COURSE DESCRIPTION

Prerequisites: ITSY 1442 or instructor consent.

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.

This is a 4 credit hour course. (3 lec., 4 lab.)

This class is designed to help prepare students for successful completion of the CompTIA Linux+ certification exams through the Linux Professional Institute (LPI).

WECM END-OF-COURSE OUTCOMES: Identify network security risks, security design, and monitoring solutions; identify sources of computer threats, evaluate potential practices, tools, and technologies to protect individual network systems; establish and sustain an operating system security plan utilizing systems and application security tools; implement procedures to secure and monitor audit logs and set system administrator alerts; and develop an organizational operating system security plan that provides for periodic reviews of security policies, procedures, authorized users list, and software update patches.

STUDENT LEARNING OUTCOMES:

Upon successful completion of ITSY 2400 Operating Systems Security, students will be able to:

- Write a one page research paper describing legal and public relations implications of security and privacy issues
- Assess an information security strategy and architecture
- Plan and respond to intruders in a an information system
- Present a disaster recovery plan for recovery of information assets after an incident
- Identify and prioritize information assets

Students will be prepared to take the CompTIA Linux+ certification exam at the end of the course. Instructions to purchase student vouchers will be sent by your instructor at the end of your course.

COURSE MATERIALS


Required online access Software: Testout Linux PRO – English 3.1.0 (CompTIA LX0-101 & LX0-102)
You will need to email your instructor or go to your course Announcements page for the special promotional code that allows students to purchase the product for $102.00. Instructions on how to install and enroll in the class will be provided in the email and on the Announcements page. Note: Follett Bookstore may have different price than the online vendor site.

A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Major Course Requirements**
Students will participate in Discussion Boards addressing topics in each chapter.
Students will complete the review questions in each chapter.
Students will complete hands-on projects.
Students will complete chapter quizzes.
Students will complete an assigned case study Exercise from each chapter.
Students will produce a Case Study Project paper on the following topics:

- Security Management
- Operational Security
- Law and Ethics
- Cryptography
- Access Control
- Computing Architecture
- Networking Security

A pre-assessment and post-assessment will evaluate the student's understanding of the fundamentals of Operating System Security.

**Subject Matter**
Topics covered in the lecture portion of the course include

- Operating Systems Security: Keeping Computers and Networks Secure
- Viruses, Worms, and Malicious Software
- Security through Authentication and Encryption
- Account-Based Security
- File, Directory, and Shared Resource Security
- Firewalls and Border Security
- Physical and Network Topology Security
- Wireless Security
- Web, Remote Access, and VPN Security
- E-Mail Security
- Security through Disaster Recovery
- Security through Monitoring and Auditing

**Disclaimer**
The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When
necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

**Institutional Policies**
Institutional Policies relating to this course can be accessed from the following link [www.elcentrocollege.edu/syllabipolicies](http://www.elcentrocollege.edu/syllabipolicies).