Wayne State University
Department of Computer Science
CSC 5991: Special Topics in Computer Science

Spring - Summer 2016

.NET Web Development using C# and F#

An Online Course or/ and Traditional:
TIMING 4:30 – 5:50 P.M.

Instructor: Dr. Javad Abdollahi
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Office hours: Timing Tuesday 3:00 – 4:00 P.M., in 318 State Hall

Student body: This .NET Web Development course should be of interest to highly motivated students in computer science, computer information systems, engineering and instructional technology who are determined to learn modern aspects of Microsoft .NET technologies, in a practical and hands-on course environment.

Course description: Appropriate for all basic-to-intermediate level courses in Visual C# programming.

.NET Platform with C#

- Basics of .NET Framework
- Introduction to Visual Studio IDE
- Basics of C# Programming to be used with ASP.NET and with web services
- Creating and Running Simple Web Form (Notions of ASPX and code-behind files)
- Web App Development with ASP.NET
- Connecting to a Database in ASP.NET
- Basics of IIS (Internet Information Services) as the Web server that programmers use when developing ASP.NET web applications in Visual Studio
- Hands on experience with Microsoft SQL Server
- ASP.NET Web Services
- ASP.NET and ASP.NET Ajax

**F# will be used periodically to contrast algorithms with functional analogs.**

**We will start from Chapter 5 of the F# book.**

**Course prerequisite:** A basic programming course such as C, C++, Java, or permission of the instructor. Having had a basic course in relational databases and / or HTML programming is a plus. Basic notions from discrete mathematics are very helpful.

**Required Text:**


2. **Professional F# 2.0**
   

**Testing/ evaluation:**

1. **Two Project/ Exams are to be given as follows:**

   Project/ Exam I (Midterm I) 100 points
   Project/ Exam II (Midterm II - Final) 100 points

2. **Homework assignments** 10 points each

3. **Literature review** 100 points
The final course grade will be determined based on the following scale:

A:   95 – 100%   A-:  90 - 94
B+:  87 – 89%    B:   84 – 86%    B-:  80 – 83%
C+:  77 – 79%    C:   74 – 76%    C-:  70 – 73%
D:   60 – 69%
F:   0 – 59%

**LITRATURE REVIEW**

**Objective:**

The intent of this assignment is to introduce students to an advanced topic in web programming and lead them to critically evaluate literature in this challenging and rapidly evolving field.

**Requirement:**

Students are to identify a topic of interest to them in the area of (advanced) web technologies. They are to research recent (2011 and later) literature on the topic and select four related articles. The lead article of these four must be drawn from an academic journal. Each paper must be at least 7 pages long. From these articles the student will prepare a double spaced eight to twelve pages paper with attached copies of the articles that:

- Briefly summarizes the content of each article.
- Develops an underlying theme from the articles - no that this should involve synthesis by the student, not merely a restatement of the articles.

**Sample Topics:**

- MapReduce
- Functional programming for the web
- Asynchronous Programming
- Web Services using C#
- Web 2.0