



Broward Community College

Course Outline

STATUS: A

COMMON COURSE NUMBER: ~~--- EIS-2354CCTS2312C ---~~

COURSE TITLE: ~~--- SSsecurity+ ---~~

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CREDIT HOURS: 34

CONTACT HOURS BREAKDOWN:

Lecture/Discussion	<u>48</u>
Lab	<u>16</u>
Other	<u>---</u>
Contact Hours/Week	<u>4</u>

CATALOG COURSE DESCRIPTION:

This course provides the student with an understanding of the computer, network, infrastructure, and information security issues faced by industry worldwide. Expertise necessary to combat and protect intellectual property from theft and destruction are also developed. The skills developed by students who complete this course will prepare them for the Security+ certification exam.

Prerequisite: ~~CETN2489C or CEN1509C or CET2489C~~

Corequisite:

UNIT TITLES:

1. General Security Concepts
2. Communication Security
3. Infrastructure Security
4. Basics of Cryptography
5. Operational/Organizational Security

LAST REVIEW Academic Year 2002-03 NEXT REVIEW Academic

Year 20067-078

Interim Revision Dates:

I. Course Overview:

Upon successful completion of this course, the student should be able to eexplain and combat computer, network, infrastructure, and information security issues~~database concepts including the relational structure of files, records and fields. SQL theory and utilization will also be delved into. Class assignments will consist of academic and business problems.~~

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II. Units:

Unit 1. 1. GENERAL SECURITY CONCEPTS~~BASIC SQL STATEMENTS~~

General Outcome:

1.0 Upon successful completion of this unit, the student should be able to understand authentication methods along with common network attacks and how to safeguard against them~~program simple SQL program statements.~~

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Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

1.1 Understand various access control methods~~see a select statement to retrieve data~~

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1.2 Understand various authentication methods~~Use an insert statement to create data~~

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1.3 Understand and disable unneeded services, protocols, and programs~~Use an update statement to change data~~

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1.4 Understand the various types of attacks and how to safeguard against them~~Use a delete statement to remove data~~

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1.5 Understand and protect against various types of malicious code~~Use functions within SQL statements~~

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1.6 Understand issue involving social engineering

1.7 Understand the processes involved in auditing

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Unit 2. 2. ~~COMMUNICATION SECURITY~~~~ADVANCED SQL STATEMENTS~~

General Outcome:

- 2.0 Upon successful completion of this unit, the student should be able to understand and secure remote access, e-mail, the Web, directory and file transfer, and wireless data, and understand the vulnerabilities~~create and execute sophisticated queries.~~

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Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Understand and secure remote access systems~~Write queries that use different types of joins.~~
- 2.2 Understand and protect E-mail~~Write subqueries systems~~
- 2.3 Understand and protect Web services and privacy
- 2.4 Understand various directory services
- 2.5 Understand and secure file transfer systems
- 2.6 Understand and protect various wireless technologies~~Control transactions~~

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Unit 3. 3. INFRASTRUCTURE SECURITY~~TABLES AND VIEWS~~

General Outcome:

3.0 Upon successful completion of this unit, the student should be able to ~~manipulate tables and views within the database,~~ understand various network devices and media, and the proper use of perimeter topologies such as DMZs, Extranets, and Intranets to establish network security.

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Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

~~3.1 Understand the various devices used in networks~~
~~Describe data types use in tables.~~

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~~Create and alter table definitions.~~

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3.2 Understand the various network and computer media used in computer and network systems

3.3 Understand implementations of security ~~Create and alter views, topologies~~

3.4 Create and maintain indexes and sequences ~~Understand implementation methods for intrusion detection~~

3.5 Understand implementations of security baselines

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Unit 4. 4. BASICS OF CRYPTOGRAPHY~~STORED PROCEDURE BASICS~~

General Outcome:

- 4.0 Upon successful completion of this unit, the student should be able to ~~create a stored procedure to perform database processing,~~ understand and discuss cryptography basics, including the differences between asymmetric and symmetric algorithms, and the different types of PKI certificates and their usage.

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Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Describe various types of cryptography algorithms~~Use variables within proper scope.~~
- 4.2 Understand the concepts of using Write queries, control transactions, and use functions with a procedure.~~cryptology~~
- 4.3 Understand the concepts and usage of PKI~~Use loops and if statements within a procedure.~~ certificates
- 4.4 Understand cryptography standards and protocols
- 4.5 Understand key management and certificate lifecycle~~Use cursors within a procedure.~~ implementation

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Unit 5. 5. OPERATIONAL/ORGANIZATIONAL SECURITY TRIGGERS

General Outcome:

5.0 Upon successful completion of this unit, the student should be able to understand implementation of operational/organizational security as it relates to physical security, disaster recovery, and business continuity, as well as an understanding of computer forensics use triggers.

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Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

5.1 Understand implementation of physical security~~Describe triggers.~~

5.2 ~~5.2~~ Understand and implement disaster recovery methods

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5.3 Understand the importance of business continuity

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5.4 Understand and implement organizational security policies and procedures

5.5 Understand and implement privilege management~~Use triggers.~~ Procedures

5.6 Understand concepts of computer forensics and the roles of computer professionals

5.7 Understand the process of risk identification

5.8 Understand the importance of end-user training as it relates to security issues and policies

5.9 Understand and maintain appropriate documentation as it relates to security guidelines

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