

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.

# ISSC412

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## Course Summary

**Course :** ISSC412 **Title :** Mobile Application Security

**Length of Course :** 8 **Faculty :**

**Prerequisites :** ISSC343 **Credit Hours :** 3

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## Description

### Course Description:

This course explores security strengths and weaknesses of applications on various mobile operating systems running on PDAs and mobile devices. 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. What constitutes designing secure code for apps on these operating systems will also be covered.(Prerequisite: ISSC343)

### Course Scope:

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## Objectives

1. **CO-1:** Describe the relationship between mobile device hardware and software interoperability.
  2. **CO-2:** Explain how a mobile network connectivity to wireless network while in motion, to include how infrastructure nodes handle passing the mobile device from one node to the next.
  3. **CO-3:** Differentiate between Android, IOS, Windows, and Blackberry mobile operating systems.
  4. **CO-4:** Analyze mobile application vulnerabilities.
  5. **CO-5:** Propose solutions to ensure PDA/device security.
  6. **CO-5:** Evaluate organizational objectives for application security and propose secure solutions to specific problems.
  7. **CO-6:** Interpret the strengths and weaknesses of a given application(s) to meet organizational objectives.
  8. **CO-7:** Debate the current trends around mobile technology, threats, and application security.
  9. **CO-8:** Assess organizational needs and propose the steps needed to design a secure application.
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## Outline

### Week 1: Mobile Applications Overview

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### Learning Outcomes

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CO-1

#### Required Readings

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

#### Assignments

- Discussion #1 Week 1 Assignment

#### Recommended Optional Reading

#### Recommended Media

### Week 2: History and Evolution of Mobile Devices

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#### Learning Outcomes

- Discussion #1
- Week 1 Assignment

#### Required Readings

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

#### Assignments

- Discussion #2
- Week 2 Assignment
- Week 2: Project Proposal and Acknowledgement

#### Recommended Optional Reading

#### Recommended Media

### Week 3: Android Devices and Applications

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#### Learning Outcomes

CO-1

CO-4

#### Required Readings

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

#### Assignments

- Discussion #3
- Week 3 Assignment

#### Recommended Optional Reading

#### Recommended Media

### Week 4: IOS Devices and Applications

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#### Learning Outcomes

CO-1

CO-4

### **Required Readings**

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

### **Assignments**

- Discussion #4
- Week 4 Assignment
- Week 4: Project Outline Paper

### **Recommended Optional Reading**

### **Recommended Media**

## **Week 5: Mobile and Wireless Vulnerabilities**

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### **Learning Outcomes**

CO-4

CO-5

CO-7

### **Required Readings**

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

### **Assignments**

- Discussion #5
- Week 5 Assignment

### **Recommended Optional Reading**

### **Recommended Media**

## **Week 6: Encryption Methods for Mobile Computing**

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### **Learning Outcomes**

CO-4

CO-6

### **Required Readings**

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

### **Assignments**

- Discussion #6
- Week 6 Assignment

### **Recommended Optional Reading**

### **Recommended Media**

## **Week 7: Current Trends and the Future of Mobility**

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### **Learning Outcomes**

CO-8

### **Required Readings**

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

### **Assignments**

- Discussion #7
- Week 7 Assignment
- Week 7: Project Presentation

### **Recommended Optional Reading**

### **Recommended Media**

## **Week 8: Peer Review and Lessons Learned**

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### **Learning Outcomes**

### **Required Readings**

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

### **Assignments**

- Discussion #8
- Week 8 Assignment
- Week 8: Final Project Paper

### **Recommended Optional Reading**

### **Recommended Media**

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# Evaluation

## Grading:

Name	Grade %
Discussions	24.00 %
Week 1: Mobile Applications Overview	3.00 %
Week 2: History and Evolution of Mobile Devices	3.00 %
Week 3: Android Devices and Applications	3.00 %
Week 4: IOS Devices and Applications	3.00 %
Week 5: Mobile And Wireless Vulnerabilities	3.00 %
Week 6: Encryption Methods for Mobile Computing	3.00 %
Week 7: Current Trends and the Future of Mobility	3.00 %
Week 8: Peer Review and Lessons Learned	3.00 %
Assignments	40.00 %
Week 1 Essay Assignment	5.00 %
Week 2 Essay Assignment	5.00 %
Week 3 Essay Assignment	5.00 %
Week 4 Essay Assignment	5.00 %
Week 5 Essay Assignment	5.00 %
Week 6 Essay Assignment	5.00 %
Week 7 Essay Assignment	5.00 %
Week 8 Essay Assignment	5.00 %
Project	36.00 %
Week 2: Project Proposal and Acknowledgement	6.00 %
Week 4: Project Paper Outline	5.00 %
Week 7: Project Presentation	10.00 %
Final Project Paper	15.00 %

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# Materials

**Book Title:** Various resources from the APUS Library are used and will be available through the classroom.

**Author:** No Author Specified

**Publication Info:**

**ISBN:** N/A

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# 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

- [Tutor.com](https://www.tutor.com) 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.
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## University Policies

### [Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [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.