

MET CS 701 -- Advanced Web Application Development

Instructor

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Course Description

The Advanced Web Application Development course concentrates primarily on building rich client web applications in the browser for desktop and mobile devices. The course is divided into various modules covering in depth the following technologies: Flex4 (Adobe), jQuery Mobile, and Silverlight (Microsoft). Along with the fundamentals underlying these technologies, several applications will be showcased as case studies. Students work with these technologies starting with simple applications and then examining real world complex applications. At the end of this course, students would have mastered the latest and widely used Web application development methodologies.

Course Prerequisites

Prior programming experience is required for this course, in particular, control structures and concepts of object oriented programming. **CS520** (*Information Structures*) background is sufficient for this class. Students who took only the **CS601** (*Web Application Development*) class but are not comfortable with programming will find this course overwhelming.

Course Grading Policy

The course grade will be based on active class participation(10%), programming assignments (30%), mid term exam (30%), and a term project (30%). Assignments are expected to be submitted by their respective due dates. Late submissions carry a penalty.

Course Web Site

<http://blackboard.bu.edu>

On the Web

- Adobe Flex ([What is Flex?](#))
- jQuery Mobile Framework([What is jQuery Mobile?](#))
- Silverlight ([What is Silverlight?](#))

References

- "Adobe Flex 4.5 Fundamentals: Training from the Source", by Labriola, M. and Tapper, J., Adobe Press, 2011. ISBN 13: 978-0-321-77712-6 (**Reference book**)
- "Beginning Silverlight 4 in C# (3rd ed.)", by Lair, R., APress, June 2010

ISBN-13: 1-4302-2988-9 (Reference book)

- Various online resources

Student Conduct Code

[Please review the academic conduct code](#)

Tentative Course Schedule

Module 1 (Introduction)	
-- Overview, Rich Internet Applications and Mobile Frameworks -- Flex & Flash Builder, jQuery, Silverlight	Week 1
Module 2 (Flex)	
-- Flex Programming elements -- MXML, Events, Data Access -- User Interface Components -- Application Design, Development, and Deployment -- Sample Applications	Weeks 2, 3, 4, 5
Module 3 (jQuery Mobile)	
-- jQuery Review -- User Interface -- Server Integration Techniques	Week 6, 7, 8
Mid Term Exam	
Module 4 (Silverlight)	
-- XAML and C# -- Layout, Dependency Properties -- Elements, Application Model, Events and event handling -- Shapes, geometries, transformations -- Animation, Sound, Video -- Data Binding, Multithreading, Networking -- Sample Applications	Weeks 10, 11, 12, 13
Project Presentations	