



INTRODUCTION TO MOBILE APPLICATION DEVELOPMENT
21:198: 347 (3 credits)

COURSE DESCRIPTION

This course introduces the dynamic world of Android *smartphone* and *tablet* app development with the Android Software Development Kit (SDK), and the Java programming language and the Android Studio Integrated Development Environment (IDE). The techniques introduced in this course also apply to Android Wear and Android TV app development. Apple iOS mobile application topics may also be covered.

PREREQUISITE

21:198:335 Data Structures

TEXTBOOK

Android How to Program, 3rd Edition, Harvey Deitel, Deitel & Associates, Inc.,
2017 ISBN-13: 978-0134444307, ISBN-10: 9780134444307

Java How to Program Early Objects 11th Edition by Paul Deitel, Harvey Deitel
ISBN-13: 978-0-13-474335-6, ISBN-10: 0-13-474335-0

Textbook can be purchased on publisher's website or from online retailers such as eBay, Amazon.

RECOMMENDED SOFTWARE

Android Studio: Can be downloaded from <https://developer.android.com/studio>, after download is complete, run its setup file to install.

SUPPLEMENTARY READINGS

Any and all other additional materials, or means by which to obtain these materials, will be physically or electronically provided to you by your instructor.

DEPARTMENT WEBSITE

<http://www.ncas.rutgers.edu/math>

TENTATIVE COURSE TOPICS

- Chapter 1: Introduction to Android
- Chapter 2: Welcome App
- Chapter 3: Tip Calculator App
- Chapter 4: Flag Quiz App
- Chapter 5: Doodlz App
- Chapter 6: Cannon Game App
- Chapter 7: WeatherViewer App
- Chapter 8: Twitter Searches App
- Chapter 9: Address Book App
- Chapter 10: Google Play and App Business Issues

COURSE PROJECTS

The course format is organized to provide a sequence of chapter-based Android Application projects. Each project focuses on a specific programming topic. This learning approach provides the students with hands-on experience in creating practical real-world Android Applications. Time permitting, creation of Apple iOS applications may be introduced. Beyond the specific focus of each project, the experience will enable each student to achieve a holistic skill set relevant to real-world applications beyond the class room.

**Department of Mathematics & Computer Science
Smith Hall 216, 101 Warren Street, Newark, New Jersey 07102
Phone: (973) 353-1004 Fax: (973) 353-5270**