ITMD 563 – Intermediate Web Application Development

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Text:

Intermediate Web Application Development

Course Description:

In-depth examination of the concepts involved in the development of Internet applications. Students will learn the differences and similarities between Internet applications and traditional client/server applications. A discussion of the technologies involved in creating these Internet applications is included, and students will learn to use these technologies to create robust server-side applications.

Course Outcome:

In this course we will learn the fundamentals of the .Net framework, gaining a deeper understanding of web application standards, tools and techniques. Leverage Visual Studio Integrated Development Environment to build web application projects and deploy them. Students will learn to use the cloud infrastructure to manage the application life cycle and deploy their solution to Microsoft Azure cloud. We will introduce the modern web application and work with standards like HTML 5, CSS and use popular tools like bootstrap to build the web applications.

Course Objectives:

Use the .NET framework to build web applications

Work with various web application project types (Web Forms, MVC)

Build an end to end web application using Visual Studio Integrated Development Environment

Use Cloud to build and deploy web applications on Microsoft Azure

Requirements:

Familiarity with Object oriented programming, prior experience with a programming language Java / C# / VB

Resources:

TBD

Evaluation:

Two Quizzes, Two Assignments, Project (Graduate Projects with a bigger scope)

Quiz 1 – 15%; Quiz 2 – 15%; Two Assignments each 20%; Project 30%;

The grade scheme is same for both graduate and undergraduate students except the scope of project for Graduate students will have additional tasks and requirements.

Course Schedule:

Week	Topic	Required Reading
Week 1	Introduction to .Net framework; Getting ready for the course – Installing Visual Studio Ultimate, Setting up Visual Studio Online account, Subscription to Azure, Familiarize with Visual Studio 2013 Update 3 IDE, Walk through a simple web project from end to end with source control and Azure Deployment	http://msdn.microsoft.com/en-us/library/zw4w595w(v=vs.110).aspx ; http://www.visualstudio.com/en-us ; http://msdn.microsoft.com/en-us/library/azure/hh535756.aspx;
Week 2 & 3	Anatomy of a web application; ASP.NET application and Page cycle; Tools to monitor web application (Fiddler, Developer tools); Web Application – The basics: HTML 5, CSS, JavaScript; Building a simple web application with HTML 5 and CSS; Using Bootstrap for theme and styling; Web application architecture – Presentation, Business Logic, Data Access	http://msdn.microsoft.com/en-us/library/bb470252.aspx ; http://msdn.microsoft.com/en-us/library/ee658099.aspx; http://getbootstrap.com/;
Week 3 & 4	Introduction to C#; overview of Web Application Project Types; overview of Authentication; one ASP.NET; Web Servers (IIS, Local, External, Custom);Building a Web Form Application; using Server Controls	http://msdn.microsoft.com/en-us/library/aa288436%28v=vs.71%29.aspx; http://www.asp.net/web-forms/what-is-web-forms; http://blogengine.codeplex.com/documentation; http://www.asp.net/web-forms/tutorials/aspnet-45/creating-a-basic-web-forms-page
Week 5 & 6	Building a Data Driven Web Forms Application with Visual Studio 2013 and Deploying it to the cloud	http://msdn.microsoft.com/en-us/data/jj200620; http://www.asp.net/visual-studio/overview/2013/aspnet-scaffolding-overview
Week 7 & 8 &9	Introduction to MVC; Building data driven MVC application with Entity Frame work	http://www.asp.net/mvc/tutorials/mvc-5/introduction/getting-started
Week 10 & 11	Introduction to services – WCF and Web Api	http://msdn.microsoft.com/en-us/data/gg601462 ;
Week 12 & 13	Introduction to HTML 5, CSS and JavaScript application	http://www.asp.net/visual-studio/overview/2013/visual-studio-2013-web-editor-features-javascript;
Week 14 & 15	Introduction to Mobile Application Development	http://azure.microsoft.com/en-us/documentation/articles/web-sites-dotnet-deploy-aspnet-mvc-mobile-app/

The session on 9/16 will be a recording.

Examinations:

2 Quizzes, 2 Assignments and a Project; Graduate student projects will have additional requirements

Code of Academic Honesty:

IIT expects students to maintain high standards of academic integrity. Students preparing for the practice of a profession are expected to conform to a code of integrity and ethical standards commensurate with the high expectations society places on practitioners of a learned profession. No student may seek to gain an unfair advantage over another. The Code of Academic Honesty is explained in the IIT Student Handbook and all students are expected to know and adhere to this code.

Plagiarism:

All work you submit in this course must be your own. You must fully attribute all material directly quoted in papers and you must document all sources used in the preparation of the paper using complete, APA-style bibliographic entries. No more than thirty-three percent of material included in any paper may be direct quotes. If you submit plagiarized material you can expect to receive a grade of ZERO for the assignment, an Academic Honesty Violation Report will be filed, and it may result in your expulsion from the course with a failing grade as per the IIT and ITM academic honesty policies.

Disabilities:

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources and make an appointment to speak with me as soon as possible. My office hours are listed on the first page of the syllabus. The Center for Disability Resources (CDR) is located in 3424 S. State St., room 1C3-2 (on the first floor), telephone 312 567.5744 or disabilities@iit.edu.