CSC/CPE 436 Mobile Application Development

1. CSC/CPE 436 Mobile Application Development

2. credit units  4      contact hours  6

3. Course Coordinator: David Janzen

4. Textbook: (and/or other required material)

5. a. Course Description: Inception, development, testing, and deployment of mobile applications. Introduction to tools, libraries, and frameworks for one or more mobile platforms and devices. Emphasis on software engineering best practices for developing entrepreneurial or humanitarian mobile-centric applications. 3 lectures, 1 laboratory. Crosslisted as CPE/CSC 436.

   b. Prerequisite: CSC/CPE 357.

   c. Required/Elective/Selective Elective for CPE, CSC, EE, SE

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6. a. Course Goals/Outcomes
   The student will be able to:
   - To gain a breadth of knowledge for developing applications with a particular mobile development platform.
   - To gain a depth of knowledge in select areas of a particular mobile development platform.
   - To learn skills required to produce and maintain a high-quality mobile software product.
   - To understand the key elements necessary for developing a successful mobile application.
   - To apply knowledge of a particular mobile development platform in the creation of a novel mobile app.
   - To analyze, evaluate and test mobile applications in terms of features, quality, and utility.
   - To follow a software development process.
   - To apply software engineering best practices in the development of a mobile application.
   - To communicate effectively about a mobile app design.

   b. How Student Outcomes addressed
   (“B” = Basic level, “I” = Intermediate level, “A” = Advanced level)

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7. Major Topics Covered: (number of lecture hours each)
• Technology Overview (1 lec)
• Critical Analysis of Apps and App Ideas (1-2)
• Tool Introduction (1)
• Application Lifecycle (1)
• View Hierarchy, Layouts, and Lifecycle (1)
• Basic UI Elements: Buttons, Lists, Tables, Tabs, etc (3)
• Local Data Storage and Retrieval (1-3)
• Remote Data Storage and Retrieval (1)
• Threading, Alarms, Background Services, and Notifications (1)
• Gestures and Events (1)
• Hardware Interfaces (e.g. Accelerometers) (1)
• Maps and location (1)
• User Interface/Software/Design Reviews (1-3)
• Performance profiling (1)
• Testing (1)
• Deployment (1)