Common Course Outline
CSIT 269
Mobile Application Security
4 Credits

Community College of Baltimore County

Description

CSIT 269 – 4 credits – Mobile Application Security brings together comprehensive, up-to-date best practices for writing apps that resist attack and will not leak information. This course focuses on strengthening code security throughout the entire development lifecycle.

4 Credits
Prerequisite: CSIT 166, or CSIT 267, or CSIT 268, or consent of Program Director.

Overall Course Objectives

Upon completing this course students will be able to:

1. protect code that communicates with back-end web servers;
2. safeguard databases;
3. resist web service attacks;
4. use webviews securely;
5. enable secure user login and information transmission;
6. protect code and business rules from reverse engineering;
7. safely integrate third-party libraries;
8. take advantage of encryption; and
9. futureproof code

Major Topics

I. Mobile security
   A. Recognizing application security challenges
   B. Exposing the threats faced by mobile devices
   C. Discovering mobile hacking tools
II. Defining the mobile threat model
   A. Balancing usability with security
   B. Identifying attack vectors and surfaces
   C. Assessing risk
III. Recognizing the risks of mobile applications
IV. Integrating security throughout the application development process
   A. Applying secure development guidelines
      1. Implementing secure coding techniques
      2. Differentiating between software and programming language vulnerabilities
   B. Employing open web application security project (OWASP) resources
      1. Revealing the top mobile risks

2. Addressing identified exploits promptly
3. Reverse-engineering apps to identify vulnerabilities

C. Implementing mobile application security
1. Protecting user interface data
2. Storing data in the keychain
3. Enforcing user authentication
4. Handling sessions properly
5. Defining trust boundaries

Course Requirements

Grading procedures will be determined by the individual faculty member and will include:

- Minimum of 4 programming projects*
- Minimum of 2 tests
- Comprehensive final exam or programming project

*These projects will include collaborative work, written portions and oral presentations as assigned by the faculty member.

Written Assignments: Students are required to utilize appropriate academic resources.

Date revised 07/09/2019