ELEX 137 - WORKSTATION SECURITY

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Course Description

The focus of this course is on Workstation Security based on the CompTIA Security + Certification exam objectives – SYO-501. The students are introduced to concepts and procedures for securing PCs and related network equipment. Security threats, user access, encryption, physical and network security, application and data defense methods will be explored.

This course includes topics necessary to write the CompTIA Security + Certification Exam.

The student will be responsible for keeping up with the required reading and lab exercises.

Online course material access will be provided after registration.

Course content is based on GTS Learning courseware delivered through CCI Learning. There is an optional eBook available for additional charge.

Course outline describing weekly content will be delivered through the ELEX 137 Camosun D2L website.

CONTENTS:

- Module 2 Labs – Lab 4, Lab 5, Lab 6

Week 5 - Module 2 – Identity and Access Management Cont.

- Unit 3 – Identification and Authentication
- Unit 4 – Identity and Access Services
- Module 2 Labs – Lab 7, Lab 8

Week 6 - Module 2 – Identity and Access Management Cont.

- Unit 5 – Account Management
- Summary
- Module 2 Labs – Lab 9, Lab 10

Week 7 - Module 3 – Architecture and Design 1

- Unit 1 – Secure Network Design
- Unit 2 – Firewalls and Load Balancers
- Unit 3 – IDS and SIEM
- **Term Exam #1 – Modules 1 and 2**

Week 8 – Module 3 – Architecture and Design 1 Cont.

- Unit 4 – Secure Wireless Access
- Unit 5 – Physical Security Controls
- Module 3 Labs – Lab 11, Lab 12, Lab 13
- Summary

Week 9 - Module 4 – Architecture and Design 2

- Unit 1 – Secure Protocols and Services
- Unit 2 – Secure Remote Access
- Module 4 Labs – Lab 14, Lab 15

Week 10 - Module 4 – Architecture and Design 2 Cont.

- Unit 3 – Secure Systems Design
- Unit 4 – Secure Mobile Device Services
- Module 4 Labs – Lab 16

Week 11 - Module 4 – Architecture and Design 2 Cont.

- Unit 5 – Secure Virtualization and Cloud Services
- Summary

Week 12 – Module 5 - Risk Management

- Unit 1 – Forensics
- Unit 2 – Disaster Recovery and Resiliency
- Unit 3 – Risk Management
- **Term Exam #2 – Modules 3 and 4**

Week 13 - Module 5 - Risk Management Cont.

- **Unit 4 – Secure Application Development**
- **Unit 5 – Organizational Security**
- **Module 5 Labs – Lab 17, Lab 18**
- **Summary**

Week 14 - Exam Prep

- **Exam Objectives**
- **Practice Exams**
- **Final Content**
- **Cleanup**

Lab Schedule

Course Module	In Class & CCI Learning Labs – Estimated time ( ) min
Week 1 – Introduction	Lab Preperation
Week 2 – Module 1 / Unit 1	VM Configuration
Module 1 / Unit 2	Lab 1 – VM Orientation (15)
Week 3 – Module 1 / Unit 3	Lab 2 – Malware Types (40)
Module 1 / Unit 4	Lab 3 – Using Vulnerability Assessment Tools (45)
Week 4 – Module 2 / Unit 1	Lab 4 – Using Network Scanning Tools 1 (30)
Module 2 / Unit 2	Lab 5 – Using Network Scanning Tools 2 (30)
	Lab 6 – Using Steganography Tools (20)
Week 5 – Module 2 / Unit 3	Lab 7 – Implementing Public Key Infrastructure (30)
Module 2 / Unit 4	Lab 8 – Deploying Certificates and Implementing Key Recovery (45)
Week 6 – Module 2 / Unit 5	Lab 9 – Using Password Cracking Tools (20)
	Lab 10 – Using Account Management Tools (60)
Week 7 – Module 3 / Unit 1 – 3	None – Term Test #1
Term Test #1	

Course Module	In Class & CCI Learning Labs – Estimated time ( ) min
Week 8 – Module 3 / Unit 4 – 5	Lab 11 – Implementing a Secure Network Design (45) Lab 12 – Implementing a Firewall (45) Lab 13 – Using an Intrusion Detection System (30)
Week 9 – Module 4 / Unit 1 Module 4 / Unit 2	Lab 14 – Implementing Secure Network Addressing Services (20) Lab 15 – Configuring a Secure Email Service (60)
Week 10 – Module 4 / Unit 3 Module 4 / Unit 4	Lab 16 – Implementing a VPN (40)
Week 11 – Module 4 / Unit 5 / Review	None
Week 12 – Module 5 / Unit 1 – 3 Operational Security Term Exam #2	None – Term Test #2
Week 13 – Module 5 / Unit 4 Module 5 / Unit 5	Lab 17 – Using Forensic Tools (30) Lab 18 – Identifying a Man-in-the-Middle-Browser Attack (30)
Week 14 – Exam Prep	Clean Up

Evaluation

Evaluation for this course will be a combined total of theory and lab marks. Students must obtain at least 60% to pass the course. Attendance and completion of all lab material is mandatory to pass the course. **Late assignments/lab exercises will not be graded.**

Marking Criteria:

Weekly Quizzes ---------- 10%
D2L Assignments ---------- 15%
Term Tests ---------- 30%
Final Exam ---------- 30%
Lab Exercises ---------- 15%

Weekly quizzes Based on the assignment material for each week.
One quiz per week on each Friday.

D2L Assignments will be weekly assignments from the CCI Learning courseware submitted to D2L by Sunday midnight of the corresponding week. Check the D2L website for weekly assignments. Only MS WORD documents will be accepted. Illegible documents will receive a mark of zero.
Late submissions will not be graded.

Term Tests. There will be two term tests completed during the lab class for that week based on the material covered up to that week.

Final Exam. There will be a three hour final exam based on the entire course content given during exam week at the end of the term.

Lab exercises should be completed by the end of the lab period on Thursday. Any submitted work to dropboxes must be completed and submitted to the dropbox no later than midnight on the Sunday of that week. Lab exercises will be from the CCI Learning Labs with supplements from the D2L site.

TEXT & REFERENCES:

Text: CCI Learning Study Guide / Lab Manual for purchase
References: CCI Learning CompTIA Security + eBook for download

Weekly Course Flow

The following is an example of a typical week for the Elex 137 Workstation Security Course:

Monday - 1 hour distance class – preparing for next week material, reading ahead and starting assignment
Thursday - 1 hour seminar discussing topics for the week, working on course material, assignment for the week, reviewing previous week assignment
- 2 hour lab exercise to be completed by the end of the scheduled time.
Friday - 1 hour seminar writing weekly quiz, finishing assignment/reading material

Refer to the D2L Weekly Schedule for Assignment topics and lab activities.