Outline

This outline provides an overview of the course and assignments by week. Please remember to check the course calendar for specific due dates.

Each week of the course is made up of one or more modules based on the topics to be covered that week. I recommend you study the modules in the order they are listed in this outline.

All modules are open at the beginning of the course.

Assignments are often based on multiple modules, and are usually two or three weeks in duration. Note that some concepts and examples required for an assignment may not be covered the week the assignment starts.

You should work on the parts of the assignment that relate to covered topics. The assignment descriptions will indicate which tasks correspond to which modules so you can plan your work accordingly.

Due dates for assignments are 11:59pm on the last day of the module. When an assignment is listed as "Submit" in a week, it is due at the end of that week.

Week 1

5/31/17 to 6/6/17	Module 1.1	Course Logistics	**Videos (18:24)** • Lecture: Course Logistics Overview (18:24)
	Module 1.2	Android Versions	**Videos (06:53)** • Lecture: Android Versions Overview (06:53)
	Module 1.3	Development Environment	**Videos (18:45)** • Lecture: Development Environment Overview (05:19) • Example: Development Environment Setup (13:26)
	Module 1.4	Devices and Emulators	**Videos (26:41)** • Lecture: Devices and Emulators Overview (10:16) • Example: Testing on an Android Emulator (05:07) • Example: Testing on an Android Device (11:18)
	Module 1.5	Gradle Basics	**Videos (16:42)** • Lecture: Gradle Overview (08:22)

		• Example: Building an Android Application in Android Studio (08:20)
Module 1.6	Git Basics	**Videos (18:33)** • Example: Git Basics (18:33)
Module 1.7	Activities	**Videos (01:16:49)** • Lecture: Activities Overview (11:58) • Lecture: Layouts (20:40) • Example: Activity Basics (16:11) • Example: Alternative Layouts (11:03) • Lecture: User Interaction (06:04) • Example: User Interaction (10:53)
Total Video Runtime	**03:02:47**	

Coding Assignments	Start	Assignment A1 Hello World! DUE 6/6/17 BY 11:59PM
	Submit	Assignment A1 Hello World! DUE 6/6/17 BY 11:59PM

Week 2

6/7/17 to 6/13/17	**Module 2.1**	Intents	**Videos (46:58)** • Lecture: Intents Overview (20:54) • Example: Intents (11:34) • Example: Passing Data (14:30)
	Module 2.2	RecyclerView and CardView	**Videos (01:12:58)** • Lecture: RecyclerView and CardView Overview (06:11) • Example: Using RecyclerView and CardView (28:57) • Example: Selection for Interaction (18:00) • Example: Passing Parcelable Objects (09:43) • Example: Swiping and Dragging (10:07)
	Module 2.3	Toolbars	**Videos (46:17)**

			• Lecture: Toolbar Overview (11:20) • Example: Todo List (34:57)
	Total Video Runtime		**02:46:13**

Week 3

6/14/17 **to** **6/20/17**	**Module 3.1**	[Fragments](#)	**Videos (01:32:23)** • Lecture: Fragments Overview (20:17) • Example: To Do List - List (38:09) • Example: To Do List - Side-By-Side (13:10) • Example: To Do List - States (20:47)
	Module 3.2	[Databases and Content Providers](#)	**Videos (01:35:37)** • Lecture: Content Provider Overview (14:51) • Example: Basic Content Provider (31:39) • Example: Using a Content Provider (part 1) (18:06) • Example: Using a Content Provider (part 2) (20:17) • Example: Using a Content Provider (part 3) (10:44)
	Total Video Runtime		**03:08:00**
	Coding Assignments	Start	[Assignment A2 Contact Manager](#) DUE 6/27/17 BY 11:59PM

Week 4

6/21/17 **to** **6/27/17**	**Module 4.1**	[Gradle Details](#)	**Videos (01:05:17)** • Example: Building Java Applications Explicitly with Gradle (20:40) • Example: Creating Custom Tasks and Plugins (26:34) • Example: Building Java and Android Applications with standard plugins (18:03)

Module 4.2	Preferences	**Videos (25:45)** • Lecture: Preferences Overview (06:21) • Example: Preference Screen (19:24)
Module 4.3	Permissions	**Videos (56:51)** • Lecture: Permissions Overview (10:26) • Example: Permissions Usage (18:20) • Example: Custom Permissions (12:50) • Example: Simplifying Runtime Permission (15:15)
Total Video Runtime		**02:27:53**
Coding Assignments	**Submit**	Assignment A2 Contact Manager DUE 6/27/17 BY 11:59PM

Week 5

6/28/17 to 7/4/17	**Module 5.1**	Graphics	**Videos (58:56)** • Lecture: Custom View and Basic Drawing (07:57) • Example: Custom View and Basic Drawing Example (23:11) • Example: View Attributes and Animation (08:57) • Example: Animation (18:51)
	Module 5.2	Manipulating Graphics	**Videos (01:26:50)** • Lecture: Manipulating Graphics (01:05) • Example: Shape Editor: Toolbar (24:12) • Example: Shape Editor: Adding Shapes (23:22) • Example: Shape Editor: Selecting and Moving Shapes (17:31) • Example: Shape Editor: Adding Lines (09:59) • Example: Shape Editor: Animating Response to User Interaction (10:41)
	Total Video Runtime		**02:25:46**

