

# Course Syllabus

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**NOTE: This syllabus is subject to change during the semester. Please check this syllabus on a regular basis for any updates.**

**Department** : Computer Sciences  
**Course Title** : Firewalls and Network Security  
**Section Name** : ITSY\_2301\_wb  
**Start Date** : 08/22/2011  
**End Date** : 12/09/2011  
**Modality** : Web  
**Credits** : 3

## Instructor Information

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**Name** : Jon Calder  
**OC Email** : jcalder@odessa.edu  
**OC Phone #** : (432) 335-6436  
**Mobile#** : (432) 940-2817

### Course Description

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Identify elements of firewall design, types of security threats and responses to security attacks. Use Best Practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities.

### Prerequisites/Corequisites

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ITSY1342 or consent of the Instructor

### Scans

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1, 2, 3, 5, 6, 7, 8, 9

### Course Objectives

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**After completing this course, the student should be able to demonstrate competency in:**

Demonstrate system security skills through firewall implementation and testing; use system tools, practices, and relevant technologies to implement a security plan; evaluate practices, tools, and technologies to identify security breaches, sources of attacks, and protect mission critical systems; establish an appropriate level of security based on an analysis of security logs; and use relevant tools to secure a network, respond to and follow up on various types of attacks.

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**COURSE REQUIREMENTS:**

ALL STUDENTS ARE EXPECTED TO:

1. Take all exams and complete all homework.
2. Complete all lab projects.

**WEIGHT OF COURSE REQUIREMENTS:**

Chapter Exams	30%
Labs(Hands on Projects)	20%
MidTerm	20%
Final Exam	20%
Discussion Board	10%

**METHOD OF EVALUATION:**

The general weighting of exams, assignments, and final exam for the Final grade in this particular course are:

<b>Exams&amp; Quizzes:</b>	<b>50%</b>	<b>A: 90 - 100</b>
<b>Discussion Board:</b>	<b>10%</b>	<b>B: 80 - 89</b>
<b>Midterm:</b>	<b>20%</b>	<b>C: 70 - 79</b>
<b>Final Exam:</b>	<b>20%</b>	<b>D: 60 - 69</b>
		<b>F: 0 - 59</b>

**NOTE: ALL ASSIGNMENTS FOR THE ENTIRE SEMESTER ARE POSTED ON THE CLASS WEBSITE. ALL QUIZZES AND LAB TEST DATES WILL BE ANNOUNCED ON THE CLASS WEBSITE.**

### **ATTENDANCE POLICY**

Attendance will be recorded and you will be graded once a week according to the number of days the class meets per week. If you are enrolled in a web class, your attendance grade comes from the discussion board.

### **COURSE REQUIRMENT DEADLINES**

Credit will be given for ONLY those exams completed on exam days, and homework, and projects completed and turned in by the announced deadlines, unless **prior arrangements** have been made with and approved by the instructor. Zeros (0) will be recorded for any work for which arrangements have not been approved!!

### **IMPORTANT NOTE**

It is the policy of this instructor to help you complete this course. If you believe that you cannot complete this class due to medical, family, financial, social, or job related problems or conflicts, you should see, call or email me to discuss your options.

### **ACADEMIC ETHICS:**

You are expected to create, edit format and print out your own assignments, take tests on your own. **ALL WORK IS EXPECTED TO BE YOUR OWN.**

**If unethical behavior is detected:**

**WITH YOUR FIRST OFFENSE, YOU WILL RECEIVE ZEROS FOR THE ENTIRE CHAPTER AND the LAB TEST for that chapter.**

**WITH YOUR SECOND OFFENSE, YOU WILL BE KICKED OUT OF THE CLASS WITH A FINAL GRADE OF "F," NO QUESTIONS ASKED.**

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## Required Readings/Materials

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### **TEXTBOOKS: Guide to Firewalls and VPNs, 3rd Edition**

Whitman/Mattord/Green

ISBN-10:1111135398

ISBN-13:9781111135393

528 pages | ©2012

### **Course Requirements (Lectures, Assignments and Assessments)**

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Credit will be given for ONLY those exams completed on exam days, and homework, and projects completed and turned in by the announced deadlines, unless **prior arrangements** have been made with and approved by the instructor. Zeros (0) will be recorded for any work for which arrangements have **not** been approved!!

