

Oklahoma State University Institute of Technology
Face-to-Face Common Syllabus
Summer 2017

ITD 3533 Secure System Administration

Students learn to secure systems and networks from threats and vulnerabilities. Topics include IDP/IDS and firewall implementation, defense in depth, network monitoring and traffic analysis, DMZs and Proxy servers, policy development and enforcement, networking hardening and attacks.

Type of course: Theory/Lab.

Credit Hours: 3; Total hours of theory per semester: 30;

Total hours of lab for the semester: 45; Total hours of clinical per semester: 0.

Class length - Full Semester

Class format – Campus based

Required synchronous meetings: Monday and Wednesday 9:30 to 11:45 AM

Prerequisites: ITD 1243, ITD 2223

Instructor Name: Dr. Fil Guinn

Instructor Phone: (918) 293-5428

Office: EET/IT, Room 15C

Instructor email: fil.guinn@okstate.edu

Contact: My preferred method of contact is **email**. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor's Office Hours: Monday and Wednesday 6:30 – 8:30 PM (Online, Phone and Email), Tuesday & Thursday 9:30 – 11:30 AM (On Campus) PLUS should be available in my office during the Study Hall, Monday-Thursday, 3-4PM, Central Time

School Name: Information Technologies

School's Main Phone: 918-293-5440

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts: **Getting Started with Windows Server Security**, Santhosh Sivarajan, Packet Publishing ISBN-13: 978-1-78439-872-9

Linux Server Security, Hack and Defend, Chris Binne, Wiley
ISBN-13: 978-1-119-27765-1

References: Assorted Subject Videos

Materials: Computer with broadband Internet Access (2Mbps upload preferred)

Uniform/Tools: None

Estimated Cost for Materials: \$ 113.75

Estimated Cost for Uniform/Tools: \$ None

Upon completion of the course, students should:

Course Objectives	Assessment of Objectives	
Evaluate and document IT security risks and make recommendations for mitigation	Course Project	E.1
Implement systems integration practices for specific processes on enterprise IT system components	Class Labs, Course Project	L.1
Create a comprehensive security plan, set of policies or procedures to protect the IT assets of an organization	Class Labs, Course Project	L.2

Aspects of the course objective assessments may be used in the university's assessment of student learning. If applicable, an asterisk (*) above indicates this course is used in the university assessment program.

Course Activities

In this course students will:

- Participate in online discussions and activities
- Use a virtual network environment to use software
- Reply to chapter questions and definitions
- View course specific video presentation
- Complete chapter quizzes
- Complete a Final Exam
- Complete a course project
- Compile a portfolio of work produced

EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS:

Class Interaction quizzes.....	10%
Professional Development.....	5%
Hands-on Projects	45%
Research Questions	20%
*Course Project	15%
Portfolio	5%
Total	100%

OSUIT Grading Scale
A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% & below

*The student's grade for this assignment will be used in the university's assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student's course grade.

Campus Course Interaction

This campus course uses a variety of tools to build a community of learners and strengthen communication between students and their peers, as well as between students and the instructor. Through the use of these tools, you will be able to interact with others in the classroom. Communication tools used in this course include Interactive quizzes and Discussions, News, Partner Interaction, and Email.

Interaction with Your Peers

You will select a partner to work with throughout the semester.

- You will interact with students during the discussion sessions each day in class.
 - You will take the Post Lecture quiz each class period
 - You will discuss the recap of the quiz for the benefit of all
 - Your interaction will be a graded assessment worth 10%
 - Not interacting in the classroom will affect your overall grade

Interaction with Your Instructor

In addition to office hours (as indicated on the first page of this syllabus), you can also expect me to provide:

- communication about student course performance during the scheduled of unscheduled sessions
- additional information and updates about the course as needed through e-mails and the News feature in the Online Classroom (D2L)
- detailed analysis, feedback and explanation of grades according to the following schedule
 - Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.
 - Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

You may contact me by email at any time with questions or concerns about your course; however, please allow 24-48 hours to receive a reply to your correspondence on weekdays. I may not be available to respond to your correspondence on the weekend, so please do not leave your coursework until the last possible moment in case you need assistance.

Attendance Policy for Face to Face Courses

A primary component of OSUIT's Mission is "to prepare and sustain a diverse student body as competitive members of a world-class workforce." Regular and consistent attendance not only aids in academic success, dependable attendance is a requirement in today's real-world employment; therefore, regular and consistent attendance is a requirement in all OSUIT courses.

Definitions:

- Absent: Failing to attend all or a significant portion of a class or lab session.
- A. Students may not be marked as absent if missing class for situations such as, but not limited to
1. participating in a required university activity such as a field trip;
 2. fulfilling a military obligation;
 3. a mandatory court appearance;
 4. death in the immediate family;
 5. extreme illness or accident to oneself or immediate family.
- Instructors, at their discretion, may require proof of such events.
- B. It is the responsibility of the student to contact and inform the instructor and/or department in advance of such excused absences whenever possible.
- Tardy: Arriving late to class as defined by the individual class instructor. Faculty, at their discretion, may equate three tardies to equal one absence.

