Date Prepared: 1/14/2020

ROCKFORD UNIVERSITY 1847

CSCI 317-01 Mobile Device Development

COURSE SYLLABUS: Spring 2020

INSTRUCTOR INFORMATION

Instructor: Dr. Donghwoon Kwon

Office Location: Starr 302D
Office Hours: Mon & Wed: 10AM-11:50AM / Tue & Thr: 11AM-11:50AM

Office Phone: 815-226-4056
Office Fax: 815-394-5166

University Email Address: dkwon@rockford.edu

Preferred Form of Communication: Email
Communication Response Time: Within 24 hours

COURSE INFORMATION

Course Description

This course will present the design and the development of mobile device programming software. This course includes programming devices such as mobile phones, tablets, and wearable technology. Topics include user interface design, saving state, data persistence; maps, geocoding and location-based services, images, audio, video, pictures and cameras and photography, telephony and messaging, networks and Wi-Fi, and sensors. Scheduled: Spring yearly or as needed, Meets: MNO

Course Objectives

- To develop the skills necessary to develop and to manage software for mobile devices.

Credit Hours: 4

Prerequisite: CSCI220 or CSCI340

Class Type: Lecture & Lab

Textbook(s) Required

- **Murach, Joel. Murach's Android Programming 2ed. Mike Murach & Associates,** 2015. ISBN: 978-1-890774-71-4
- Instructor's own materials will be regularly and electronically provided.

Software Required

- *JDK*. You can download this software from https://www.oracle.com/index.html.
- *Eclipse* for java coding. You can download this software from https://www.eclipse.org/ide/
- *Android Studio.* You can download this software from https://developer.android.com/studio/

Optional Texts and/or Materials

- Flash drive recommended

Students Learning Outcomes

Students will be able to

1. (SLO #1) An ability to understand application launching basics in Android
2. (SLO #2) An ability to develop an application based on tabs, buttons, text-fields, etc.

Topical Outline

- Topic 1: Review of Java and Introduction to Android Studio
- Topic 2: Set up development environment
- Topic 3: Layouts and widgets / controls
- Topic 4: Event handling
- Topic 5: Themes and styles
- Topic 6: Menus, preferences, and fragments
- Topic 7: Threads, files, adapters, and intents
- Topic 8: Custom view, graphics, and animation
- Topic 9: Database

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COURSE REQUIREMENTS

Instructional Methods

1. Lectures: Important materials from the text and outside sources will be covered in class. Students should plan to take careful notes as not all materials can be found in the texts or readings.
2. Labs: Based on lectures, lab exercises will be given to students. Students are required to complete lab exercises, and the discussion is highly encouraged.
3. Assignments: Programming and / or general assignments will be regularly given to students.
4. Quizzes: Occasional announced quizzes will be given to help ensure students keep up with assigned materials.
5. Exams: Two exams will be given, one midterm exam and one final exam. Midterm exam will primarily cover topics from week 1-6, and final exam will be from week 7-the last week of class.

GRADING

Final grades in this course will be based on the following scale:

% of Total Points	Grade
87% - 100%	**A**
77% - 86.9 %	**B**
67% - 76.9%	**C**
57% - 66.9%	**D**
Below 57%	**F**

Category	Percentage
Midterm	**25%**
Final Exam	**30%**
Assignments	**25%**
Quizzes	**15%**
Attendance	**5%**

COURSE SPECIFIC PROCEDURE / POLICY

1. ***Assignments***: All assignments **MUST** be turned in by the assigned deadlines. All assignments are due at the time specified. Please keep in mind that ***NO LATE WORK*** will be accepted. All assignments must be placed in the appropriate Dropbox on Canvas.

2. ***Examination Makeup Policy***: If a student is absent from an exam during the scheduled time for that exam, the student will automatically receive a grade of 0 for the exam unless:

a. the student notifies the instructor of the absence before 24 hrs of the exam and supplies a written doctor's excuse or any other official documents explaining the absence, or

b. there is an extraordinary situation which the instructor allows as an acceptable excuse (instructor needs to be notified before 24 hrs of the exam). If (a) or (b) applies, arrangements for a makeup exam will be made.

It will be the responsibility of the student to show written documentation supporting the absence, from your team coach, physician, or other relevant authority.

The *syllabus is subject to change.*

COLLEGE POLICY

1. Attendance: Each student is required to be present at all class lectures and labs. If an unforeseen absence does occur, the student is responsible to get the notes and assignments from another student. If a student has more than 3 absences from class, they may be dropped from the class roster.

