

**Department of Computer and Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

1. Course title/number, number of credit hours	
Software Hardware Co-Design with Android – CEN4214	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: COT 3002 Foundations of Computer Science or equivalent	
3. Course logistics	
Term: Spring 2012	
Class location and time: M/W 11:00AM-12:20 PM (Lecture) EE207	
4. Instructor contact information	
<i>Instructor's name</i> <i>Office address</i> <i>Office Hours</i> <i>Contact telephone number</i> <i>Email address</i>	Dr. Ravi Shankar, Professor 513 EE, FAU-Boca Campus M W 10 AM to 11 AM, and 3 to 5 PM 561-297-3470 Shankar@fau.edu
5. TA contact information	
6. Course description	
This course is designed to help students develop and prototype Android-based mobile applications. XML, Java, and the Android Emulator are used in design and prototyping. Some of the projects may be continued as ED1/2 (engineering design) projects.	
7. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives</i>	To introduce students to a top-down design methodology for mobile based application development using the Android Mobile Platform, Java, and XML.
<i>Student learning outcomes & relationship to ABET a-k objectives</i>	<ol style="list-style-type: none"> 1. Students will gain an understanding of the Android Mobile Platform. (a,h,i) 2. Students will gain the ability to use Java, XML and the Android Framework to develop mobile applications. (a,b,c,i) 3. Students will gain the ability to work in a team to develop a project that involves designing and implementing an Android Application. (a,b,c,d,i)
8. Course evaluation method	
Examination - 20% Assignments - 30% Project - 50%	

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9. Course grading scale
Grading Scale: 90 and above: "A", 80-89: "B", 70-79: "C", 60-69: "D", 50-59, below 50: "F."
10. Policy on makeup tests, late work, and incompletes
<p><i>Makeup tests</i> are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student of participating in the exam. Makeup exam should be administered and proctored by department personnel unless there are other pre-approved arrangements</p> <p><i>Late work</i> is not acceptable.</p> <p><i>Incomplete grades</i> are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.</p>
11. Special course requirements
12. Classroom etiquette policy
University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions.
13. Disability policy statement
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) located in Boca Raton campus, SU 133 (561) 297-3880 and follow all OSD procedures.
14. Honor code policy
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf
15. Required texts/reading
Hello, Android: Introducing Google's Mobile Development Platform, by James Burnette, Pragmatic, 3th edition, ISBN: 9781934356562
16. Supplementary/recommended readings
<ol style="list-style-type: none"> 1. Professional Android Application Development, by R. Meier, Wrox, 2008, ISBN: 978-0470344712. 2. Mobile Device Game Development (Game Development Series), by Clayton E. Crooks II, Charles River Media; 1st edition, 2004, ISBN: 978-1584503248

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17. Course topical outline, including dates for exams/quizzes, papers, completion of reading

1. Android Introduction: Installing the software: Java JDK, Eclipse, Android SDK and the Eclipse Plug-in; and General Design Considerations;
2. Intro to Java: Basic Java concepts such as classes, objects, methods, packages, inheritance, abstract and nested classes, interfaces;
3. Intro to XML: Basic XML concepts: syntax, elements, attributes, namespaces;
5. Application Components and Lifecycle;
6. User Interface Design: Views, Layouts, Widgets (List, Button, etc), Menus;
7. 2D Graphics: Colors, drawing and handling user input;
8. 3D Graphics: OpenGL ES;
9. Data Storage: Shared Preferences, SQLite and using the file system;
10. Multimedia: images and playback of multimedia files;
11. Location Based Services, Maps, and Sensors;

Exam: 2/8/12 and 3/14/12

Project: due : May 1, 2012