Procedures:

Early Intervention

- A. Any student who misses 10% of an individual course (or earlier at faculty discretion) during a regular fifteen-week semester, or the equivalent portion of time in a shorter session, will have their name submitted by that course instructor to the OSUIT Early Alert System for retention intervention.
- B. At the point the Early Alert is issued, the student *must* meet with their assigned faculty advisor or designated faculty/staff member within seven (7) academic calendar days for counseling on how to improve their attendance and academic success.

Excessive Absences

- A. The University reserves the right to administratively withdraw any student from an individual course who misses 20% of that course, whether excused or unexcused, and, in the opinion of the instructor, the student does not have a reasonable opportunity to be successful in the course.
- B. Students should be aware any of the following may impact their financial aid:
1. being administratively withdrawn from a course
 2. dropping a course
 3. their last date of attendance in a course

Please see OSUIT Policy 2-021 for full details and procedures.

Authorized Tools

Students may use any/all course materials, including books and notes, while participating in online classroom activities. All quizzes, labs, and written assignments are to be completed independently and any instance of collaboration will be considered academic dishonesty. Collaboration with classmates while studying concepts and network configurations is permitted and encouraged.

Late Work

Turning in your properly-executed work early is always acceptable. All exams, assignments, papers and projects must be completed and submitted by the specified due date; late work will not be accepted after the due date unless prior authorization is given.

If the faculty member grades an assignment you have submitted before the due date, you do not have the ability to modify the assignment to increase your grade. Any additional submissions will not be opened, so make sure you are ready to submit your assignments and accept the grade you are given.

Testing

Quizzes may be timed or proctored during this course.

University & Course Expectations

It is the responsibility of each OSUIT student to read, abide by, and maintain a copy of the syllabus for this course. Syllabi are available on the OSUIT website.

Students understand that excerpts or portions of their work may be utilized for institutional assessment purposes. The purpose of institutional assessment is for verification of student learning and program improvement. Every effort will be made to keep this information confidential.

Americans With Disabilities Act (ADA)

According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Academic Accommodations/LASSO Center. Please advise the instructor of your disability as soon as possible, and contact The LASSO Center, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. The LASSO Center is located on the 3rd floor of the Noble Center. You may call 918.293.4855 for more information or fax documentation to 918.293.4853.

Academic Dishonesty

Academic dishonesty or misconduct is neither condoned nor tolerated at OSUIT. Any student found guilty of academic dishonesty or misconduct shall be subject to disciplinary action. Academic dishonesty and/or misconduct includes, but is not limited to, the following actions:

1. Plagiarism: the representation of previously written, published, or creative work as one's own
2. Unauthorized collaboration on projects
3. Cheating on examinations
4. Unauthorized advance access to exams
5. Fraudulent alteration of academic materials
6. Knowing cooperation with another person in an academically dishonest undertaking.

Students are required to actively protect their work against misuse by others. For details, refer to The OSUIT Student Handbook (Student Rights and Responsibilities Governing Student Behavior) available online at http://www.osuit.edu/academics/forms/student_rights_responsibility.pdf.

Course Schedule

Schedule	Topic	Assignment	Due Date
Week 1	Getting Started Online Orientation Partner Selection	Reading assignment – Preface. Class Orientation. Assignment –Partner selection	5/7/2017
Week 2	Module One Chapter 1 – Operating System & Baseline Security	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	5/14/2017
Week 3	Module Two Chapter 2 – Native MS Security Tools and Configuration	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	5/21/2017
Week 4	Module Three Chapter 3 – Server Roles and Protocols	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	5/28/2017
Week 5	Module Four Chapter 4 – Application Security	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	6/4/2017
Week 6	Module Five Chapter 5 – Network Service Security	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	6/11/2017
Week 7	Module Six Chapter 6 – Access Control	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	6/18/2017

Week 8	Module Seven Chapter 7 – Patch Management	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	6/25/2017
Student Summer Break			
Week 9	Module Eight Chapter 8 – Auditing and Monitoring	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	7/16/2017
Week 10	Module Nine Chapter 1 – Invisibility Cloak & Chapter 2 – Digitally Fingerprint Your Files	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	7/23/2017
Week 11	Module Ten Chapter 3 – Twenty-First-Century Netcat & Chapter 4 – Denying Service	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	7/30/2017
Week 12	Module Eleven Chapter 5 – Nping & Chapter 6 – Logging Reconnoiters	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	8/6/2017
Week 13	Module Twelve Chapter 7 – Nmap’s Prodigious NSE & Chapter 8 – Malware Detection	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	8/13/2017
Week 14	Module Thirteen Chapter 9 – Password Cracking with Hashcat & Chapter 10 – SQL Injection Attacks	Assignments – Chapter Labs Class Interaction quizzes Assessments: Research Questions	8/20/2017
Week 15	Module Fourteen Portfolio	Final Project Course Portfolio	8/23/2017 8/24/2017

Schedule is subject to change at instructor discretion.