Washtenaw Community College Comprehensive Report

CSS 180 Computer Security I Proposed start term: Fall 2010

Course Cover

Division: Business and Computer Technologies

Department: Computer Instruction **Discipline:** Computer Systems Security

Course Number: 180 Org Number: 13400

Full Course Title: Computer Security I Transcript Title: Computer Security I

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog, Time Schedule, Web Page Reason for Submission: Three Year Review / Assessment Report

Change Information:
Outcomes/Assessment
Objectives/Evaluation
Rationale: Change to outcomes
Proposed Start: Fall 2010

Course Description: Computer Security I is the introductory course in a series of courses dedicated to computer security. It provides an overview of computer systems with an emphasis on security. Topics include basic architecture of computers and operating systems, command line interface, networking concepts and security fundamentals. This course assumes an intermediate level of computer knowledge and experience. The title of this course was previously Computer Security for PC's.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 60 Student: 60

Lab: Instructor: 0 Student: 0 Clinical: Instructor: 0 Student: 0 Other: Instructor: 0 Student: 0

Total Contact Hours: Instructor: Student:

Repeatable for Credit: NO Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

Requisites

Prerequisite

Academic Reading and Writing Levels of 6; CIS 100 or CIS 117, minimum grade "C" or industry experience

General Education

Request Course Transfer

Proposed For:

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http://www.curricunet.com

Student Learning Outcomes

1. Convert numbers to different numbering systems

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year

period

Number students to be assessed: All students

How the assessment will be scored: Written exam evaluated by the CIS Faculty with

departmental-developed rubric

Standard of success to be used for this assessment: At least 80% of students must score 75%

or better

Who will score and analyze the data: Assessment materials are evaluated by the CIS

Department

2. Recognize and configure major Operating System components.

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year

period

Number students to be assessed: All students

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Standard of success to be used for this assessment: At least 80% of students must score 75%

or better

Who will score and analyze the data: Assessment materials are evaluated by the CIS

Department

3. Recognize the concepts and principles of how data packets are transmitted over a network.

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year

period.

Number students to be assessed: all

How the assessment will be scored: Written exam evaluated by the CIS Faculty with

departmental-developed rubric

Standard of success to be used for this assessment: At least 80% of students must score 75%

or better

Who will score and analyze the data: Assessment materials are evaluated by the CIS

Department

4. Recognize and use networking components to build a small network topology.

Assessment 1

Assessment Tool: Sample of laboratory reports.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year

period.

Number students to be assessed: all students

How the assessment will be scored: Written exam evaluated by the CIS Faculty with department-developed rubric

Standard of success to be used for this assessment: At least 80% of students must score 75% or better

Who will score and analyze the data: Assessment materials are evaluated by the CIS Department

5. Recognize and use the networking protocols that comprise the TCP/IP model of networking.

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year period.

Number students to be assessed: all students

How the assessment will be scored: Written exam evaluated by the CIS Faculty with department-developed rubric.

Standard of success to be used for this assessment: At least 80% of students must score 75% or better.

Who will score and analyze the data: Assessment materials are evaluated by the CIS Department.

6. Apply techniques to subnet a network address into multiple subnetworks.

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions.

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year period.

Number students to be assessed: all students

How the assessment will be scored: Written exam evaluated by the CIS Faculty with department-developed rubric.

Standard of success to be used for this assessment: At least 80% of students must score 75% or better.

Who will score and analyze the data: Assessment materials are evaluated by the CIS Department.

7. Recognize the priciples of different attack vectors against computers and networks.

Assessment 1

Assessment Tool: Department created final exam - short answer/multiple choice questions

Assessment Date: Fall 2013

Assessment Cycle: Every Three Years

Course section(s)/other population: Min. of two sections of CSS 180 over the three year period.

Number students to be assessed: all students

How the assessment will be scored: Written exam evaluated by the CIS Faculty with department-developed rubric.

Standard of success to be used for this assessment: At least 80% of students must score 75% or better.

Who will score and analyze the data: Assessment materials are evaluated by the CIS Department.

Course Objectives

1. Use numbering systems such as binary, octal and hexadecimal.

Methods of Evaluation

Exams/Tests

Matched Outcomes

- 1. Convert numbers to different numbering systems
- 2. Explain the conceptual architecture of computers.

Methods of Evaluation

Exams/Tests

Matched Outcomes

- 2. Recognize and configure major Operating System components.
- 3. Use basic commands on the Windows command line.

Methods of Evaluation

Exams/Tests

Matched Outcomes

- 4. Recognize and use networking components to build a small network topology.
- 5. Recognize and use the networking protocols that comprise the TCP/IP model of networking.
- 4. List the concepts and purpose of the layers of the TCP/IP model.

Methods of Evaluation

Exams/Tests

Matched Outcomes

- 3. Recognize the concepts and principles of how data packets are transmitted over a network.
- 5. Recognize and use the networking protocols that comprise the TCP/IP model of networking.
- 6. Apply techniques to subnet a network address into multiple subnetworks.
- 5. List the concepts and purpose of networking protocols including Ethernet, IP, TCP, ARP, HTTP, FTP, DHCP, and DNS.

Methods of Evaluation

Exams/Tests

Matched Outcomes

- 3. Recognize the concepts and principles of how data packets are transmitted over a network.
- 5. Recognize and use the networking protocols that comprise the TCP/IP model of networking.
- 6. Configure a small network.

Methods of Evaluation

Lab Activity, Report or Test

Matched Outcomes

7. List techniques used to compromise networks and computers.

Methods of Evaluation

Exams/Tests

Matched Outcomes

8. Apply firewall concepts and use the Windows firewall to protect a PC.

Methods of Evaluation

Lab Activity, Report or Test

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Other

Equipment/Facilities
Level III classroom
Computer workstations/lab