

**MOBILE APPLICATION DEVELOPMENT  
(OPEN ELECTIVE)**

(Effective from the academic year 2018 -2019)

**SEMESTER – VI**

<b>Course Code</b>	<b>18CS651</b>	<b>CIE Marks</b>	<b>40</b>
<b>Number of Contact Hours/Week</b>	<b>3:0:0</b>	<b>SEE Marks</b>	<b>60</b>
<b>Total Number of Contact Hours</b>	<b>40</b>	<b>Exam Hours</b>	<b>03</b>

**CREDITS –3**

**Course Learning Objectives:** This course (18CS651) will enable students to:

- Learn to setup Android application development environment
- Illustrate user interfaces for interacting with apps and triggering actions
- Interpret tasks used in handling multiple activities
- Identify options to save persistent application data
- Appraise the role of security and performance in Android applications

**Module – 1**

Get started, Build your first app, Activities, Testing, debugging and using support libraries  
Textbook 1: Lesson 1,2,3  
RBT: L1, L2

**Teaching Hours**  
08

**Module – 2**

User Interaction, Delightful user experience, Testing your UI  
Textbook 1: Lesson 4,5,6  
RBT: L1, L2

08

**Module – 3**

Background Tasks, Triggering, scheduling and optimizing background tasks  
Textbook 1: Lesson 7,8  
RBT: L1, L2

08

**Module – 4**

All about data, Preferences and Settings, Storing data using SQLite, Sharing data with content providers, Loading data using Loaders  
Textbook 1: Lesson 9,10,11,12  
RBT: L1, L2

08

**Module – 5**

Permissions, Performance and Security, Firebase and AdMob, Publish//  
Textbook 1: Lesson 13,14,15  
RBT: L1, L2

08

**Course outcomes:** The students should be able to:

- Create, test and debug Android application by setting up Android development environment
- Implement adaptive, responsive user interfaces that work across a wide range of devices.
- Infer long running tasks and background work in Android applications
- Demonstrate methods in storing, sharing and retrieving data in Android applications
- Analyze performance of android applications and understand the role of permissions and security
- Describe the steps involved in publishing Android application to share with the world

**Question Paper Pattern:**

- The question paper will have ten questions.
- Each full Question consisting of 20 marks

- There will be 2 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module.

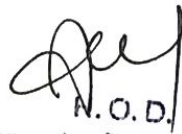
The students will have to answer 5 full questions, selecting one full question from each module.

**Textbooks:**

1. Google Developer Training, "Android Developer Fundamentals Course – Concept Reference", Google Developer Training Team, 2017. <https://www.gitbook.com/book/google-developer-training/android-developer-fundamentals-course-concepts/details> (Download pdf file from the above link)

**Reference Books:**

1. Erik Hellman, "Android Programming – Pushing the Limits", 1<sup>st</sup> Edition, Wiley India Pvt Ltd, 2014.
2. Dawn Griffiths and David Griffiths, "Head First Android Development", 1<sup>st</sup> Edition, O'Reilly SPD Publishers, 2015.
3. J F DiMarzio, "Beginning Android Programming with Android Studio", 4<sup>th</sup> Edition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126565580
4. Anubhav Pradhan, Anil V Deshpande, "Composing Mobile Apps" using Android, Wiley 2014, ISBN: 978-81-265-4660-2



N. O. D.

Dept. Of Computer Science & Engineering  
Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225