**Sir Syed University of Engineering & Technology**

**Continuing Education Programme**

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**Android, iphone, ipad, Windows phone and Windows 8 TABLET Technologies**

**TRAINING CERTIFICATE IN Developing Apps for Web & Software Stores using Html5, Cloud Computing, and No-SQL Databases**

***Seminar on Sunday, April 14, 2013 at 1:00 pm***

***Classes starting on Sunday, April 21, 2013***

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| |  |  | | --- | --- | | **Mobile/Web Technologies:** | **Html 5, CSS 3, jQuery, D3, Famo.us, Backbone, Bootstrap, Require, and Windows 8 SDK** | | **Programming Languages:** | **JavaScript** | | **Real-Time Web Technologies:** | **Node.js with Express and Socket.io** | | **Cloud Platforms:** | **Microsoft’s Windows Azure, Salesforce’s Heroku, Joyent and AWS with Node.js** | | **Cloud Databases** | **MongoDB, Microsoft’s SQL Azure, Cloud MySQL and Oracle.** | | **Target OS’s:** | **Windows 8, Mac OS X, Windows Phone 8, Android, Chrome OS, Tizen, BB10, and iOS** | | **Target Browsers:** | **Google Chrome, Microsoft’s Internet Explorer, Firefox, and Apple’s Safari** | | **Target Mobile Handsets:**  **Target Tablets:** | **Nokia, iPhone, Motorola, Samsung, LG, Sony Ericsson, Dell, and HTC Smart Phones**  **iPad, Android Tablets, Tizen, BB10, and Windows 8 Tablets** | |  |
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**Six Month Training**

***Course Sequence and Schedule***

**Mobile & Cloud Computing-101**

Functional & Object-Oriented Programming using JavaScript

*Sunday: 11:00 a.m.-1:00 p.m.*

*1:30 p.m.-3:30 p.m. (Lab)*

**Mobile & Cloud Computing-251**

Building Apps for Software Stores using Html5/Cloud Computing/Databases

*Sunday: 3:30 pm-6:00 pm*

**Mobile & Cloud Computing-201**

Html5 Mobile & Real-Time Web Application Development

*Sunday: 1:00 p.m.-3:00 p.m.*

*10:00 a.m.-12:00 noon (Lab)*

Microsoft, Apple, and Google have unveiled their Mobile platforms: Windows Phone 8, iPhone, and Android. All the major mobile handset makers like Nokia, Apple, Motorola, Samsung, LG, Sony Ericsson, Dell, and HTC are supporting these technologies.

Another major technology trend is use of tablet and similar touch enabled devices for accessing the web and for general purpose computing. Apple with their iPad, Google with Android, and Microsoft with Windows 8 is targeting this market segment. Many experts are predicting that the touch enabled mobile computing will soon overtake the current main-stream mouse/keyboard PCs.

In 2013, a large number of website design professionals and developers have started implementing HTML5 and CSS3 in the websites. Microsoft has selected Html5 and Javascript to be the main development platform for Windows 8. These technologies are also becoming the main development option for mobile and tablet applications as well. Therefore, Html5/CSS3 with JavaScript is emerging as the de-facto standard for client application development, may it be Websites, Mobile, Tablet, or PC applications: a single ubiquitous client platform to rule them all.

On the server-side all major software companies have released Internet operating systems for cloud-based computing. Microsoft has unveiled Windows Azure, Amazon has AWS, Salesforce.com has acquired Heroku, etc. These platforms are built to work on a planetary scale supporting billions of users and trillions of transactions per day. They will allow anyone from hobbyists to enterprises to write and host applications on data centers located globally and running a vast number of machines. Cloud computing coupled with Html5 touch based mobile store apps are setting the stage for the next 50 years of computing.

Continuing Education Programme of SSUET is pleased to announce a six months Training Certificate in Developing Apps for Web & App Stores using Cloud Computing/Databases at the back-end. The Training Certificate will consist of two semesters of course work for developers who have a prior background in object-oriented programming (Courses: 201 & 251). The participants who have no background in programming will complete an additional semester (Course: 101).