Coding Assignments	Start	**Assignment A3 Manipulating Graphics** DUE 7/11/17 BY 11:59PM

Week 6

7/5/17 to 7/11/17	**Module 6.1**	Services	**Videos (01:07:14)** • Lecture: Services Overview (09:51) • Example: In-Process Services (22:54) • Example: Remote Services (20:54) • Example: AIDL (13:35)
	Module 6.2	RESTful Web Services	**Videos (01:29:41)** • Lecture: RESTful Web Services Overview (09:18) • Example: Simple REST Server, part 1 (22:50) • Example: Simple REST Server, part 2 (13:14) • Example: REST Client - part 1 (22:48) • Example: REST Client - part 2 (21:31)
	Total Video Runtime		**02:36:55**
	Coding Assignments	Submit	**Assignment A3 Manipulating Graphics** DUE 7/11/17 BY 11:59PM

Week 7

7/12/17 to 7/18/17	**Module 7.1**	Maps	**Videos (01:01:57)** • Lecture: Maps Overview (06:02) • Example: Basic Map (07:49) • Example: Car Finder: Locations and Markers (23:08) • Example: Car Finder: Routing and Navigation (24:58)
	Module 7.2	Sensors	**Videos (42:17)**

- Lecture: Sensors Overview (04:59)
- Example: Accelerometer Example (17:41)
- Example: Moving a Puck (08:22)
- Example: Simple Augmented Reality (11:15)

Total Video Runtime	01:44:14

Coding Assignments	Start	Assignment A4 RESTful Web Services, Google Maps and Services DUE 7/25/17 BY 11:59PM

Week 8

7/19/17 to 7/25/17	Module 8.1	Notifications	**Videos (01:01:08)** - Lecture: Notifications Overview (10:20) - Example: Toasts, Snackbars & Dialogs (18:07) - Example: Basic Notifications (17:54) - Example: Handling 'Back', Expandable Notifications, Actions (14:47)
	Module 8.2	Widgets and Broadcast Receivers	**Videos (49:18)** - Lecture: Widgets and Broadcast Receivers Overview (09:15) - Example: Simple Broadcast Receiver (15:52) - Example: Widgets (24:11)

Total Video Runtime	01:50:26

Coding Assignments	Submit	Assignment A4 RESTful Web Services, Google Maps and Services DUE 7/25/17 BY 11:59PM

Week 9

7/26/17	Module 9.1	Data Binding	**Videos (01:50:06)**

to **8/1/17**			• Lecture: Data Binding Overview (14:08) • Example: Data Binding Basics (20:06) • Example: Two-Way Data Binding (33:38) • Example: Data Binding in RecyclerView (15:23) • Example: Data Binding in Generic RecyclerView (14:18) • Example: Data Binding Events (12:33)
	Module 9.2	[Alarm Manager](#)	**Videos (16:03)** • Lecture: Alarm Manager Overview (04:30) • Example: Alarms Example (11:33)
	Total Video Runtime		**02:06:09**
	Coding Assignments	**Start**	[Assignment A5 Widgets and Notifications](#) DUE 8/15/17 BY 11:59PM

[Week 10](#)

8/2/17 **to** **8/8/17**	**Module 10.1**	[Navigation](#)	**Videos (35:05)** • Lecture: Navigation Overview (09:05) • Example: Navigation Examples (26:00)
	Module 10.2	[HTML Applications](#)	**Videos (41:16)** • Lecture: HTML Applications Overview (11:51) • Example: WebView Basics (12:48) • Example: Using JavaScript (16:37)
	Module 10.3	[Files](#)	**Videos (40:03)** • Lecture: Files Overview (06:24) • Example: Writing and Reading Files (16:02) • Example: Properly Closing Files (17:37)
	Total Video Runtime		**01:56:24**

Week 11

8/9/17 to 8/15/17	Module 11.1	Speech	**Videos (52:01)** • Lecture: Speech Overview (07:54) • Example: Adventure Game Overview (16:27) • Example: Adventure Game - Text to Speech (04:24) • Example: Adventure Game - Speech to Text - manual (07:10) • Example: Adventure Game - Speech to Text - conversational (16:06)
	Module 11.2	Property Animation	**Videos (40:20)** • Lecture: Property Animation Overview (07:26) • Example: Animating Views (18:54) • Example: Animating Properties (14:00)
	Total Video Runtime		**01:32:21**
	Coding Assignments	Submit	Assignment A5 Widgets and Notifications DUE 8/15/17 BY 11:59PM

Week 12

8/16/17 to 8/22/17	Module 12.1	NFC	**Videos (59:43)** • Lecture: NFC Overview (19:10) • Example: NFC Reading (16:16) • Example: NFC Writing (15:25) • Example: Android Beam (08:52)
	Module 12.2	Publishing Applications	**Videos (30:59)** • Lecture: Publishing Overview (08:22) • Example: Publishing Example (22:37)
	Module 12.3	Further Resources	**Videos (03:05)** • Lecture: Further Resources (03:05)

Total Video Runtime	**01:33:47**

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