Syllabus for
Interaction and Communication with Android
Autumn 2014 Certificate (Android Application Development)

1325 Fourth Ave., Suite 400, Seattle, WA 98101
Wednesdays between 6-9pm Apr 1- Jun 3

Joe Rogers

joerogers832@comcast.net
https://plus.google.com/u/0/+JoeRogers

Course Description:
This course builds on the foundations of Android development. We will discuss topics on application communications to retrieve and store data, interaction between other applications, and development techniques that use advanced features of the Android platform. Communication and interaction are key concepts to building rich applications in the Android environment.

Course Learning Objectives:
At the end of this course students should know about good techniques for fetching data from a network. Students will also learn how different communication techniques impact battery life. Additions concepts cover application interactions, sensors, and interacting with cloud services.

Course Format:
Each class will consist of approximately 2 to 2.5 hours of lecture with breaks. There will also be time allocated for reviewing the previous weeks homework assignment solution, and ability to ask questions.

Course Materials:
There is no text for this class, but various online resources and readings will be provided at the start of class.

Technical Requirements:
Student should have a computer or laptop capable of doing Android development. The student should have an Android device (phone or tablet), however, using an emulator would be acceptable.

It is mandatory the student uses Android Studio 1.1 as the development platform for this section of the class. Students should ensure SDK version 22 (Android 5.1) is installed along with the Intel x86 system images for both standard and Google APIs if relying on emulators. Along with the following tools:

- SDK tools 24.1.2
- Platform tools 22
- Build tools 22.0.1
- Android Support Repository 12
- Google Repository 16

https://developer.android.com/sdk/installing/studio.html

Program Webpage:
For posting of syllabi, student bios, and other course materials, provided by PCE staff.
https://catalyst.uw.edu/workspace/joeroger/49369

Course Topics (Order and content subject to change):

1. Introduction, Sharing and Search
2. Networking Part 1, Battery Implications
3. Networking Part 2
4. Places (suggesting locations for the user), Alarm, Job Schedulers
5. Location via Google Play Services, Google Play Service Integration
6. Maps
7. Sensors raw and via Google Play Services
8. System Broadcasts, wake locks
9. Administration, Accounts and Telephony
10. Releasing

Attendance:
You should attend in person or remotely for each class. However, if you are unable to attend we will be attempting to record each class to post by end of day on Thursday.

I strongly urge you to attend class as you will have the opportunity to raise a question. I encourage questions to be asked. However, if I feel the question is way off topic, I'll postpone it to after class or via a discussion board. In fact the discussion board may be a better place for a question that isn't directly related to the subject material being presented.

Student Assessment:

Homework - 3 or 4 assignments

Because this is a programming course, grades will be weighted towards Homework geared at letting you practice the concepts introduced in class. Homework may combine topics across several weeks. I will try to break it into parts so you are able to work on the assignment over a few weeks.

The class is considered a Successful Completion/Unsuccessful Completion. To earn a successful completion you should obtain at least **60% of the possible points** on the assignments. However, this is a baseline and additional consideration will be made depending on how the class is doing as a whole. If you are concerned about how you are doing, please contact me directly.

Note: There may be bonus sections added to various homework assignments that will give you the opportunity to earn additional points in that week.

Policies and Values:
Homework: No late homework will be accepted. Once a homework assignment has been completed, the first part of class will be discussing particular issues anyone had with the homework including showing particular solutions. In weeks where an assignment is ongoing, questions may be asked, but hints or direction will be provided instead.

It is expected each student completes the assignment on their own.

Participation:
Participation and questions are encouraged during class. However, if you have a more involved question or discussion, please refrain until after the lecture is complete in order to get through all of the material. If you are unsure, error on the side that it is more involved.

Devices:
While mobile phones, tablets, laptops are requirements for the course, try to minimize personal use of these devices during class. Please place phone on vibrate and all other devices on silent. If you must take a call, please exit the room before answering as it is a distraction to everyone in the class.