COURSE SYLLABUS
COM262: Mobile Development

Course Description

This course provides an introduction to Mobile Development. The students will learn application development on the Android platform. Topics will include memory management; user interface design; user interface building; input methods; data handling; network techniques; and finally, specifics such as GPS and motion sensing. Students are expected to work on a project that produces a professional-quality mobile application. Projects will be deployed in real-world applications. Course work will include project conception, design, implementation, and pilot testing on an actual handheld device.

General Course Information

Number of Units/Weeks	8/10
#Hours Lecture/#Hours Laboratory/#Hours HWs*	60/40/120
Prerequisite(s)	COM202, SEC200
Co-requisites (s)	None
Course Developer(s)	Leticia Rabor, M.S.
Date Approved / Last Review	February 2017 / February 2017

*Enhanced Learning Projects

Learning Outcomes

- Build GUIs compatible with mobile devices.
- Develop a needs analysis for a proposed application.
- Create applications that enable access to network services.
- Create applications that accommodate resource constraints.

Instructional Methods Employed in this Course

- Lecture and reading assignments
- Hands-on exercises and labs
- Homework Projects
- PowerPoint Slides
- Student Presentations
- Practical application of theory and skills in authentic mobile development
- Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course

Textbook

Android Programming, 3rd ed.
Philips, Bill. Atlanta, GA: Big Nerd Ranch, LLC, 2017. ISBN-13: 978-0134706054

Android Studio Development Essentials, 7th ed.
Smyth, Neil. CreateSpace Independent Publishing Platform, 2016. ISBN-13: 978-1535425339

Web Site Readings

Android Developer SDK
http://developer.android.com/sdk/index.html
Retrieved April 16, 2014

Java for Android Development
http://code.tutsplus.com/tutorials/java-tutorial--mobile-2604
Retrieved April 16, 2014

Table/Topics & Assignments

Types of Assignments:

Lecture -
Considered Lecture Hours

Classroom Discussion -
Considered Lecture Hours

In Class Critique -
Considered Lecture Hours

In Class (IC) Exercise -
Considered Lecture Hours

Reading -
Considered Homework (HW), work done outside of class

Projects –
Considered HW, work done outside of class
Considered LAB Hours

Midterm, Final, LASA -
Considered Lecture Hours

Week 1						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**

LEC 1A	Introduction to Course / Introduction to Android / Setup Development Environment	2				
LEC 1B	A tour of Android Studio Code Editor / Setup an Android Virtual Device (AVD) and a Physical Android Device	2				
IC EX 1A	Setting up your Emulator	1				
IC EX 1B	Develop a new Android App	1				
HW 1A	Read Chapters 1, 6 (28 pages) Evaluated by HW 1C			2.8		
HW 1B	Read Chapters 2, 3 (37 pages) Evaluated by HW 1D			3.7		
HW 1C	Review Questions: Chapters 1, 6 31 Questions			2	10	Start of Next Class Meeting
HW 1D	Review Questions: Chapters 2, 3 24 Questions			1.5	10	Week 2
Total Week 1		6	0	10	20	

Week 2

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 2A	Layouts & Widgets, Intents	1.5				
LEC 2B	Test & Debug, Fragments	1.5				
IC EX 2A	Create the Invoice Total App	1				
IC EX 2B	Use the documentation for the Android API	1				
IC EX 2C	Test and Debug an Android App	1				
LAB 2A	Project 1: Create the Fahrenheit to Celsius Converter App		8		-	Week 3
HW 2A	Project 1: Create the Fahrenheit to Celsius Converter App			8	30	Week 3
HW 2B	Read Chapters 5, 9 (48 pages) Evaluated by HW 2D			4.8		

HW 2C	Read Chapters 4, 7 (27 pages) Evaluated by HW 2E			2.7		
HW 2D	Review Questions: Chapters 5, 9 33 Questions			2	10	Start of Next Class Meeting
HW 2E	Review Questions: Chapters 4, 7 22 Questions			1.5	10	Week 3
Total Week 2		6	8	19	50	

Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 3A	Recycler View, Fragment Arguments, ViewPager	2				
LEC 3B	Handle Events, Dialogs	2				
IC EX 3A	Add a seek bar	0.5				
IC EX 3B	Add Radio Buttons and a Spinner	0.5				
IC EX 3C	Use Anonymous Classes for the Event Listeners	0.5				
IC EX 3D	Improve the Listener for the Key Events	0.5				
LAB 3A	Project 2: Add a Seek Bar to the Invoice Total App		4		-	Week 4
HW 3A	Project 2: Add a Seek Bar to the Invoice Total App			5	30	Week 4
HW 3B	Read Chapters 8, 10, 11 (40 pages) Evaluated by HW 3D			4.0		
HW 3C	Read Chapter 12 (30 pages) Evaluated by HW 3E			3.0		
HW 3D	Review Questions: Chapter 8, 10, 11 23 Questions			1.5	10	Start of Next Class Meeting
HW 3E	Review Questions: Chapter 12 17 Questions			1	10	Week 4
Total Week 3		6	4	14.5	50	

Week 4

		LEC	LAB	HW	Point	

Type	Topic/Description	Hours	Hours	Hours	Value	Due
LEC 4A	Themes and Styles, Material Design, Implicit Intents	1.5				
LEC 4B	Toolbar, SQLiteDatabase	2				
IC EX 4A	Use Built-In Themes	0.5				
IC EX 4B	Use Styles, Material Design	0.5				
IC EX 4C	Experiment with Menus and Settings	0.5				
IC EX 4D	Work with Menus	0.5				
IC EX 4E	Work with Preferences	0.5				
LAB 4A	Project 3: Modify the Invoice Total App to use styles to format its widgets.		4		-	Week 5
HW 4A	Project 3: Modify the Invoice Total App to use styles to format its widgets.			7	30	Week 5
HW 4B	Read Chapters 22, 35, 15 (23 pages) Evaluated by 4D			2.3		
HW 4C	Read Chapter 13, 14 (32 pages) Evaluated by 4E			3.2		
HW 4D	Review Questions: Chapters 22, 35, 15 19 Questions			1	10	Start of Next Class Meeting
HW 4E	Review Questions: Chapters 13, 14 22 Questions			1.5	10	Week 5
Total Week 4		6	4	15	50	

Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 5A	Taking Pictures	1				
IC EX 5A	Create a New Fragment	0.5				
IC EX 5B	Use the Fragment Manager	0.5				
LAB 5A	Project 4 – Convert the News Reader App to use Fragments		6		-	Week 6

HW 5A	Project 4 – Convert the News Reader App to use Fragments			6	30	Week 6
HW 5B	Read Chapter 16 (29 pages) Evaluated by HW 5D			2.9		
HW 5C	Review Questions: Chapter 16 23 Questions			1.3	10	Week 6
EXAM 5A	Midterm Exam	1			150	Week 5
EXAM 5B	LASA MIDTERM: Create a Burned Calories Calculator Application	3			100	Week 5
Total Week 5		6	6	10.2	290	

Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6A	Two Pane, Accessibility	1				
LEC 6B	Localization, Data Binding	1				
LEC 6D	Firebase and Multi-Window Support	1				
IC EX 6A	Review the News Reader app	0.5				
IC EX 6B	Work with asynchronous tasks	0.5				
IC EX 6C	Modify the News Reader app	0.5				
IC EX 6D	Work with a service	0.5				
IC EX 6E	Modify the Notification for the News Reader app	0.5				
IC EX 6F	Create a Reminder App	0.5				
LAB 6A	Project 5: Use a timer thread to the News Reader App		4		-	Week 7
HW 6A	Project 5: Use a timer thread to the News Reader App			5	30	Week 7
HW 6B	Read Chapters 17, 18 (52 pages) Evaluated by HW 6D			5.2		
HW 6C	Read Chapters 19, 20 (40 pages) Evaluated by HW 6E			4.0		
HW 6D	Review Questions: Chapter 17, 18			1.8	10	Start of Next Class Meeting

