COSC 6362.001 Mobile Software Development
Department of Computing Sciences
Summer 2021

A. COURSE INFORMATION

Course number/section: COSC 6362.001
Class meeting time: T 10:00 am – 11:55 am
Class location: online
Course Website: http://bb9.tamucc.edu

** This course is offered as a fully online course.* ***There will be synchronous (virtual) meetings on Tuesday's for presentations, and discussions.***

B. INSTRUCTOR INFORMATION

Instructor: Dr. Mamta Yadav
Office location: RFEB 316N
Office hours: T 12:00 – 01:00 PM; R 09:30 AM – 11:30 AM (Virtual only on WebEx)
(Changes announced via email or in class)
Telephone: 361-825-2688
e-mail: Mamta.Yadav@tamucc.edu
Appointments: By e-mail

C. COURSE DESCRIPTION

Catalog Course Description
Survey of software development on mobile platforms including both native and cross-platform applications with topics such as: prototyping, programming, testing, debugging, and deploying. Coverage of software life cycle on mobile platforms and how mobile hardware differs from traditional computers.

Extended Course Description
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.

D. PREREQUISITES AND COREQUISITES

Prerequisites
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.

Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

- Android 6 for Programmers: An App-Driven Approach, 3rd Edition by Deitel inc., Prentice Hall (ISBN: 0-13-428936-6)

Optional Textbook(s) or Other References

None

Supplies

None

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course's student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. Produce and maintain a high-quality mobile software product using Android
2. Evaluate and analyze existing Android apps.
3. Apply the software development process to mobile platforms.
4. Work as a member of a project development team with deadlines.
5. Demonstrate ability with the software development process.
6. Develop high quality android mobile apps individually or as a team member with the Android SDK.
7. Effectively communicate about mobile application development.

Assessment of objectives will be conducted through exams, quizzes, homework assignments, and projects.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This course will be a mixture of lectures using online electronic documents, lecture recordings, tutorials, slides and discussions of online videos that present mobile software development practices by experts. Students may be assigned to make presentations too.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Regular completion of all reading, homework, and other outside assignments, are absolutely essential for success in this course. Your course grade will be decided on your performance in the homework assignments, quizzes, projects, and two exams. The distribution of points is as follows.

ACTIVITY	% of FINAL GRADE
Exams	45
Class Activities and Quizzes	10
Homework	20
Project(s)	25

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

Homework Assignments: Approximately 3-4 homework assignments will be given. Partial credit will be given for incomplete assignments.

Quizzes: There will be several announced quizzes during the semester.

Course Project: There will be a semester long programming project to develop a mobile application of the student's choosing. This project should be done individually. The idea for the project must be approved by the instructor. Additional details on the project will be provided later.

Exams: The first exam will be given on Tuesday, June 29, 2021 and the second exam will be given on Tuesday, July 27, 2021 during the scheduled class time.

I. COURSE CONTENT/SCHEDULE:

J.

Week	TOPIC
Week 1:	Syllabus, Introduction, Android App Basics, Android Market and App Business Issues, **HW1**
Week 2:	User Interface, Building Android App with Java, Shared Preferences, Buttons,
Week 3:	Nested Layouts, Intents, AlertDialogs, Inflating XML Layouts and the Manifest File, Assets, Asset Manager, **HW 2**
Week 4:	Tween Animations, Handler, Menus, Error Logs, Touches and Gestures, Frame-By-Frame Animation, Graphics, Sound,
Week 5:	Threading, SurfaceView and SurfaceHolder, **EXAM 1 on Tuesday 06/29/2021 , HW3**
Week 6:	Property Animation, ViewPropertyAnimator, AnimatorListener, Thread-Safe Collections, Default SharedPreferences for an Activity

Week 7:	Two-Dimensional Graphics, SensorManager, Multitouch Events and Toasts, ListActivity, AdapterViews, Adapters, **HW 4**
Week 8:	Multiple Activities, SQLite, GUI Styles, Menu Resources and MenuInflater, Google Maps API, GPS,
Week 9:	**EXAM 2 on Tuesday 07/27/2021** LocationManager, MapActivity, MapView and Overlay, Web Services, JSON, Fragments, ActionBar, App Widgets, Broadcast Intents and BroadcastReceivers
Week 10:	Final Project Demos and presentations

Note: ***Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Students Learning Outcomes described in Section F.***

K. COURSE POLICIES

Course Syllabus: The course is online and lectures will be posted on the blackboard. We will meet virtually on Tuesdays (via WebEx meetings), to discuss some important topics, and for project Demos. The quizzes and exams will be given during the class hours. You are responsible for all the material presented during the lecture.

Attendance/Tardiness: The course is online and only virtual meetings needed for quizzes, exams, and project demos. Therefore, there is no attendance requirements. The quizzes and exams will be given during the scheduled class hours.

Exams: Exams will cover all lecture and reading material discussed in the class. Exams must be taken on the hours they are scheduled.

Missed Exam: In the event, if you cannot attend the class to take the exam due to some emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given.

