

Course	iOS Development for Object Oriented Programmers		
Credits	3	Format	2sx2hx6w
Pre-Requisites	<ul style="list-style-type: none"> • Be a Senior in / Graduate of Computer Science or Computer Engineering or has a demonstrable experience of work in the field • Be well acquainted with algorithm design and implementation • Have worked or Familiar with object oriented programming • Has intermediate to advanced knowledge of any programming language 		
Abstract	This course provides the core foundation for those aiming to become iOS developers. The course provides the participants with the initial skill set focusing on the core concepts of iOS Development.		
Contents	<p>OOP Refreshment</p> <ul style="list-style-type: none"> • Primitive and Reference Data Types • Memory Management In Java <p>Introduction to Objective-C</p> <ul style="list-style-type: none"> • ARC & Memory Management in Objective-C • Primitive and Reference Data Types in Objective-C • Functions in Objective-C • Controlling Program Flow in Objective-C • Arrays & Dictionaries in Objective-C • Classes in Objective-C • Protocols & Categories in Objective-C <p>Introduction to Swift</p> <ul style="list-style-type: none"> • Type Inference, Variables & Classes in Swift • Functions in Swift • Controlling Program Flow in Swift • Optional Types in Swift <p>Introduction to iOS Development</p> <ul style="list-style-type: none"> • Introduction to the Xcode's Interface Builder • Application Life Cycle in iOS • Basic UI Components in iOS • First iOS Application 		
Outcomes	By the end of this course participants should be able to create a basic mobile application that can receive, process input from the user and present basic information accordingly		

Course	Web Development using PHP		
Credits	3	Format	2sx2hx6w
Pre-Requisites	<ul style="list-style-type: none"> • Be a Senior in / Graduate of Computer Science or Computer Engineering or has a demonstrable experience of work in the field • Be well acquainted with algorithm design and implementation • Have worked or Familiar with object oriented programming • Has intermediate to advanced knowledge of any programming language 		
Contents	<p>Introduction to PHP</p> <p>PHP data types and syntax</p> <p>PHP functions</p> <p>Conditional logic and loops</p> <p>Exception and error handling</p> <p>Integration with MySQL</p> <p>Form handling and File uploads</p> <p>Files read/write.</p> <p>Object Oriented PHP</p> <p>Sessions, and Cookies.</p> <p>API usage (XML, JSON)</p> <p>PHPUnit testing.</p> <p>Introduction to Composer, PHP package manager.</p> <p>PHP common standards.</p> <p>Introduction to MVC frameworks and Laravel</p> <p>Introduction to Backbone.js</p> <p>Introduction to TypeScript</p> <p>Introduction to JavaScript tests</p> <p>Project: Develop a Laravel application.</p>		
Outcomes	<p>By the end of this course students will be able to write their own backend application with PHP and Laravel. Students will be familiar with Object Oriented PHP, practice it, and learn different techniques in dealing with APIs. Students will integrate PHP with databases. Students will be able to make use of open source available packages and libraries through composer.</p>		

Course	An Introduction to Data Science		
Credits	3	Format	2sx2hx6w
Pre-Requisites	<ul style="list-style-type: none"> • Be a Senior in / Graduate of Computer Science or Computer Engineering or has a demonstrable experience of work in the field • Be well acquainted with algorithm design and implementation • Have worked or Familiar with object oriented programming • Has intermediate to advanced knowledge of any programming language 		
Abstract	<p>Data is everywhere; from weather, health, stocks, machinery, demographics, to music and entertainment. Data science is the emerging, interdisciplinary field that is tasked with dealing with and leveraging this data to extract insights and generate predictions of various forms to support decision making and create value.</p>		
Contents	<p>1. Statistical Foundation</p> <p>1.1 Basics of descriptive and inferential statistics.</p> <p>1.2 Statistical programming with R.</p> <p>1.3 Exploratory data analysis.</p> <p>2. Data Preparation</p> <p>2.1 Data Acquisition.</p> <p>2.2 Data Pre-Processing.</p> <p>2.3 Feature Engineering. 3. Predictive Analytics.</p> <p>3.1 Regression, Regularization, and Gradient Descent</p> <p>3.2 Classification, and Validation.</p> <p>3.3 Unsupervised Learning, Clustering</p> <p>4. Big Data 4.1 Basics of multi-machine computing</p> <p>4.2 Apache Spark</p> <p>4.3 Microsoft Azure ML</p> <p>5. Data Visualization</p> <p>6. Real Life Use Cases</p>		
Outcomes	<p>In this course, learners will get an overview of the interdisciplinary field of Data Science. Students will acquire the needed theoretical concepts and practical skills to acquire, transform, visualize and make sense of data using open-source technologies. In addition to developing predictive models to meet real world challenges.</p>		

Course	Mobile Startups
Abstract	This course provides the core foundation for those aiming to start their mobile business development. The course provides the participants with the initial skill set focusing on the core concepts of Android Development as well as business plans needed to start their business and analyze its profit models
Courses	<ul style="list-style-type: none"> • Introduction to the course and internet trends • Idea generation, Idea refinement, Pitching contest • Value prop and competition, Engineering good design & usability • Early adoption testing • Growing: Marketing, Financing and Financial Template • Hybrid mobile development frameworks (Advantages and Disadvantages) • Ionic components • Using lab mode to see how the app shows in both android and ios
Project	A complete Prototype and Mobile Startup App will be ready by the end of the course.