

Course Title	Smartphone Programming				
Course Code	CSE335				
Course Type	Compulsory				
Level	Bachelor (1st cycle)				
Year / Semester	3 <sup>rd</sup> year / 5 <sup>th</sup> semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 Hours/14 weeks	Laboratories / week	None
Course Purpose and Objectives	<p>The purpose of this course is to introduce software application development for smartphones. This includes user interface design using common user interface components - such as labels, text fields, radio buttons, check boxes and drop down lists, processing user input and user generated events, location based and location awareness services, multithreading, camera utilization, database connectivity, saving the application state and implementing user feedback with notifications and pop up messages.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> <li>• Create smartphone applications using the respective smartphone's programming language</li> <li>• Apply the touch User Interface (UI) controls for effective UI design and development.</li> <li>• Build and query local databases.</li> <li>• Develop user/smartphone interactions using several smartphone features and capabilities.</li> <li>• Deploy smartphone applications to online stores.</li> </ul>				
Prerequisites	CSE200	Co-requisites		None	
Course Content	<p>Introduction: the smartphone programming platform, architecture, capabilities, setting programming environment, tools, history and evolution, application deployment.</p> <p>Programming language: introduction to the smartphone's programming language, similarities to other languages, API description, development platform.</p> <p>User Interface: Using the user interface (UI) components and patterns for effective UI design and development.</p> <p>Smartphone's features: using built-in features such as camera, vibration effect, location services, available sounds and gesture sensors, background services, text to speech.</p>				

	<p>Databases: saving and retrieving the smartphone application state, creating and connecting with external SQLite database, querying the database, displaying the results in different ways.</p> <p>Communication: creating applications with internet and email connectivity, sharing abilities and broadcasting features.</p> <p>Other: future developments and contemporary topics.</p>								
Teaching Methodology	Face-to-face								
Bibliography	<p>iOS Development with Swift, Craig Grummit, Manning Publications Co</p> <p>Head First Android Development, Dawn Griffiths, O'Reilly</p> <p>iOS 12 Programming for Beginners: An Introductory Guide to iOS App Development with Swift 4.2 and XCode 10, Craig Clayton, Packt.</p> <p>Android Studio 3.3 Development Essentials – Android 9 Edition: Developing Android 9 Apps Using Android Studio 3.3, Java and Android Jetpack, Neil Smyth, Payload Media Inc.</p>								
Assessment	<table border="1"> <tr> <td>Assignments</td> <td>50%</td> </tr> <tr> <td>Examinations</td> <td>40%</td> </tr> <tr> <td>Class Participation and attendance</td> <td>10%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </table>	Assignments	50%	Examinations	40%	Class Participation and attendance	10%		100%
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Language	English								