SEC200: INTRODUCTION TO NETWORK SECURITY

Course Syllabus

Course Description

In this course, you will explore the essentials of network security. You will build a solid understanding of concepts that include compliance and operational security; malware and social engineering attacks, threats and vulnerabilities; attack and defense techniques; web application, data, operating system, and host security; access and cryptography.

Also, you will maximize your knowledge and retention with the development of supplemental activities that will allow you to accomplish your goals and ensure a good learning experience.

General Course Information

Number of Units/Weeks	4/10
#Hours Lecture/#Hours Laboratory/#Hours ELP	40/0/80
Prerequisite(s)	None
Co-requisite(s)	None
Course Developer(s)	Tom Byrne / Lydia Zeman
Date Approved/Last Review	February 21, 2018

Learning Outcomes

- You will list major events in Cybersecurity history and apply this knowledge to examine current events
- You can assess the relevance and application of cybersecurity in everyday life
- You will demonstrate proficiency in cybersecurity subjects by writing clear, concise and coherent papers in American Psychological Association (APA) style
- You will use oral communication skills necessary to effective communication
- You will identify security concerns on current technology

- You will distinguish social engineering and malware attacks

Instructional Methods Employed in this Course

A number of instructional/learning methods are employed in this course, including the following:

- Lecture and reading assignments
- Research projects
- Current events analysis
- Practical application of theory and skills in authentic design projects
- Build on prior knowledge and experience of students to enhance richness of class activities.

Information Resources for this Course

Textbook

CompTIA Security+ Get Certified Get Ahead, SY0-401 Study Guide

Author Darril Gibson, CISSP

ISBN-13: 978-1939136022

ISBN-10: 1939136024

Topics and Assignments

Type of assignment:

- Lecture – Considered lecture hours
- Classroom discussion (CD) - Considered lecture hours
- In-class (IC) exercise – Considered lecture hours
- Delivering oral presentations – Considered lecture hours
- Homework (HW) exercise – Considered Enhanced Learning Project (ELP), work done outside class
- Reading - Considered Enhanced Learning Project (ELP), work done outside class
- Quiz, Midterm or Final – considered lecture hours
- Participation

Week 1					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 1A	Introduction to security	1			
Lecture 1B	Malware and social engineering attacks	1			
IC Exercise	Laboratories	1.5		30	
Reading	Chapters 1 and 2 (48 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W1		4	9	70	
Week 2					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 2A	Application and networking-based attacks	1			
Lecture 2B	Host, application and data security	1			
IC Exercise	Laboratories	1.5		30	
CD	Current events discussion	0.5			
Reading	Chapters 3 and 4 (49 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W2		4	9	70	
Week 3					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 3A	Basic cryptography	1			
Lecture 3B	Advanced cryptography	1			
IC Exercise	Laboratories	1		30	
CD	Current events discussion	0.5			
IC Exercise	Quiz 1	0.5			
Reading	Chapters 5 and 6 (46 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W3		4	9	70	

Week 4

Type	Topic/Description	Lecture Time	ELP Time	Point Value	Due Date
Lecture 4A	Network security fundamentals	1			
Lecture 4B	Administering a secure network	1			
IC Exercise	Laboratories	1.5		30	
CD	Current events discussion	0.5			
Reading	Chapters 7 and 8 (51 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W4		4	9	70	

Week 5

Type	Topic/Description	Lecture Time	ELP Time	Point Value	Due Date
Lecture 5B	Midterm exam	1.5		100	
CD	Current events discussion	0.5			
HW1	Weekly research project		3	20	
HW2	Current event analysis		2	10	
Reading	Chapters 1-8		5		
Total W5		4	10	130	

Week 6

Type	Topic/Description	Lecture Time	ELP Time	Point Value	Due Date
Lecture 6A	Wireless network security	1			
Lecture 6B	Mobile device security	1			
IC Exercise	Laboratories	1.5		30	
CD	Current events discussion	0.5			
Reading	Chapters 9 and 10 (43 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W6		4	9	70	

Week 7

Type	Topic/Description	Lecture Time	ELP Time	Point Value	Due Date
Lecture 7A	Access control fundamentals	1			
Lecture 7B	Authentication and account management	1			
IC Exercise	Laboratories	1.5		30	

CD	Current events discussion	0.5			
Reading	Chapters 11 and 12 (43 pages)		3		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W7		4	9	60	
Week 8					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 8A	Business continuity	1			
Lecture 8B	Risk Mitigation	1			
IC Exercise	Laboratories	1		30	
CD	Current events discussion	0.5			
IC Exercise	Quiz 2	0.5			
Reading	Chapters 13 and 14 (48 pages)		2		
HW1	Chapter review webclass		1	10	6 days
HW2	Weekly research project		2	20	6 days
HW3	Current event analysis		2	10	6 days
Total W7		4	8	60	
Week 9					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 9A	Vulnerability Assessment	1			
Lecture 9C	Re-assessment quiz	0.5			
IC Exercise	Laboratories	2.5		20	
Reading	Chapter 15 (20 pages)		5		
HW1	Chapter review webclass		0.5	10	6 days
Total W9		4	8	20	
Week 10					
Type	**Topic/Description**	**Lecture Time**	**ELP Time**	**Point Value**	**Due Date**
Lecture 10	Final exam	1		150	
CD	Class discussion	0.5			
Total W10		4		150	

Late Submission Policy

All assignments must be completed as scheduled, if a late submission is required a 5 points penalty will be applied for each additional day.

Course Hours Summary

Session	Topic	Lecture Time	ELP Time
1	Introduction to security/malware	4	9
2	Host and network attacks/data security	4	9
3	Basic and advance cryptography	4	9
4	Secure networks	4	9
5	Midterm exam	4	10
6	Wireless and mobile security	4	9
7	Access controls/authenticating accounts	4	9
8	Business continuity/risk assessment	4	8
9	Vulnerability assessment	4	8
10	Final exam/ final research project presentations	4	0
Total		40	80

Week	Assignment	Possible Points	Percentage of Grade
	End of Chapter(s) Online Quizzes	80	8%
1	Weekly research project	30	3%
1	Current event analysis and discussion	20	2%
1	Weekly Labs	30	3%
2	Weekly research project	30	3%
2	Current event analysis and discussion	20	2%
2	Weekly Labs	30	3%
3	Weekly research project	30	3%
3	Current event analysis and discussion	20	2%
3	Weekly Labs	30	3%
4	Weekly research project	30	3%
4	Current event analysis and discussion	20	2%
4	Weekly Labs	30	3%
5	Weekly research project	30	3%
5	Current event analysis and discussion	20	2%
5	Midterm Exam	100	10%
6	Weekly research project	30	3%

6	Current event analysis and discussion	20	2%
6	Weekly Labs	30	3%
7	Weekly research project	30	3%
7	Current event analysis and discussion	20	2%
7	Weekly Labs	30	3%
8	Weekly research project	30	3%
8	Current event analysis and discussion	20	2%
8	Weekly Labs	30	3%
9	Weekly research project	20	2%
9	Current event analysis and discussion	20	2%
9	Weekly Labs	20	2%
10	Final Exam	150	15%
Total		1000	100%

Grades for this course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other type of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy

The University's guidelines for the assignment of grades to total points earned is as follows:

Percentage	Letter Grade	Grade Points
94-100	A	20%
90-93	A-	10%
87-89	B+	20%
84-86	B	30%
80-83	B-	5%
77-79	C+	5%
74-76	C	2.0
70-73	C-	1.7
67-69	D+	1.33
64-66	D	1.0
60-63	D-	0.67
n/a	INC	0
n/a	W	0
59 or below	F	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Expectations for Written Assignments

Academic Quality

Unless explicitly stated otherwise, all written assignments will be submitted in APA format. This includes the Current Event Analysis, and Weekly and Final Research projects. Note that WebClass Discussion Forum posts are not required to follow APA format.

Students with questions about the quality of their writing style are encouraged to consult the Coleman University Center for Academic Success. Located in Room 232, the CAS is a service available to all Coleman University students to review the grammar and style prior to

submission. The CAS has several tools available to help students improve their ability to communicate clearly in writing.

Coleman University Students are expected to deliver college level written assignments and they should pay close attention to the Spelling and Grammar Check functions of Microsoft Word ®. In addition, the Coleman University Library Resource section of WebClass includes a version of TurnItIn, which allows students to check their work for plagiarism and grammar errors.

Scholarly References

All written assignments will include references to scholarly sources. Scholarly sources include peer-reviewed technical and business journals, papers presented at conferences sponsored by professional organizations (e.g., IEEE, ACM, INCOSE, PMI, etc.), and academic books (i.e., textbooks). Scholarly sources can be found using the EBSCO Host and Harvard Business Review databases available in the Coleman University Library Resource section of WebClass, Google Scholar, plos.org, or the Directory of Open Access Journals. If the option is available in the search engine, please limit your search results to peer-reviewed sources.

The following types of sources WILL NOT be accepted as scholarly resources:

- Commercial Webpages (except those included in Online Supplemental Materials section of this document, or with written approval by instructor)
- Open-source wiki sites such as wikipedia.com, ask.com, about.com, answers.yahoo.com
  • Blogs such as wordpress.com, blogspot.com (except those included in Online Supplemental Materials section of this document, or with written approval by instructor)
- Postings from open discussion forums
- White papers published by commercial organizations MAY be considered scholarly references, but tread lightly. Students are encouraged to review the Coleman University presentation regarding evaluation of resources (“CAARBs”) available on the Coleman University Library Resources section of WebClass.

Class Decorum Requirements

Attendance

Classes begin and end as indicated in the published schedule. It is required that students be present at the beginning of each class session and stay until class is dismissed, including lab periods. Excessive tardiness, leaving early and/or absences (from either lecture or lab sessions) are causes for dismissal from the University. A student that arrives in class beyond 30 minutes late will be considered absent. A student leaving more than 30 minutes before the end of class will also be considered absent. Both will result in loss of Participation points.

Conduct

Students are expected to conduct themselves in a professional manner while on campus. Rules of conduct are outlined in the University Catalog and students are required to adhere to such policies.

Coleman University Policy on Academic Dishonesty

Academic dishonesty is cause for dismissal from Coleman University. Presenting another person's ideas, methods, course work, or test answers with the intention that they be taken as one's own is theft of a special kind. It defrauds the originator of the work, the institution, its graduates, its students, and its future students.

The student has full responsibility for the authenticity of all academic work and examinations submitted. A student who appears to have violated this policy must submit to a hearing with the reporting instructor and the associate dean. If it is determined that a violation occurred, the matter will be referred to an Officer of the University with recommendations for an appropriate penalty. The student may be dismissed, suspended, or given another penalty.

Academic Accommodation/Adjustment Policy

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.

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