STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

# American Public University System

American Military University | American Public University

# ISSC415

# **Course Summary**

**Course :** ISSC415 **Title :** Mobile Device Security **Length of Course :** 8 **Faculty : Prerequisites :** ISSC343 **Credit Hours :** 3

# Description

## **Course Description:**

This course explores security strengths and weaknesses of devices running various mobile operating systems. It identifies, analyzes and explores vulnerabilities, attacks, exploits, and insecurities of mobile applications running on operating systems such as iOS, Android, Windows, and Blackberry OS. A comparative study of current mobile devices with respect to security and privacy capabilities will be covered. (Prerequisite: ISSC343)

### Course Scope:

# **Objectives**

- 1. Explain the history of mobile technology
- 2. Identify the challenges of mobile device security
- 3. Assess the technologies used for mobile security such as Wi-Fi, Bluetooth, etc.
- 4. Understand the regulatory compliance associated with mobile technology
- 5. Differentiate between GSM and CDMA
- 6. Evaluate the technical, social, financial, and legal impact of loT and mobile technology on global commerce
- 7. Explain and understand the numerous wireless security threats
- 8. Construct a plan to deal with mobile communication security challenges

# Outline

# Week 1: The Evolution of Data Networks:

Learning Outcomes

CO1

**Required Readings** 

Course includes weekly resources of various media types refer to reading and resources in Content.

Assignments Assignment 1 Recommended Optional Reading Recommended Media

## Week 2: Wired Networking to Wireless Networking and the Mobile Revolution

#### Learning Outcomes

CO2

#### **Required Readings**

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

Assignment 2

**Discussion** Posting Term

Paper Outline

Recommended Optional Reading Recommended Media

## Week 3: Security Threats of Mobile and How do LAN Systems Work?

#### Learning Outcomes

CO3

#### **Required Readings**

Course includes weekly resources of various media types refer to reading and resources in Content.

Assignments

Assignment 3

**Discussion** Posting

Recommended Optional Reading Recommended Media

# Week 4: WLAN and IP Networking Threats and IP Vulnerability Analysis and WLAN Security Measure

#### Learning Outcomes

CO4

#### Required Readings

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

## Assignment 4

Discussion Posting

Recommended Optional Reading Recommended Media

## Week 5: Advanced WLAN Security Measures and WLAN Auditing Tools

#### Learning Outcomes

CO5

#### **Required Readings**

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

Assignment 5

Discussion Posting

Recommended Optional Reading Recommended Media

#### Week 6: Mobile Communication Security Challenges and Mobile Models

#### Learning Outcomes

CO6

#### Required Readings

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

Assignment 6

**Discussion** Posting

Recommended Optional Reading Recommended Media

#### Week 7: Mobile Wireless Attacks

#### Learning Outcomes

CO7

#### **Required Readings**

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

Assignment 7

# Discussion Posting

# Recommended Optional Reading Recommended Media

# Week 8: Fingerprinting Mobile Devices and Mobile Malware and Threats

## Learning Outcomes

CO8

## **Required Readings**

Course includes weekly resources of various media types refer to reading and resources in Content.

#### Assignments

Assignment 8

Discussion Posting

## TermPaper

Recommended OptionalReading Recommended Media

# **Evaluation**

## Grading:

Name	Grade %
Weekly Assignments	40.00 %
Assignment #1	5.00 %
Assignment #2	5.00 %
Assignment #3	5.00 %
Assignment #4	5.00 %
Assignment #5	5.00 %
Assignment #6	5.00 %
Assignment #7	5.00 %
Assignment #8	5.00 %
Discussions	32.00 %
Week 1: Data Networks Wired and Wireless Networking	4.00 %
Week 2: Wired Networking and Mobile Revolution	4.00 %
Week 3: Mobile Security Threats and LAN Systems	4.00 %
Week 4: WLAN and IP Networking	4.00 %
Week 5: Advanced WLAN Security Measures and Auditing Tools	4.00 %
Week 6: Mobile Communication Security Challenges	4.00 %
Week 7: Wireless Attacks and Remedies	4.00 %
Week 8: Fingerprinting and Mobile Malware	4.00 %
Term Paper Outline	3.00 %
Week 2: Term Paper Outline	3.00 %
Term Paper	25.00 %
Week 8: Term Paper	25.00 %

# **Materials**

**Book Title:** Wireless and Mobile Device Security, 2nd edition - e-book available in the classroom

Author: Doherty, Jim

Publication Info: Jones & Bartlett Lib

ISBN: 9781284211726

# **Course Guidelines**

# **Citation and Reference Style**

• Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

# Tutoring

 <u>Tutor.com</u> offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours\* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

# Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

# Turn It In

• Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

# **Academic Dishonesty**

• Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

# **Submission Guidelines**

• Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

# **Disclaimer Statement**

• Course content may vary from the outline to meet the needs of this particular group.

# Communicating on the Discussion

• Discussions are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the discussion. The purpose of the discussions is to actively participate in an on-going discussion about the assigned content.

- "Substantive" means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

# **University Policies**

Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- <u>Academic Probation</u>
- <u>Appeals</u>
- Disability Accommodations

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.