



Course Information

Course Title	Operating System Security
Course Prefix, Num. and Title	ITSY 2300 – Operating System Security
Division	Technology & Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Safeguard computer operating systems by demonstrating server support skills and designing and implementing a security system. Identify security threats and monitor network security implementations. Use best practices to configure operating systems to industry security standards.
Pre-Requisites	ITSY 1342 and ITNW 1316
Co-Requisites	Enter Co-Requisites Here.

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:2:2
Lab/Other Hours	
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	2
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Securing Modems
Hardening Routers
Hardening Operating Systems
Patch Management
Log Analysis
Application Security

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Identify network security risks, security design, and monitoring solutions
2. Identify sources of computer threats
3. evaluate potential practices, tools, and technologies to protect individual network systems
4. Establish and sustain an operating system security plan utilizing systems and application security tools
5. Implement procedures to secure and monitor audit logs and set system administrator alerts
6. Develop an organizational operating system security plan that provides for periodic reviews of security policies, procedures, authorized users list, and software update patches

Methods of Assessment:

- Individual Projects
- Group Projects
- Lab Assignments
- Tests and Quizzes
- Final Exam

Required text(s), optional text(s) and/or materials to be supplied by the student:

Network Defense: Securing and Troubleshooting Network Operating Systems, 1st Edition. EC-Council, 2011, 9781435483583 or current textbook in the topic.

Suggested Course Maximum:

18

List any specific or physical requirements beyond a typical classroom required to teach the course.

Access to Netlab

- Computer (64-bit CPU) equipped with 12 GB RAM or more (running virtual machines), graphics card capable of supporting virtual machines, 19" or better monitor, and removable hard drive (500 GB or better) for each student and same for instructor.
- Instructor's machine needs 2 network interface cards (one to connect to WCJC network and one to connect to student pcs). And Data projector
- Cat 5 network cable, RJ-45 jacks and crimper for each student and 2 cable testers
- Router and cables to separate class from WCJC network
- Microsoft Windows 7 (or current version) (64 bit) operating system software for each pc (student and instructors)
- Linux Operating system*
- Microsoft Office suite for each pc (student and instructors)

Version: 3/20/2019

- VMWare Workstation 11 (or current version) for each student and instructor
- Antivirus software for each pc

The course maximum is set by current equipment contained in the lab.

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Attendance and Participation	0-10%
Chapter Review Questions	0-10%
Labs (Projects)	25-50%
Tests	25-50%
Final Exam / Project	10-25%

- A = 90.0 - 100
- B = 80.0 - 89.9
- C = 70.0 - 79.9
- D = 60.0 - 69.9
- F = less than 60.0

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist