COSC 4590.001 Selected Topics: Mobile Programming
Summer 2014 - Section 001

• Meeting Times: MW 3:00 - 5:30 PM
• Meeting Place: CI-128
• Instructor: Dr. Ajay K Katangur
• Office: CI 340
• Office Hrs: 1:30 - 3:00 PM MW, other times by appointment
• Office Phone: 361-825-2478
• E-mail: ajay dot katangur at tamucc dot edu
• Course Web Page: http://faculty.tamucc.edu/~akatangur/su14/COSC4590

Course Description:

This course introduces mobile application development for the Android platform. Students will learn skills for creating and deploying mobile applications, with particular emphasis on Android. We will focus on software engineering topics as related to mobile programming, primarily in how software design differs on Android. This course counts as an elective for all CS Options.

Pre-requisite:
COSC 2437 (Data Structures). If you do not have the prerequisites (or equivalents from another university) shown on your TAMUCC records, you may be dropped from class at any time.

Student Learning Outcomes:
Upon successful completion of this course, the student will:

- Be able to produce and maintain a high-quality mobile software product
- Gain a breadth of knowledge in developing applications with the Android SDK
- Gain a depth of knowledge in select areas of the Android SDK
- Gain experience working as a member of a team to meet project milestones
- Demonstrate their ability in the software process
- Be able to effectively communicate about mobile application development

Assessment of Learning Outcomes:
Assessment of objectives will be conducted through exams, programming assignments, and a project.

Required Course Text:

Recommended Course Text:

Course Requirements:
This is a difficult course that demands all students attend all classes! Regular completion of all reading, homework, and other outside assignments, are absolutely essential for success in this course.

Grading Policy:
Your course grade will be decided based on active class participation, homework assignments, quizzes and a semester wide group project. The distribution of points is as follows:
1. Active Class Participation, Assignments, Quizzes worth 60%.
2. Project worth 40%.

**Grading scale:** A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: 59-0.

**Assignments:** Approximately 6 - 7 assignments will be given. Partial credit will be given for incomplete assignments. All assignments will involve programming.

**Quizzes and Active Class Participation:** There will be announced and unannounced quizzes during the semester. In addition, attendance and active class participation in discussions will be considered here. Students will perform evaluations of their own and other's work.

**Project:** There will be a semester long programming project to develop a mobile application of the student's choosing. Projects will be in teams of one to three. The idea for the project must be approved by the instructor. Additional details on the project will be available on the class website.

**Course Organization and Policies:**

**Course Syllabus:** We will meet for lecture on Mondays and Wednesdays, when new material will be presented. We will follow the text generally, but non-text material may also be included in the lectures. The assignments and quizzes will be given during the class hours. You are responsible for all the material presented during the lecture.

**Quizzes:** Quizzes will cover all lecture and reading material discussed in the class. There will be announced and unannounced quizzes during the semester. Quizzes will be given at any point during the scheduled class time. No makeup quizzes will be given.

**Assignments:** Assignments will significantly build on the material from the lectures. They will be posted on the course webpage or hard copies are handed out in the class during the lecture sessions. Please refer to the handout on programming assignments for complete details on submission requirements. (Details decided per assignment). All the assignments are due at the beginning of the class on the due date. If the student is absent on the assignment due date, it is the student's responsibility to see to it that the assignment is submitted on the designated date. An assignment that is turned in after the class on the due date is considered one day late. There is a penalty for late submissions. 20% penalty for 1 day late, 50% penalty for 2-3 days late, and 100% penalty if submitted after 3 days. If you have not completed your assignment by the due date, you should submit the work you have done for partial credit. No work will be accepted once the graded work has been returned or the solution has been disclosed to the class, except for unusual circumstances which the instructor feels reasonable. **Be sure to backup copies of all your programs. Note that any kind of hardware or software failure or machine unavailability in the lab does not merit an extension on the assignment.** Diskettes upon which major quizzes, assignments, projects or papers submitted may be retained by the instructor as a permanent record of the student's work.

**Grading Error:** All questions concerning any graded work must be resolved within one week. It is always a good idea to keep all of your work until the end of the semester. In case of any recording errors or doubts, you may produce them for correction or verification.