*Week 1* Topic/Overview: This week focuses on Introduction  
Summary of Week 1 Assignments & Activities

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 1</i>	<i>Reading</i>	<i>Read Chapter 1</i>	<i>see Blackboard</i>
Discussion Board Week 1	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

## *Week 2*

**Topic/Overview:** This week focuses on Chapter 1: Introduction to Information Security

### **Summary of Week 2 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 1</i>	<i>Lab</i>	<i>Hands on Projects 1-1&amp; 1-2</i>	<i>see Blackboard</i>
<i>Chapter 1 Exam</i>	<i>Exam</i>	<i>Chapter 1 Exam</i>	<i>see Blackboard</i>
<i>Chapter 2</i>	<i>Reading</i>	<i>Read Chapter 2</i>	<i>see Blackboard</i>
<i>Discussion Board Week 2</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

### *Week 3*

**Topic/Overview:** This week focuses on Chapter 2: Security Policies and Standards

#### **Summary of Week 3 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 2</i>	<i>Lab</i>	<i>Hands on Projects 2-1&amp; 2-2</i>	<i>see Blackboard</i>
<i>Chapter 2 Exam</i>	<i>Exam</i>	<i>Chapter 2 Exam</i>	<i>see Blackboard</i>
<i>Chapter 3</i>	<i>Reading</i>	<i>Read Chapter 3</i>	<i>see Blackboard</i>
<i>Discussion Board Week 3</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 4*

**Topic/Overview:** This week focuses on Chapter 3: Authenticating Users

**Summary of Week 4 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 3</i>	<i>Lab</i>	<i>Hands on Projects 3-1&amp; 3-2</i>	<i>see Blackboard</i>
<i>Chapter 3 Exam</i>	<i>Exam</i>	<i>Chapter 3 Exam</i>	<i>see Blackboard</i>
<i>Chapter 4</i>	<i>Reading</i>	<i>Read Chapter 4</i>	<i>see Blackboard</i>
<i>Discussion Board Week 4</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>



*Week 5&6*

**Topic/Overview:** This week focuses on Chapter 4: Introduction to Firewalls

**Summary of Weeks 5&6 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 4</i>	<i>Lab</i>	<i>Hands on Projects 4-1,4-2&amp;4-3</i>	<i>see Blackboard</i>
<i>Chapter 4 Exam</i>	<i>Exam</i>	<i>Chapter 4 Exam</i>	<i>see Blackboard</i>
<i>Chapter 5</i>	<i>Reading</i>	<i>Read Chapter 5</i>	<i>see Blackboard</i>
<i>Discussion Board Week 5&amp;6</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 7*

**Topic/Overview:** This week focuses on Chapter 5: Packet Filtering

**Summary of Week 7 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 5</i>	<i>Lab</i>	<i>Hands on Projects 5-1through 5-4</i>	<i>see Blackboard</i>
<i>Chapter 5 Exam</i>	<i>Exam</i>	<i>Chapter 5 Exam</i>	<i>see Blackboard</i>
<i>Chapter 6</i>	<i>Reading</i>	<i>Read Chapter 6</i>	<i>see Blackboard</i>
<i>Discussion Board Week 7</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 8*

**Topic/Overview:** This week focuses on the Midterm Chapters 1-5

**Summary of Week 8 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Mid Term Review</i>	<i>Review</i>	<i>Chapters 1-5</i>	<i>see Blackboard</i>
<i>MidTerm</i>	<i>MidTerm</i>	<i>Chapters 1-5</i>	<i>see Blackboard</i>