Homework Assignments & Projects: They will significantly be based on the material from the lectures and other material considered essential for the successful completion of this course. They will be posted on the course web page or hard copies are handed out in the class during the lecture sessions. The submission details will be provided to you along with the assignment. All the homework assignments and projects are due at the beginning of the class on the due date. If the student is absent on the due date, it is the student's responsibility to see to it that the assignment is submitted on the designated date. *No late homework assignments will be accepted*. Late projects will be accepted. There is a penalty for late submissions. A project that is turned in after the class on the due date is considered one day late. There is a penalty for late submissions. 25% penalty for 1 day late, 50% penalty for 2 days late, 75% penalty for 3-4 days late and 100% penalty (i.e. no credit) if submitted after 4 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. 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 examinations, assignments, projects or papers submitted may be retained by the instructor as a permanent record of the student's work.

Participation:
The virtual WebEx meetings during class scheduled time is required for the Project Demos, quizzes, and Exams.

Student Safety Trainings
Required safety trainings and/or lab safety seminars must be successfully completed once every academic year, normally in the Fall. Students will be required to take the course from Blackboard in either the first lecture or first lab to complete their training assignments and show the certificate of completion before the end of the class or lab. Students who are still covered by having taken the safety training earlier should show their certificate of completion. For students unable to attend first day of class/lab (or still registering for the class), a reasonable completion date will be flagged in Starfish. A possible grade penalty can be enforced for non-completion

Grading Error: All questions concerning a test score or grading of a returned test or assignment 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.

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: 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.

Cell Phone Use
Not applicable for this course as we do not meet in class.

Laptop Use
Not applicable for this course as we do not meet in class.

Food in Class
Not applicable for this course as we do not meet in class.

Student Security Statement: Please read the Student Security Statement.

L. COLLEGE AND UNIVERSITY POLICIES

COVID-19
Face Coverings - (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Extra masks will be made available if needed.

Campus Emergencies*

At TAMU-CC, your safety is a top concern. We actively prepare for natural disasters or human-caused incidents with the ultimate goal of maintaining a safe and secure campus.

- For any emergency, dial the University Police Department (UPD) at **361-825-4444** or dial 911. It's a good idea to have the UPD emergency number (and non-emergency number 361-825-4242) saved in your cell phone.
- There are nearly 200 classroom telephones throughout campus. If you feel threatened or need help and don't have a cell phone, dial 4444 (emergency) or 4242 (non-emergency) to be connected to UPD.
- If we hear a fire alarm, we will immediately evacuate the building.
    - Proceed to the nearest building exit or evacuation stairway. Do not use the elevator. Persons who need help navigating stairs should proceed to a marked Area of Rescue Assistance, if possible.
    - Persons with disabilities should speak with their faculty about how to best assist them in case of an emergency.
    - Review the evacuation route (see specific Building Emergency Plan).
- TAMU-CC employs the Code Blue Emergency Notification System, an alert system which connects the campus community during emergency situations.
    - The notifications include emails, text and pre-recorded messages, as appropriate.
    - Code Blue emergencies may include severe weather warnings, threats, school closures, delays, evacuations and other incidents which disrupt regular campus

activities.
  - Students can update personal contact information anytime at https://emergency.tamucc.edu/contactform/

- Shelter in Place via Code Blue.
  - "Shelter-in-place" means to take immediate shelter where you are and may be implemented for severe weather, hazardous material spills, active shooters or other dangerous situations.
  - If there is a shelter in place for a **tornado warning**, our preferred location is the bottom floor of this building, away from windows and doors.
- Active Threat Protocol. There are three things you could do that make a difference if there is an active threat: Run, Hide, and/or Fight. For more information about the Run, Hide, Fight protocol, including what to do when law enforcement arrives, visit http://safety.tamucc.edu/ems/activethreat.html

For the *Quick Campus Guide to Campus Emergencies* (including a list of Areas of Rescue Assistance and additional protocols on assisting persons with physical disabilities, hurricanes, bomb threats, animal bites, crime reporting, elevator entrapment, etc.), visit https://safety.tamucc.edu/uploads/Site/finalbooklet.pdf

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one's own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor's ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high-quality educational experience that is free from repression. You are responsible for following the rules of the

University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. ***Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.*** Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C0.03, 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 required 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.C0.03, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf). 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.

- **Disability Services**
  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 call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

  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.
  http://disabilityservices.tamucc.edu/

- **Civil Rights Reporting Info**
  Texas A&M University-Corpus Christi is committed to fostering a culture of caring and respect that is free from discrimination, relationship violence and sexual misconduct, and ensuring that all affected students have access to services. For information on reporting Civil Rights complaints, options and support resources (including pregnancy support accommodations) or university policies and procedures, please contact the University Title IX Coordinator, Sam Ramirez (Samuel.ramirez@tamucc.edu) or Deputy Title IX Coordinator, Rosie Ruiz (Rosie.Ruiz@tamucc.edu) x5826, or visit website at Title IX/Sexual Assault/Pregnancy.

  Limits to Confidentiality. Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, are not able to maintain confidentiality when it conflicts with their responsibility to report alleged or suspected civil rights discrimination that is observed by or made known to an employee in the course and scope of their employment. As the instructor, I must report allegations of civil rights discrimination, including sexual assault, relationship violence, stalking, or sexual harassment to the Title IX Coordinator if you share it with me.

  These reports will trigger contact with you from the Civil Rights/Title IX Compliance office who will inform you of your options and resources regarding the incident that you have shared. If you would like to talk about these incidents in a **confidential** setting, you are encouraged to make an appointment with counselors in the University Counseling Center.

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

M. OTHER INFORMATION

- **Academic Advising**
  The College of Science & Engineering 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. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College's Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.