	28 Questions					
HW 6E	Review Questions: Chapter 19, 20 23 Questions			1.3	10	Week 7
Total Week 6		6	4	17.3	50	

Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 7A	Unit Test, XML Drawables	2				
LEC 7B	Tasks, HTTP	1				
LEC 7C	Content Providers	1				
IC EX 7A	Work with broadcast receivers	0.5				
IC EX 7B	Review the Task List app and use its database class	0.5				
IC EX 7C	Use the SQLite Database Browser	0.5				
IC EX 7D	Modify the database class for the Task List app	0.5				
LAB 7A	Project 6: Add Broadcast Receivers to the Tip Calculator App or the Invoice Total App		2		-	Week 8
LAB 7B	Project 7: Add a database to the Tip Calculator App or the Invoice Total App		2		-	Week 8
HW 7A	Project 6: Add Broadcast Receivers to the Tip Calculator App or the Invoice Total App			6	30	Week 8
HW 7B	Project 7: Add a database to the Tip Calculator App or the Invoice Total App			7	30	Week 8
HW 7C	Read Chapters 21, 23 (12 pages) Evaluated by HW 7E			1.2		
HW 7D	Read Chapters 24, 25 (38 pages) Evaluated by HW 7F			3.8		
HW 7E	Review Questions: Chapters 21, 23 15 Questions			1	10	Start of Next Class Meeting

HW 7F	Review Questions: Chapters 24, 25 17 Questions			1	10	Week 8
Total Week 7		6	4	20	80	

Week 8

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 8A	Thread, Search	2				
LEC 8B	Background Services, Broadcast Intents	1.5				
IC EX 8A	Work with tabs	0.5				
IC EX 8B	Work with a custom adapter	0.5				
IC EX 8C	Review and modify the task list and task history apps	0.5				
IC EX 8D	Review and modify the favorites app	0.5				
IC EX 8E	Add a Content Provider	0.5				
LAB 8A	Project 8: Display the data for the Tip Calculator or the Invoice Total App		4		-	Week 9
LAB 8B	LASA FINAL – Create your own Android App		2		-	Topic Approval: Start of Next Class Meeting Project: Week 9
HW 8A	Project 8: Display the data for the Tip Calculator or the Invoice Total App			4	30	Week 9
HW 8B	LASA FINAL – Create your own Android App			12	150	Week 9
HW 8C	Read Chapters 26, 27 (31 pages) Evaluated by HW 8E			3.1		
HW 8D	Read Chapters 28, 29 (33 pages) Evaluated by HW 8F			3.3		
HW 8E	Review Questions: Chapter 26, 27 9 Questions			0.7	10	Start of Next Class Meeting
HW 8F	Review Questions: Chapter 28, 29 13 Questions			0.6	10	Week 9
Total Week 8		6	6	23.7	200	

Week 9						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 9A	App Widgets, WebView, Custom View	1.5				
LEC 9B	Deploy an App, Property Animation, Location	1.5				
LEC 9C	Final Exam Review Chapters 9-17	0.5				
IC EX 9A	Review and modify the task list app widget	0.5				
IC EX 9B	Add an app widget that displays a count of tasks	0.5				
IC EX 9C	Add an app widget to the News Reader App	0.5				
IC EX 9D	Install the Tip Calculator App on your device	0.5				
IC EX 9E	Install the Task List App on your device	0.5				
LAB 9A	LASA: Install your Android App on the School's Android Device		4			Week 9
HW 9A	Read Chapter 30, 31 (21 pages) Evaluated by HW 9C			2.1		
HW 9B	Read Chapter 32, 33 (20 pages) Evaluated by HW 9D			2.0		
HW 9C	Review Questions: Chapters 30, 31 11 Questions			0.7	10	Start of Next Class Meeting
HW 9D	Review Questions: Chapters 32, 33 19 Questions			0.6	10	Week 10
Total Week 9		6	4	5.4	20	

Week 10						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 10A	Maps	2				
EXAM 10A	FINAL EXAM	2			150	Week 10
EXAM 10B	LASA FINAL: Present and Explain	2			40	Week 10

