Washtenaw Community College Comprehensive Report

CPS 251 Android Programming
Effective Term: Fall 2021

Course Cover

Division: Business and Computer Technologies
Department: Computer Science & Information Technology
Discipline: Computer Science
Course Number: 251
Org Number: 13410
Full Course Title: Android Programming
Transcript Title: Android Programming
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Course title
Course description
Pre-requisite, co-requisite, or enrollment restrictions
Outcomes/Assessment
Objectives/Evaluation
Other:
Rationale: To update the syllabus. Also, Android Studio is more geared towards using Kotlin over Java so we will be removing the Java word from the title and teaching Kotlin. In the future Android may recommend and adopt another language so we don't want the title stuck to one language.
Proposed Start Semester: Fall 2021
Course Description: In this course, students create applications using Android Studio. These applications will run on Android devices. Students will use the latest Google-preferred programming language to develop these applications. Topics include graphical user interfaces, events, intents, view model, live data, database and other concepts for developing android applications. The title of this course was previously Android Programming Using Java.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite

CPS 161 minimum grade "C+"

General Education

General Education Area 7 - Computer and Information Literacy

Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify the different files used in creating Android applications.

   Assessment 1

   Assessment Tool: Outcome-related multiple-choice exam questions
   Assessment Date: Winter 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 70% of the students will score 70% or better on the outcome-related questions
   Who will score and analyze the data: Departmental faculty

2. Demonstrate the various ways that data can be retrieved and saved on an Android device.

   Assessment 1

   Assessment Tool: Student final programming projects
   Assessment Date: Winter 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: Random sample of 50% of all students with a maximum of 100 and a minimum of one full section
   How the assessment will be scored: Project rubric
   Standard of success to be used for this assessment: 70% of the students will score 70% or better on the student project
   Who will score and analyze the data: Departmental faculty

3. Identify the different types of layouts used in Android applications.

   Assessment 1

   Assessment Tool: Outcome-related multiple-choice exam questions
   Assessment Date: Winter 2023
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All sections
   Number students to be assessed: All students
   How the assessment will be scored: Answer key
   Standard of success to be used for this assessment: 70% of the students will score 70% or better on the outcome-related questions
   Who will score and analyze the data: Departmental faculty

4. Demonstrate the various graphical user interfaces used to create Android applications.

Assessment 1

Assessment Tool: Student final programming projects
Assessment Date: Winter 2023
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: Random selection of 50% of all students with a maximum of 100 and a minimum of one full section
How the assessment will be scored: Project rubric
Standard of success to be used for this assessment: 70% of the students will score 70% or better on the student project
Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify the purpose of the Manifest file.
2. Demonstrate the use of the view model in preserving non-persistent data.
3. Create a textbox in Android.
4. Identify the purpose of the Gradle files.
5. Identify the purpose of the layout files.
6. Utilize an SQLite database to store persistent data.
7. Utilize intents to transfer data between activities.
8. Create a button in Android Studio.
9. Create a recycle view with a card view.
10. Identify the rationale for using a constraint layout.
11. Identify the purpose of a linear layout.
12. Identify a relative layout.

New Resources for Course

This course will use a book for study and have projects that the student to complete that will enforce the concepts taught.

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Other: Computer workstation/lab that can run the most current version of Android Studio

Reviewer	Action	Date
Faculty Preparer:		
Scott Shaper	*Faculty Preparer*	*Nov 23, 2020*
Department Chair/Area Director:		
Cyndi Millns	*Recommend Approval*	*Nov 30, 2020*
Dean:		
Eva Samulski	*Recommend Approval*	*Dec 02, 2020*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Jan 21, 2021*
Assessment Committee Chair:		
Shawn Deron	*Recommend Approval*	*Jan 27, 2021*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Jan 30, 2021*