

<p align="center"><b>MOBILE APPLICATION DEVELOPMENT</b>  <b>[As per Choice Based Credit System (CBCS) scheme]</b>  <b>(Effective from the academic year 2016 -2017)</b>  <b>SEMESTER – VI</b></p>			
Subject Code	15CS661	IA Marks	20
Number of Lecture Hours/Week	3	Exam Marks	80
Total Number of Lecture Hours	40	Exam Hours	03
<b>CREDITS – 03</b>			
<b>Course objectives:</b> This course will enable students to			
<ul style="list-style-type: none"> <li>• Learn to setup Android application development environment</li> <li>• Illustrate user interfaces for interacting with apps and triggering actions</li> <li>• Interpret tasks used in handling multiple activities</li> <li>• Identify options to save persistent application data</li> <li>• Appraise the role of security and performance in Android applications</li> </ul>			
<b>Module – 1</b>			<b>Teaching Hours</b>
Get started, Build your first app, Activities, Testing, debugging and using support libraries			<b>8 Hours</b>
<b>Module – 2</b>			
User Interaction, Delightful user experience, Testing your UI			<b>8 Hours</b>
<b>Module – 3</b>			
Background Tasks, Triggering, scheduling and optimizing background tasks			<b>8 Hours</b>
<b>Module – 4</b>			
All about data, Preferences and Settings, Storing data using SQLite, Sharing data with content providers, Loading data using Loaders			<b>8 Hours</b>
<b>Module – 5</b>			
Permissions, Performance and Security, Firebase and AdMob, Publish			<b>8 Hours</b>
<b>Course outcomes:</b> The students should be able to:			
<ul style="list-style-type: none"> <li>• Create, test and debug Android application by setting up Android development environment</li> <li>• Implement adaptive, responsive user interfaces that work across a wide range of devices.</li> <li>• Infer long running tasks and background work in Android applications</li> <li>• Demonstrate methods in storing, sharing and retrieving data in Android applications</li> <li>• Analyze performance of android applications and understand the role of permissions and security</li> <li>• Describe the steps involved in publishing Android application to share with the world</li> </ul>			
<b>Question paper pattern:</b> The question paper will have TEN questions. There will be TWO questions from each module. Each question will have questions covering all the topics under a module. The students will have to answer FIVE full questions, selecting ONE full question from each module.			
<b>Text Books:</b>			
1. Google Developer Training, "Android Developer Fundamentals Course – Concept Reference", Google Developer Training Team, 2017. <a href="https://www.gitbook.com/book/google-developer-training/android-developer-fundamentals-course-concepts/details">https://www.gitbook.com/book/google-developer-training/android-developer-fundamentals-course-concepts/details</a> (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