

**ACCELERATED PROFESSIONAL PROGRAM**

**SATURDAYS AT THE NORTH CAMPUS  
MOBILE APPS SOFTWARE DEVELOPMENT (787)**

- This is a great opportunity to expand and upgrade your credentials and enhance employment opportunities.
- There are 8 courses in this program.
- Students must have taken CIT-111 (Introduction to Programming: Java) and CIT-115 (Introduction to Information Technology) or demonstrate equivalent experience or knowledge prior to starting this certificate program.
- Students must have access to computer systems running the Android operating system, as well as the iOS operating system.
- Each course is 8 weeks.
- It is suggested that the courses be taken in sequence. CIT-267 must be taken in the final semester.

This certificate program is designed to provide students with the specific technical competencies for employment in various areas in the information technology field including mobile apps software developers, programmers, consultants, as well as UI (User Interface) software developers.

**CERTIFICATE REQUIREMENTS**

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<b>SPRING 2019:</b>			
CIT-116-NC35H	Mobile Apps Visual Development	3 credits	1/19/19 - 3/9/19
CIT-125-NC35H	Web Development	3 credits	3/16/19 – 5/11/19
CIT-130-NC35H	Object-Oriented Programming 1: Java	4 credits	3/16/19 – 5/11/19
<b>SUMMER 2019:</b>			
CIT-135-NC35H	Mobile Apps Programming 1	3 credits	5/18/19 – 7/6/19
CIT-244-NC35H	Object-Oriented Programming 2: Java	4 credits	7/13/19 – 8/31/19
<b>FALL 2019:</b>			
CIT-265-NC35H	Mobile Apps Programming 2	4 credits	9/7/19 – 10/26/19
CIT-266-NC35H	Mobile Apps Programming using iOS	4 credits	11/2/19 – 12/14/19
<b>SPRING 2020:</b>			
CIT-267-NC35H	Mobile Apps Software Develop Capstone	3 credits	1/18/20 – 3/7/20

**FOR MORE INFORMATION, CALL OR VISIT THE CCAC NORTH CAMPUS  
ADVISING OFFICE, 412-369-3740, ROOM 1004A**

## CIT – MOBILE APPS SOFTWARE DEVELOPMENT CERTIFICATE PROGRAM (787)

This certificate program is designed to provide students with the specific technical competencies for employment in various areas in the information technology field including mobile apps software developers, programmers, consultants, as well as UI (User Interface) software developers

### Upon successful completion of the program, the graduate will:

1. Implement troubleshooting strategies and techniques in correcting a variety of information technology design issues and problems.
2. Apply various software development tools to create graphical user interfaces, websites and mobile apps.
3. Design websites to display on various mobile devices and screens.
4. Develop the necessary technical and problem solving skills in creating apps for mobile devices by implementing Android and iOS operating system frameworks and object-oriented programming languages.
5. Acquire the necessary technical skills to work with data from a variety of sources, including databases and web services.
6. Develop the necessary technical skills in publishing apps.

### Course Descriptions:

**CIT 116      Mobile Apps Visual Development      3 credits**  
***(Prerequisites: CIT 111 or with instructor's permission)***

This course is an introduction in creating applications (apps) using mobile app visual development software. The focus of the course includes using visual development software tools to create graphical user interfaces, implement computer programming control structures, including object-oriented principles and applications, and design apps that include multimedia technologies.

**CIT 125      Web Development      3 credits**

This course focuses on developing skills necessary to design, create, and enhance Web pages for personal and business use. Students will acquire hands-on experience in creating and publishing Web pages that include text, hyperlinks, images, tables, frames, forms, sound, and video. Topics include: Cascading Style Sheets, JavaScript, XML, Graphics and other web media, and Web site development using a web authoring tool.

**CIT 130      Object-Oriented Programming 1: Java      4 credits**  
***(Prerequisites: CIT-111 or with instructor's permission)***

This course uses the skills gained in CIT 111 and expands on the concepts of the software development process, data representation and storage, program control structures, objects and classes. Additional topics include event handling, arrays and window based graphical user interfaces (GUIs).

**CIT 135      Mobile Apps Programming 1      3 credits**  
**(Prerequisite: CIT-130 or with instructor's approval)**

This course is an introduction in creating applications (apps) using an object-oriented computer programming language and the Android mobile operating system. The focus of the course includes the Integrated Development Environment (IDE) and the Software Development Kit (SDK) technologies, graphical user interfaces, object-oriented computer programming, interactive activity classes and the activity life cycle, programming structures, multimedia applications, persistent data and Web application publishing.

**CIT 244      Object-Oriented Programing 2/Java      4 credits**  
**(Prerequisite: CIT-130)**

This course builds on the concepts of software design and development introduced in CIT-130. Review basic Object-Oriented design and program structure in the creation of Java applications. The focus of this course is on Object-Oriented design data encapsulation, graphical user interfaces, exception handling, multi-threading, Input/Output processes and data structures.

**CIT 265      Mobile Apps Programming 2      4 credits**  
**(Prerequisites: CIT-135 and CIT-244)**

This course is an advanced course in creating mobile applications (apps). The focus of the course includes a review of object-oriented computer programming concepts and applications, the Android mobile operating system, and the activity life cycle. Additional course topics include creating apps that follow effective design principles and writing apps that include multimedia, data structures, database technology and multithreading.

**CIT 266      Mobile Apps Programming using iOS      4 credits**  
**(Prerequisites: CIT-135 and CIT-244 or with instructor's permission)**

This course is an introduction in creating applications (apps) using an object-oriented computer programming language and the iOS mobile operating system. The focus of the course includes the Integrated Development Environment (IDE) and the Software Development Kit (SDK) technologies, the iOS mobile operating system, visual tools and graphical user interfaces, object-oriented computer programming, multimedia applications, persistent data and Web application publishing.

**CIT 267      Mobile Apps Software Develop Capstone      3 credits**  
**(Prerequisites: This is a capstone course: CIT-135 and CIT-244. Last semester of the CIT certificate or with instructor's permission.)**  
**(Co-requisites: This is a capstone course: Take CIT-265 and CIT 266. Last semester of the CIT certificate of with instructor's permission.)**

This course, which must be taken in the final semester, is the capstone course in the Mobile Applications (APPS) Software Development program. Students gain comprehensive experience in developing, designing and implementing mobile apps by applying the knowledge, as well as the technical and problem-solving skills learned in the program. With the instructor's guidance and approval, students will produce an individual and a team-based mobile app project that will be used to evaluate the students' competencies in the program.