	Mobile App					
Total Week 10		6	0	0	190	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Introduction to Course / Introduction to Android Setup Development Environment	6	0	10
2	Layouts, Widgets, and Intents Test & Debug an Android App, Fragments	6	8	19
3	Recycler View, Fragment Arguments, View Pager Handle Events, Dialogs	6	4	14.5
4	Themes and Styles, Material Design, Implicit Intents Toolbars, SQLite Database	6	4	15
5	Taking Pictures	6	6	10.2
6	Two Pane, Accessibility Localization, Data Binding	6	4	17.3
7	Unit Test, XML Drawables Tasks, HTTP	6	4	20
8	Thread, Search Background Services, Broadcast Intents	6	6	23.7
9	App Widgets, Web View, Custom View Deploy an App, Property Animation, Location	6	4	5.4
10	Maps Final Examination App Presentation	6	0	0
Total		60	40	131.1

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	HW 1C, Review Questions (Chapter 1)	10	1%
1	HW 1D, Review Questions (Chapter 2)	10	1%
2	HW 2A , Project 1: Fahrenheit to Celsius Converter App	30	3%
2	HW 2D, Review Questions (Chapter 3)	10	1%
2	HW 2E, Review Questions (Chapter 4)	10	1%
3	HW 3A, Project 2: Add a Seek Bar to the Invoice Total App	30	3%
3	HW 3D, Review Questions (Chapter 5)	10	1%
3	HW 3E, Review Questions (Chapter 6)	10	1%
4	HW 4A, Project 3: Add Styles to Format the widgets of the Invoice Total App.	30	3%

4	HW 4D, Review Questions (Chapter 7)	10	1%
4	HW 4E, Review Questions (Chapter 8)	10	1%
5	HW 5A, Project 4: Convert the News Reader App to use Fragments	30	3%
5	HW 5C, Review Questions (Chapter 9)	10	1%
5	EXAM 5A, Midterm Exam	150	15%
5	EXAM 5B, LASA MIDTERM: Burned Calories Calculator Application (Practical Exam)	100	10%
6	HW 6A, Project 5: Use a Timer Thread to the News Reader App	30	3%
6	HW 6D, Review Questions (Chapter 10)	10	1%
6	HW 6E, Review Questions (Chapter 11)	10	1%
7	HW 7A, Project 6: Add Broadcast Receivers to the Tip Calculator App or the Invoice Total App	30	3%
7	HW 7B, Project 7: Add a database to the Tip Calculator App or the Invoice Total App.	30	3%
7	HW 7E, Review Questions (Chapter 12)	10	1%
7	HW 7F, Review Questions (Chapter 13)	10	1%
8	HW 8A, Project 8: Display the data for the Tip Calculator or the Invoice Total App	30	3%
8	HW 8B, LASA FINAL: Create your own Android Application	150	15%
8	HW 8E, Review Questions (Chapter 14)	10	1%
8	HW 8F, Review Questions (Chapter 15)	10	1%
9	HW 9C, Review Questions (Chapter 16)	10	1%
9	HW 9D, Review Questions (Chapter 17)	10	1%
10	EXAM 10A, Final Exam	150	15%
10	EXAM 10B, LASA FINAL: Android Application Presentation	40	4%
Total		1000	100%

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:
The Coleman University guidelines for the assignment of grades to total points earned is as follows:

Percent	Letter Grade	Grade Points
94-100	A	4.0
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3.0
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2.00
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1.00
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
70 or above	PASS	0

Requirements

Assignments: All assignments (including projects, lab work, quizzes and exams) must be completed as scheduled. The following will apply to late assignments:

- 1-24 hours after due date = 20% off point value
- 25-48 hours after due date = 60% off point value
- 49+ hours after due date = No points given

If an assignment equals less than 5 points, no points will be given for late work. If there are extenuating circumstances, the student must submit a written explanation to the department Senior Instructor. Upon evaluation, points will be given according to the Senior Instructor's discretion.

