COURSE DESCRIPTION

Prerequisites: Prior networking course, networking experience or Instructor approval.

Instruction in security for network hardware, software, and data including physical security, backup procedure, relevant tools; encryption and protection from viruses.

This class is designed to help prepare students for successful completion of the CompTIA Security + certification exam.

Additional certification information is available at: http://www.comptia.org.

This is a 4 credit hour course. (3 Lec., 4 Lab.)

WECM END-OF-COURSE OUTCOMES: National Institute of Standards and Technology (NIST) Guidelines and other best practices; develop backup procedures to provide for data security; use network operating system features to implement network security; identify computer and network threats and vulnerabilities and methods to prevent their effects; use tools to enhance network security; and use encryption techniques to protect network data.

STUDENT LEARNING OUTCOMES:

Upon successful completion of ITSY 1442 Information Technologies Security, the student will be able to:

- Develop backup procedures to provide for data security
- Describe the nature of computer viruses, their methods of spreading, and means of protecting networks from viruses
- Utilize relevant tools to provide for network security
- Protect network data using encryptions techniques
- Discuss the best way to protect an organization’s data assets

COURSE MATERIALS

Required Software: Testout Security Pro – SY0-501 (ISBN# 978-1-935080-44-2) from Testout www.testout.com 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
$89.00. 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:

A mid-term and final exam will evaluate the student's understanding of the fundamentals of Information Security.

- **Cryptography**
- **Network Infrastructure**
- **Network Attacks**
- **Network Security**
- **Application Security**
- **Organizational Security**
- **Assessments & Audits**

**Subject Matter**
Topics covered in the lecture portion of the course include
- Introduction to Security
- Malware and Social Engineering Attacks
- Application and Network Attacks
- Vulnerability Assessment and Mitigating Attacks
- Host, Application, and Data Security
- Network Security
- Administering a Secure Network
- Wireless Network Security
- Access Control Fundamentals
- Authentication and Account Management
- Basic Cryptography
- Advanced Cryptography
- Business Continuity
- Risk Mitigation

**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).