**Last date to withdraw:** Friday, June 20, 2014 & receive an automatic grade of W.

**Academic Honesty Policy:** You are expected to avoid all forms of academic dishonesty as defined in Catalog. In addition, students are expected to behave in an ethical manner in all class activities. If you feel uncertain about a particular activity, please speak to me BEFORE problems arise. Ethical behavior is a requirement for passing this course. All work submitted for grading must be the student's own work.
Plagiarism will result in a score of 0 (zero) for the work or dismissal from the course and the Dean of Students office will be notified. No copying from another student's work, of any class, is allowed. It is the student's duty to allow no one to copy his or her work. Anyone found cheating and/or copying, in the exams or assignments, in the instructor's opinion, will receive an automatic F for the course.

Collaboration: Except on group projects no collaboration is allowed. If two or more people collaborate on an assignment assigned it should be notified on the assignment and each student should submit his or her solutions for grading. The grade obtained on such an assignment is the total points obtained for the assignment divided by the square of the number of people who collaborated on the assignment (e.g., if 3 people collaborate on an assignment and the grade for that assignment is 90 out of 100, then each student receives a grade of $90/3^2 = 10$). If you do not notify me of such collaboration it will be treated as copied and action will be taken as discussed under the academic honesty policy.

Attendance: You must attend all classes. While in class attendance will not directly affect the grade, you are responsible for any materials covered or handed out or announcements made for the quizzes and assignments in your absence. Records of your attendance will be maintained and reported to the university. Students found missing classes without the instructor's permission will be automatically withdrawn from the course.

Absence from class: Students are responsible for all materials covered in class and assigned. Should a student be absent from class, it is his/her responsibility to get the notes, etc. for that missed class. More important, should there be assignments, it is the student responsibility to obtain such assignments. No excuse will be accepted for assignments not turned in because the student was absent when it was due.

Other Policies: Cell phones and pagers must be turned off during class. First violation receives a warning. All succeeding violations result in a ten point deduction on the last exam. Any violation during a quiz or exam results in a ten percent deduction off the corresponding paper. No warnings for quizzes or exams.

Student Security Statement: Please read the Student Security Statement.

Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services Office at (361) 825-5816 or come by and visit us in Driftwood 101.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

Academic Advising: The College of Science and Technology requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College's Academic Advising Center is located in CI 366, and can be reached at 825-3721.

Grade Appeal Process: As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of
days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost

**Tentative Course Schedule (Subject to change)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/02/14</td>
<td>Syllabus, Introduction, <strong>Hw1</strong></td>
</tr>
<tr>
<td>06/04/14</td>
<td>Android App Basics</td>
</tr>
<tr>
<td>06/09/14</td>
<td>Android Market and App Business Issues</td>
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<tr>
<td>06/11/14</td>
<td>User Interface, <strong>Hw2</strong></td>
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<tr>
<td>06/16/14</td>
<td>Building Android App with Java, <strong>Hw3</strong></td>
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<tr>
<td>06/18/14</td>
<td>Shared Preferences, Buttons, Nested Layouts, Intents, AlertDialogs, Inflating XML Layouts and the Manifest File, <strong>Hw4</strong></td>
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<tr>
<td>06/23/14</td>
<td>Assets, Asset Manager, Tween Animations, Handler, Menus, Error Logs</td>
</tr>
<tr>
<td>06/25/14</td>
<td>Touches and Gestures, Frame-By-Frame Animation, Graphics, Sound, Threading, SurfaceView and SurfaceHolder, <strong>Hw5</strong></td>
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<tr>
<td>06/30/14</td>
<td>Property Animation, ViewPropertyAnimator, AnimatorListener, Thread-Safe Collections, Default SharedPreferences for an Activity</td>
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<tr>
<td>07/02/14</td>
<td>Two-Dimensional Graphics, SensorManager, Multitouch Events and Toasts, <strong>Hw6</strong></td>
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<tr>
<td>07/07/14</td>
<td>ListActivity, AdapterViews, Adapters, Multiple Activities, SQLite, GUI Styles, Menu Resources and MenuInflater</td>
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<tr>
<td>07/09/14</td>
<td>Google Maps API, GPS, LocationManager, MapActivity, MapView and Overlay, <strong>Hw7</strong></td>
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<tr>
<td>07/14/14</td>
<td>Web Services, JSON, Fragments, ActionBar, App Widgets, Broadcast Intents and BroadcastReceivers, <strong>Hw8</strong></td>
</tr>
<tr>
<td>07/16/14</td>
<td><strong>Final Projects Demo</strong></td>
</tr>
<tr>
<td>07/21/14</td>
<td><strong>Final Projects Demo</strong></td>
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</tbody>
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**Note:** This syllabus represents a general plan for the course. Deviations from this syllabus may be necessary during the semester and changes will be announced in class.