Attendance: Classes begin and end as indicated in the published schedule. It is required that students be present at the beginning of each class session and stay until class is dismissed, including lab periods. Excessive tardiness, leaving early and/or absences (from either lecture or lab sessions) are causes for dismissal from the course. A student that arrives in class beyond 30 minutes late may be considered absent. A student that leaves over 30 minutes before the end of class may also be considered absent. Excused absences will be determined by the instructors and approved by the Dean of Academics & Director of Student Services. Students may be removed from the course(s) based on the following absence guidelines:

4 Unit Course – Allowed 2 absences per 10-week MOD (3rd absence may be excused by DOA & DOSS)

5 Unit Course – Allowed 2 absences per 5-week MOD (3rd absence may be excused by DOA & DOSS)

8 Unit Course – Allowed 5 absences per 10-week MOD (6th absence may be excused by DOA & DOSS)

Conduct: Students are expected to conduct themselves in a professional manner while on campus. Rules of conduct are outlined in the University Catalog and students are required to adhere to such policies. Students who are in violation of the Student Code of Conduct Policy can be suspended.

Student Academic Progression (SAP)

Graduate: Student must maintain an accumulative GPA of 3.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student's accumulative GPA will be reviewed after 4 future mods have been completed (must take punitive graded courses). Failure to meet the 3.0 GPA requirements will result in an Academic

Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

Undergraduate: Student must maintain an accumulative GPA of 2.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student's accumulative GPA will be reviewed after 2 future mods have been completed (must take a minimum of 8 credits per mod). Failure to meet the 2.0 GPA requirements will result in an Academic Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

Suspension and Reinstatement: If a student is suspended (SAP, plagiarism, code of conduct, etc.), the student must sit out one full MOD (currently 10 weeks for undergraduate level and 5 weeks for graduate level). The student will be required to submit a written reinstatement request, which will be reviewed by the Reinstatement Committee. The Reinstatement Committee will approve the request, deny the request, or request a meeting with the student for further consideration.

Grades: All grades listed will count as units attempted:

Letter Grade	Percentage	Grade Points
A	94% - 100%	4.00
A-	90% - 93%	3.67
B+	87% - 89%	3.33
B	84% - 86%	3.00
B-	80% - 83%	2.67
C+	77% - 79%	2.33
C	74% - 76%	2.00
C-	70% - 73%	1.67
D+	67% - 69%	1.33
D	64% - 66%	1.00
D-	60% - 63%	0.67
F	0% - 59%	0.00
INC	N/A	0.00
W	N/A	0.00
CR	N/A	0.00
NC	N/A	0.00
PASS	N/A	0.00

Failed Courses: If a student receives a FAIL grade, they may retake the course. The retake course will be charged at current tuition pricing. The student will be able to *replace* the previous FAIL grade with the grade received on the retake course.

Drop Period & Refund:

Graduate

Sessions Attended	Refund	Grade Received When Dropping Course
0	100%	No Grade
1	100%	No Grade
2	80%	W
3	70%	W
4	60%	W
5	50%	Grade Earned
6	0%	Grade Earned
7	0%	Grade Earned
8	0%	Grade Earned
9	0%	Grade Earned
10	0%	Grade Earned

Undergraduate

Week In MOD	Refund	Grade Received When Dropping Course
No Start	100%	No Grade
1	100%	No Grade
2	80%	W
3	70%	W
4	60%	W
5	50%	Grade Earned
6	0%	Grade Earned
7	0%	Grade Earned
8	0%	Grade Earned
9	0%	Grade Earned
10	0%	Grade Earned

Coleman University Policy on Academic Dishonesty:

Academic dishonesty is cause for dismissal from Coleman University. Presenting another person's ideas, methods, course work, or test answers with the intention that they be taken as one's own is theft of a special kind. It defrauds the originator of the work, the institution, its graduates, its students, and its future students.

The student has full responsibility for the authenticity of all academic work and examinations submitted. A student who appears to have violated this policy must submit to a hearing with the reporting instructor and the associate dean. If it is determined that a violation occurred, the matter will be referred to an Officer of the University with recommendations for an appropriate penalty. The student may be dismissed, suspended, or given another penalty.

Coleman University employs the plagiarism software known as Turnitin. Students are expected to use this tool in an appropriate manner with the sole purpose to support their own academic endeavors at Coleman University. Turnitin account information can not be shared with anyone. Contact your instructor if you have any questions about plagiarism related issues.

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator, Ariana Marron, at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.