Mobile Application Development Syllabus

1. Introduction
    a. Introduction to Mobile Computing
    b. Introduction to
    c. Android Development Environment
2. Factors in Developing Mobile Applications
    a. Mobile Software Engineering
    b. Frameworks and Tools
    c. Generic UI Development
    d. Android User
3. More on UIs
    a. VUIs and Mobile Apps
        i. Text-to-Speech Techniques
    b. Designing the Right UI
    c. Multichannel and Multimodial UIs
4. Intents and Services
    a. Android Intents and Services
    b. Characteristics of Mobile Applications
    c. Successful Mobile Development
5. Storing and Retrieving Data
    a. Synchronization and Replication of Mobile Data
    b. Getting the Model Right
    c. Android Storing and Retrieving Data
    d. Working with a Content Provider
6. Communications Via Network and the Web
    a. State Machine
    b. Correct Communications Model
    c. Android Networking and Web
7. Telephony
    a. Deciding Scope of an App
    b. Wireless Connectivity and Mobile Apps
    c. Android Telephony
8. Notifications and Alarms
    a. Performance
    b. Performance and Memory Management
    c. Android Notifications and Alarms
9. Graphics
    a. Performance and Multithreading
    b. Graphics and UI Performance
    c. Android Graphics and
10. Multimedia
    a. Mobile Agents and Peer-to-Peer Architecture
    b. Android Multimedia
11. Location
    a. Mobility and Location Based Services

       b.   Android
12. Putting It All Together (as time allows)
       a.   Packaging and Deploying
       b.   Performance Best Practices
       c.   Android Field Service App
13. Security and Hacking (as time allows)
       a.   Active Transactions
       b.   More on Security
       c.   Hacking Android
14. Platforms and Additional Issues (as time allows)
       a.   Development Process
       b.   Architecture, Design, Technology Selection
       c.   Mobile App Development Hurdles
       d.   Testing