Students eligible are excused for "Senior Day"

This 4-credit course will meet for 100 minutes per session twice a week throughout the semester. A minimum of 2-3 hours of student preparation time outside of class is expected for each credit hour. Thus, please be prepared to devote 12-16 hours per week to this course.

2. Instructor Policy: Students not regularly attending class or not turning in assignments will be given a grade of "**F**" at the end of semester if that student has not dropped the class or been dropped by the instructor.

3. In case of an emergency or extenuating circumstances, such as illness, family crisis, contact me or have someone on your behalf contact me immediately; emergencies will be handled on a case-by-case basis. Email is best method for contacting me.

HONOR CODE

In this course the policies and procedures concerning the Rockford University Academic Honor Code including definitions of cheating and plagiarism as they appear on the appropriate pages of the current Rockford University Handbook will be Applicable.

PLAGIARISM POLICY

1. Plagiarism: To plagiarize is to present someone else's ideas or work as your own. Credit (citation) should be given to the source in the following instances: (1) when you directly quote someone else; (2) when you use someone else's ideas or opinions (unless they are common knowledge); (3) when you use someone else's examples; (4) when you cite statistics or other facts compiled by someone else; (5) when you present evidence or testimony taken from someone else's argument (Berke, Jacqueline. Twenty Questions for the Writer. 4th Ed. New York: Harcourt, Brace, Jovanovich, 1985).

If a student plagiarizes, that student will receive an **"F"** for the assignment. A second occurrence of plagiarism will result in expulsion from the course.

2. Copy: Copying parts or whole of assignments, quizzes and exams is just as serious as any other type of plagiarism. Any indication of copying, cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved.

ADA STATEMENT

Students with Disabilities: If you believe you are eligible to receive any type of academic accommodation, through such federal laws as the ADA, please contact the Lang Center for Health,

Wellness, Counseling and Disabilities Services, 815-226-4083. The Lang staff manages disability services for Rockford University.

ACADEMIC CONCERN WITH THIS COURSE

A student who questions the justice of a final grade must first seek an explanation from the course instructor. If dissatisfied with the explanation offered, the student may appeal the grade. Additional information regarding grade appeals can be found in the Academic Catalog.

DISCLAIMER

- Due dates, assignments, etc. are subject to change as directed by your instructor during the course of the semester.
- If you have questions about Computer Science, computer careers, etc. please email Dr. Donghwoon Kwon at dkwon@rockford.edu

COURSE OUTLINE / CALENDAR

Week	Lectures	Topics
1 (1/21 – 1/26)	Lecture 1	Course introduction and syllabus discussion Introduction to Java Programming
2 (1/27 – 2/2)	Lecture 1	Introduction to Java Programming (Cont')
	Lecture 2	In-depth Java Programming
	Assignment #1: Basic Java programming Due date: By 11:59PM, 2/9/2020	
3 (2/3 – 2/9)	Lecture 3	Arrays in Java
	Assignment #2: Java programming for arrays Due date: By 11:59PM, 2/16/2020	
4 (2/10 – 2/16)	Lecture 4	Java Methods
	Lecture 5	Java OOP
	Assignment #3: Temperature conversion Java programming Due date: By 11:59PM, 2/23/2020	
5 (2/17 – 2/23)	Lecture 5	Android Studio Installation and be familiar with Android Studio
6 (2/24 – 3/1)	Lecture 6	Make the 1st Android application
	Assignment #4: Create UIs for the temp converter app Due date: By 11:59PM, 3/8/2020	
7 & 8 (3/2 – 3/15)	-	***Midterm Review, Midterm, and Spring Break***
9 (3/16 – 3/22)	Lecture 7	Temp Converter App (Cont')
	Assignment #5: Write Java code for the temp converter app Due date: By 11:59PM, 3/29/2020	

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10 (3/23 – 3/29)	Lecture 8	Make the Tip Calculator App
11 (3/30 – 4/5)	Lecture 9	How to Work with Layouts and Widgets
	Assignment #6: Add radio buttons and a spinner Due date: By 11:59PM, 04/12/2020	
12 (4/6 – 4/12)	Lecture 10	How to Work with Themes and Styles
	Assignment #7: Themes and Styles Due date: By 11:59PM, 04/19/2020	
13 (4/13 – 4/19)	Lecture 11	How to Work with Menus and Preferences
	Assignment #8: Menus and Preferences Due date: 11:59PM, 4/26/2020	
14 (4/20 – 4/26)	Lecture 12	Extra Application Development
15 (4/27 – 5/2)	Lecture 12	Extra Application Development (Cont')
	-	Review session for the final exam
17 (5/11 – 5/17)	***Final Exam***	

Date Prepared: January 14, 2020