Institute:	Institute of Technology
Name of Programme:	Integrated B.Tech.(CSE)-MBA
Course Code:	CSI0802
Course Title:	Mobile OS and Applications
Course Type:	Core
Year of Introduction:	2021-22

Credit Scheme

L	T	Practical Component				C
		LPW	PW	W	S	
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Course Learning Outcomes (CLO):

At the end of the course, students will be able to –

1. compare the similarities, differences and benefits of the current mobile operating systems
2. explain the functionalities of remote operations and security essential of mobile devices
3. analyze the latest trends and application in building Mobile OS
4. demonstrate the native applications required to build using mobile OS

Syllabus: **Total Teaching hours: 20**

Unit	Syllabus	Teaching hours
Unit-I	Introduction: Introduction to different operating system platforms, Windows Server, Windows Desktop, Linux servers, Android, Apple iOS.	04
Unit-II	Installation of software operating system and configuration, identification and obtaining installation media as well as suitable hardware, installing software.	05
Unit-III	End-to-end testing of operating systems (Windows, Linux), test remote management, login management, connectivity to network resources	02
Unit-IV	Various operating systems applications (IOS, Safari, Maps, App Store, Windows, Command Prompt, Linux, Terminal, Android; Chrome, Maps, Play Store.), Introduction to Cross Platform development	04
Unit-V	Security principles of operating systems, virtual servers and cloud services, user access control, malware protection, patch management	05

Self-Study:	The self-study contents will be declared at the commencement of semester. Around 10% of the questions will be asked from self-study contents
Suggested Readings/ References:	1. Gerardus Blokdyk, Mobile Operating System a Complete Guide, 5STARCooks publication
	2. Reto Meier, Professional Android 4 Application Development, Wrox Publication
	3. Books Llc (Google online Books), Mobile Phone Operating System: General Books LLC Installation of Android studio.
	4. Charlie Miller, Dion Blazakis, Dino DaiZovi, Stefan Esser, Vincenzo Iozzo, iOS Hacker's Handbook, Wiley publication

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Suggested List of Experiments:	Sr. No.	Title	Hours
	1	A) Compare various Mobile operating systems with applications.	04
		B) Summaries the native applications for different operating systems	
	2	Write a shell script for implementing directory management. (In Linux OS).	04
	3	Installation of Android studio and Development of Hello World Application	04
	4	Mobile application phase-I:	04
		Demonstration of simple UI with user activity	
		- To develop an application by using list view and spinner view to list out some items on screen by selecting any of the item's system display complete information about that item. Also show addition and deletion of the items from the spinner view.	
	5	A) Develop a native calculator application.	04
		B) Create an application that takes the name from a text box and shows a hello message along with the name entered in text box, when the user clicks the OK button.	
	6	Create a screen that has input boxes for User Name, Password, Address, Gender (radio buttons for male and female), Age (numeric), Date of Birth (Datepicker), State (Spinner) and a Submit button. On clicking the submit button, print all the data below the Submit Button (use any layout).	04
	7	Mobile application phase-II:	04
		To show Communication between two Activity through Intents: In first Activity take two inputs from user send these two numbers or strings via intent to second activity, perform the user defined operations on these two numbers/strings in second activity. Now sent back to first activity and show the results to the user on first activity.	
	8	Develop an application that uses GUI components, Font and Colors.	04
	9	To implement the security concepts when running an operating system running on a platform; with a focus on physical hardware, virtual servers and cloud services	04
	10	To study and explore different Remote Systems Management API.	04

Suggested Case List:	-NA-