure.com/calendar?event_id=1011958&include_contexts=course_503650)	12am
Sun Nov 8, 2020	Monitoring and Auditing Quiz (https://weber.instructure.com/courses/503650	due by 11:59pm

Date	Details	
	/assignments/4453654)	
	Threats, Attacks, and Vulnerabilities Lab (https://weber.instructure.com/courses/503650/assignments/4453649)	due by 11:59pm
	Vulnerability and Risk Assessments Quiz (https://weber.instructure.com/courses/503650/assignments/4453650)	due by 11:59pm
Mon Nov 9, 2020	Encryption and Hashing Concepts (https://weber.instructure.com/calendar?event_id=1011962&include_contexts=course_503650)	12am
	MATT OUT OF TOWN - NO CLASS (https://weber.instructure.com/calendar?event_id=1011957&include_contexts=course_503650)	12am
	PKI and Encryption Protocols (https://weber.instructure.com/calendar?event_id=1011968&include_contexts=course_503650)	12am
Sun Nov 15, 2020	Encryption Concepts Quiz (https://weber.instructure.com/courses/503650/assignments/4453639)	due by 11:59pm
	PKI Concepts Quiz (https://weber.instructure.com/courses/503650/assignments/4453630)	due by 11:59pm
Mon Nov 16, 2020	Redundancy and Disaster Recovery (https://weber.instructure.com/calendar?event_id=1011963&include_contexts=course_503650)	12am
Sun Nov 22, 2020	Disaster Recovery Quiz (https://weber.instructure.com/courses/503650/assignments/4453645)	due by 11:59pm
	Incident Reponse Lab (https://weber.instructure.com/courses/503650/assignments/4453664)	due by 11:59pm
Mon Nov 23, 2020	Policies and Procedures (https://weber.instructure.com/calendar?event_id=1011969&include_contexts=course_503650)	12am
	Social Engineering (https://weber.instructure.com/calendar?event_id=1011964&include_contexts=course_503650)	12am

Date	Details	
Sun Nov 29, 2020	Policies and Procedures Quiz (https://weber.instructure.com/courses/503650/assignments/4453643)	due by 11:59pm
	Security Administration Lab (https://weber.instructure.com/courses/503650/assignments/4453671)	due by 11:59pm
Mon Nov 30, 2020	Final Exam Review (https://weber.instructure.com/calendar?event_id=1011966&include_contexts=course_503650)	12am
	NICE Challenge: Raising The Stakes: Security By The Book (https://weber.instructure.com/courses/503650/assignments/4453648)	due by 11:59pm
Fri Dec 4, 2020	Last Day of Fall Semester Classes (https://weber.instructure.com/calendar?event_id=1011961&include_contexts=course_503650)	12am
	Application Security Quiz (https://weber.instructure.com/courses/503650/assignments/4453641)	
	Connecting a Remote System Lab (https://weber.instructure.com/courses/503650/assignments/4453661)	
	Cryptography Lab (https://weber.instructure.com/courses/503650/assignments/4453638)	
	Export Everything (https://weber.instructure.com/courses/503650/assignments/4453635)	
	Final Exam (https://weber.instructure.com/courses/503650/assignments/4453662)	
	Final Exam Placeholder (https://weber.instructure.com/courses/503650/assignments/4453663)	
	Log Analysis Lab (https://weber.instructure.com/courses/503650/assignments/4453651)	
	Midterm Exam (https://weber.instructure.com/courses/503650/assignments/4453665)	
	Midterm Exam Placeholder (https://weber.instructure.com/courses/503650/assignments/4453666)	

Date	Details
	Network Design Elements Quiz (https://weber.instructure.com/courses/503650/assignments/4453632)
	NICE Challenge: Dangerous Drives (Complexity 1) (https://weber.instructure.com/courses/503650/assignments/4453667)
	NICE Challenge: Domain Organization and Access Controls (https://weber.instructure.com/courses/503650/assignments/4453668)
	NICE Challenge: Group Policy Protections (https://weber.instructure.com/courses/503650/assignments/4453669)
	NICE Challenge: The Network Is Down (https://weber.instructure.com/courses/503650/assignments/4453670)