EC512 – Enterprise Client/Server Software
Spring 2021

Instructor
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PHO 513 (I will not be on campus this semester)
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Reference Materials
- Numerous online resources, especially the World Wide Web Consortium (w3c.org).
- Visual Studio, .NET and ASP.NET (docs.microsoft.com)
- Slides and other material provided on the course web site. See links on home page as well.
- Books of your choice if you need additional resources.

Prerequisites
Students must be fully competent in an object oriented programming language (C++, C#, or Java preferred). Familiarity with web technologies such as HTML, scripting, XML, etc. is helpful. Programming experience with a graphical user environment, MFC, .NET, Java, X etc. is also very desirable.

Senior or graduate student status is required or permission.

Course Goals
- To explore and use cutting edge technology for enterprise software development in the modern distributed environment afforded by the World Wide Web (WWW).
- To understand the implementation of these technologies.
- Integrate basic knowledge of computer networks with software design.
- Learn modern rapid application development (RAD) techniques.
- Develop experience in working with current and developing standards, e.g., W3C
- Gain an understanding of the issues of interoperability, cross platform migration and backward compatibility.

Grading
- 40% Attendance
- 60% Programming assignments

Attendance
Attendance is an imperative for success in this course. Much of the knowledge is gained through in class examples and discussion. Attendance is required and constitutes 40 percent of your grade. You will receive 2 points for every class attended up to the 40 points. There are more than 20 possible classes allowing extra classes beyond the 20 necessary for a perfect attendance score. You will receive a 0.5 point bonus for every class attended beyond 20. Bonus points apply directly to your average and are not required for achieving a perfect 100 points for the course. They will instead be used to compensate for lost points elsewhere in the course.

Since the course will be entirely online via Zoom, attendance means joining the Zoom meeting or viewing the online video of the class within a period of time after the class. This allows LFA students in different time zones to be accommodated. Each class meeting will have a code that I will give out to be entered online for attendance credit.

Late Assignments
Late assignments will be accepted up to one week after the original due date with a 50% penalty. Assignments will not be accepted beyond one week late without extreme mitigating circumstances. Should a situation arise you must contact me in advance and I will decide if an extension is warranted. There is no free late policy in this course.

Software
Visual Studio 2019 Community should be obtained directly from Microsoft using the instructions I will provide. This is the REQUIRED software for the course. There is no charge for this software.

Cheating
Any form of copying of any part of another student’s program or other source is plagiarism and will result in a grade of F. Students may assist one another in understanding the concepts of the course. I urge cooperation among students in helping each other with the concepts only. The line is drawn at the program code. Program code must be an individual effort. In addition to failing the course I will
report all such academic misconduct to the student conduct review board. The easiest way to guarantee you are not crossing the line is to never look at anyone else’s code and do not show your code to anyone else.

Do not place code on public sites such as GitHub or other source controlsites. You do not want to be involved in contributing to plagiarism. **DO NOT SEEK OR LOOK AT ANY PRESENT OR FORMER STUDENT’S PROGRAMS ON SITES SUCH AS GITHUB.** If I find you have posted anything from this course on a public site I will regard it as plagiarism.

**Course Web Site**

This course has a web site. Lab assignments and other material that is relevant to this course will be posted there. The web site will also contain copies of all course overheads. These can be viewed and/or printed as you prefer. The course web site is located at [http://tomcat.bu.edu/ec512](http://tomcat.bu.edu/ec512). Visit this site on a regular basis.

Some parts of the site are password protected and the password will given out in class.

**Topics**

This is a tentative list of topics. Not all topics will necessarily be covered and some not listed may be added. This is not meant to be a week by week listing but is the general order we will cover the topics.

1. Downloading and installing tools and resources from the web.
2. Using Visual Studio 2019 for HTML authoring
3. HTML and CSS
4. Review of basic TCP/IP networking
5. HTTP, servers and other basic concepts
6. Legacy server side technologies, CGI, ISAPI etc.
7. .NET technology overview, ASP.NET.
8. ASP.NET technologies (Web Forms, MVC etc.
9. Important C# concepts (probably will be left up to you to learn the majority)
10. An introduction to the framework class library (brief).
11. Web forms using ASP.NET and C#
12. Web controls and user controls
13. Database access with ADO.NET and Visual Studio tools (including LINQ)
14. Use of SQL Server
15. Web applications, session state, dynamic content, etc.
16. AJAX
17. Authentication, login and roles and other security topics