

**CS 182.51 Course Outline as of Fall 2015****CATALOG INFORMATION**

Dept and Nbr: CS 182.51 Title: SECURITY FOR CABLE &amp; DSL

Full Title: Security for Cable and DSL Home Networks

Last Reviewed: 11/8/2010

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	0.50	Lecture Scheduled	0.50	17.5	Lecture Scheduled	8.75
Minimum	0.50	Lab Scheduled	0	2	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	0.50		Contact Total	8.75
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 17.50

Total Student Learning Hours: 26.25

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: CIS 150.1

**Catalog Description:**

Overview and implementation of security for personal computers connected to the Internet with broadband cable or Digital Subscriber Line (DSL). Topics include privacy, anonymity, communication protocols, file and print sharing, the prevention and detection of intrusion, downloading firewall software and updates from the Internet, developing a security strategy, checking for vulnerability, and other data protection techniques.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Overview and implementation of security for personal computers connected to the Internet with broadband cable or Digital Subscriber Line (DSL). Topics include privacy, anonymity, communication protocols, file and print sharing, the prevention and detection of intrusion, downloading firewall software and updates from the Internet, developing a security

strategy, checking for vulnerability, and other data protection techniques. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>		Effective:	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of the course, students will be able to:

1. Analyze security options on a home network
2. Describe network communication protocols
3. Determine the extent of their vulnerability
4. Describe how a system can be maliciously used without the owner's knowledge
5. Download and configure a firewall program
6. Describe a hardware firewall configuration method
7. Implement and evaluate a security plan

### **Topics and Scope:**

1. Security
  - a. How safe is secure?
  - b. Software options
  - c. Hardware options
  - d. Privacy and anonymity
  - e. Masquerading
2. Communication Protocols
  - a. Transmission Control Protocol/Internet Protocol (TCP/IP)
  - b. Network Basic Input/Output System User Enhanced Interface (NetBUEI)
  - c. AppleTalk
  - d. File and print sharing
  - e. Secure Protocols
3. Scanning
  - a. Ports

- b. Self scan
- c. Someone else using your system
- 4. Firewalls
  - a. Types of firewalls pros and cons
  - b. Download a software firewall
  - c. Install and configure a software firewall
  - d. Update a software firewall
- 5. Configuring Hardware Options
  - a. Hubs and switches
  - b. Routers
  - c. Proxy servers
- 6. Developing a Security Plan
  - a. Best practices
  - b. Acceptable risks

### Assignment:

- 1. Computer lab assignments:
  - a. Download, install and configure a software firewall
  - b. Scan for vulnerabilities
- 2. Performance exams on class content
- 3. One to two quizzes

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Computer lab assignments, and performance exams on class content

Skill Demonstrations  
40 - 60%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes: multiple choice, true/false, matching items, completion

Exams  
40 - 60%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None
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Other Category 0 - 0%
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**Representative Textbooks and Materials:**

Instructor prepared materials