## *Week 9*

**Topic/Overview:** This week focuses on Chapter 6: Firewall Configuration and Administration

### **Summary of Week 9 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 6</i>	<i>Lab</i>	<i>Hands on Projects 6-1&amp; 6-2</i>	<i>see Blackboard</i>
<i>Chapter 6 Exam</i>	<i>Exam</i>	<i>Chapter 6 Exam</i>	<i>see Blackboard</i>
<i>Chapter 7</i>	<i>Reading</i>	<i>Read Chapter 7</i>	<i>see Blackboard</i>
<i>Discussion Board Week 9</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 10*

**Topic/Overview:** This week focuses on Chapter 7: Working with Proxy Servers & Application Firewalls  
**Summary of Week 10 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 7</i>	<i>Lab</i>	<i>Real World Exercises Pick one and answer 1-2 Pages</i>	<i>see Blackboard</i>
<i>Chapter 7 Exam</i>	<i>Exam</i>	<i>Chapter 7 Exam</i>	<i>see Blackboard</i>
<i>Chapter 8</i>	<i>Reading</i>	<i>Read Chapter 8</i>	<i>see Blackboard</i>
<i>Discussion Board Week10</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 11& 12*

**Topic/Overview:** These weeks focus on Chapter 8: Implementing the Bastion Host

**Summary of Weeks 11 & 12 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 8</i>	<i>Lab</i>	<i>Hands on Projects 8-1&amp; 8-4</i>	<i>see Blackboard</i>
<i>Chapter 8 Exam</i>	<i>Exam</i>	<i>Chapter 8 Exam</i>	<i>see Blackboard</i>
<i>Chapter 9</i>	<i>Reading</i>	<i>Read Chapter 9</i>	<i>see Blackboard</i>
<i>Discussion Board Weeks 11&amp;12</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 13&14*

**Topic/Overview:** These weeks focus on Chapter 9: Encryption-The Foundation for the VPN  
**Summary of Week 13 &14 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 9</i>	<i>Lab</i>	<i>Hands on Projects 9-1&amp; 9-2</i>	<i>see Blackboard</i>
<i>Chapter 9 Exam</i>	<i>Exam</i>	<i>Chapter 9 Exam</i>	<i>see Blackboard</i>
<i>Chapter 10</i>	<i>Reading</i>	<i>Read Chapter 10</i>	<i>see Blackboard</i>
<i>Discussion Board Weeks 13&amp;14</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>

*Week 15*

**Topic/Overview:** This week focuses on Chapter 10: Setting Up a Virtual Private Network

**Summary of Week 15 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Chapter 10</i>	<i>Lab</i>	<i>Hands on Project 10-1</i>	<i>see Blackboard</i>
<i>Chapter 10 Exam</i>	<i>Exam</i>	<i>Chapter 10 Exam</i>	<i>see Blackboard</i>
<i>Discussion Board Week 15</i>	<i>Discussion Board</i>	<i>Discussion Board</i>	<i>see Blackboard</i>



*Week 16*

**Topic/Overview:** This week focuses on the Final Exam

**Summary of Week 13 Assignments & Activities**

<b>Item(Name)</b>	<b>Type</b>	<b>Description</b>	<b>Due</b>
<i>Review Final Exam</i>	<i>Review</i>	<i>Chapters 6-10</i>	<i>see Blackboard</i>
<i>Final</i>	<i>Final Exam</i>	<i>Chapters 6-10</i>	<i>see Blackboard</i>

## Grading Policy

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Percentage %	Grade
90-100	A
80-89	B
70-79	C
60-69	D
$\leq 59$	F

## Special Needs

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Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

## Learning Resource Center (Library)

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The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the "[Ask a Librarian](#)" service provide additional help.

## Student E-mail

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Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

## Student Portal

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Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

## Technical Support

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For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm).

## Important School Policies

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For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).