**COURSE CATALOG FOR DEVELOPING APPS FOR APP STORES & WEB USING CLOUD COMPUTING/DATABASES**

***Mobile & Cloud Computing-101:* Functional & Object-Oriented Programming using JavaScript**

This course is designed for the absolute beginners in programming and builds a solid foundation in Functional and Object-Oriented Programming using JavaScript. Assuming no prior programming experience on the part of the participant, this primer class focuses on the fundamentals of composing code with JavaScript. Introduction to both client and server based JavaScript is covered in this course.

***Part A:*** This part covers structured programming using JavaScript. It begins with variables and ends with a discussion on arrays. You'll learn about the syntax and structure of the language including operators and expressions, control structures, methods, and arrays.

***Part B:*** In this section we will learn functional programming using JavaScript.

***Part C:*** The participants are introduced to Html5 and the uses of browser based client side JavaScript, and server-side JavaScript technology Node.js.

*Prerequisite:* No programming experience required.

***Mobile & Cloud Computing-201:* Html5 Mobile and Real-Time Web Application Development**

***Part A:*** The class starts with in-depth coverage of Html5 and CSS3.

***Part B:*** The class moves on to coverage of advanced functional programming techniques using JavaScript.

***Part C:*** jQuery, and jQuery Mobile for web, tablet, and mobile application development are covered.

***Part D:*** In this part we will learn to develop real-time web applications using Node.js and its libraries like Express, and Socket.io.

**Part E:** In this part of the course we will learn how to develop Single Page Web Applications using jQuery, Backbone, Bootstrap, and Require.js, etc.

**Part F:** In last part of this course we will learn to develop graphic intensive and data driven apps and controls using SVG and D3.js.

*Prerequisite:* Exposure to any Programming Language i.e. JavaScript, Java, C, C++, C#, VB.NET, PHP, etc.

*Certification:* Microsoft Exam 70-480 Programming in HTML5 with JavaScript and CSS3

***Mobile & Cloud Computing-251:* Building Apps for Software Stores using Html5/CloudComputing/Databases**

***Part A:*** We will start by learning to develop apps for Windows 8, Android, iPad/iPhone, Tizen,, and BB10 app stores using Html5/Javascript.

***Part B:*** We will move to conduct an exhaustive study of Relational Database (RDBMS) Theory and SQL. Microsoft’s SQL Azure, Oracle, and Cloud MySQL will be explored in the context of cloud based usage.

***Part C:*** For a quarter of a century, the relational database has been the dominant model for database management. But, today, non-relational, “cloud,” or “NoSQL” databases are gaining mindshare as an alternative model for database management. MongoDB, a cross-platform NoSQL database, is the fastest-growing new database in the world. We will explore NOSQL concepts using MongoDB. We then move on to study and explore other cloud based NOSQL Databases i.e. Microsoft’s Azure Table, Blobs, and Queues.

***Part D:*** We will explore how to develop cloud based real-time web applications using Node.js on Microsoft Azure, AWS, Heroku, and other cloud platforms.

***Part E:*** In this section of the course we will learn how to develop integrated end-to-end cloud based real-time web, tablet, and mobile applications for Microsoft (Windows 8), Apple and Google App Stores.

***Part F:*** Facebook has become very popular destination for all web users. We will learn how to use the Facebook's application programming interfaces and how to build socially aware websites and mobile and tablet applications by using Facebook Open Graph and Timeline API's.

***Part G:*** In the last section of the course we will learn Git, the distributed version control system from a prospective of a project leader. We will also review Git based GitHub and BitBucket services.

*Certification:* Microsoft Exam 70-481: Essentials of Developing Windows Store Apps using HTML5 and JavaScript

**Course Academic Coordinator:**

Mr. Zia U. Khan (http://www.facebook.com/ziakhan) will be the academic coordinator for this course. He has ten years of experience in teaching computer science subjects and over ten years of experience in development of business and financial software solutions. For seven consecutive years, in 2007, 2008, 2009, 2010, 2011, 2012 and 2013 he has received the Most Valuable Professional (MVP) Award from Microsoft USA. He has a Master of Science in Engineering (MS), Master of Business Administration (MBA), and Master of Accountancy (MAC), all three from Arizona State University. He is also a CPA and CMA in USA.

**Registration Fee:** Rs. 100/-

**Fee:** Rs. 3,500/- per semester

**Classes only on Sundays**

**Contact:**

**Continuing Education Programme**

**Room# BS-01, Block B, 2nd Floor.**

**Tel: 34800420**

***Questions and Course Details:***

http://groups.yahoo.com/group/windowsazure/