

MET CS 701 C1-- Advanced Web Application Development

Instructor

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Course Description

The Advanced Web Application Development course builds upon its predecessor (MET CS601) and concentrates primarily on building rich client web applications in the browser. The course is divided into various modules covering in depth the following technologies: Flash & Flex 4 (Adobe), AJAX (Asynchronous Javascript and XML), GWT (Google Web Toolkit), Silverlight 4 (Microsoft), and JavaFX . 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 Grading Policy

The course grade will be based on active class participation and quizzes (10%), programming assignments (30%), mid term exam (30%), and a final project and presentation (30%). Assignments and projects are expected to be submitted by their respective due dates. Late submission grades will be scaled with respect to the minimum grade of those submitted on time.

Course Web Site

All course materials will be posted using BU's WebCT site. This requires all students to have an account with the BU computer system. [Click here for instructions if you require an account.](#)

[Click here to enter WebCT site for this course.](#)

References

- *"Flash Builder 4 and Flex 4 Bible"*, by David Gassner, Wiley, 2010. ISBN 978-0-470-48895-9 (**Required book**)
- *"Pro Silverlight 4 in C#"*, by Matthew MacDonald, APress, 2010

ISBN-10: 1-4302-2979-9 / ISBN-13: 978-1-4302-2979-7 (**Required book**)

- *Various online resources*

Student Conduct Code

[Please review the academic conduct code](#)

Tentative Course Schedule

Module 1 (Introduction)	
-- Overview, Rich Internet Applications, Rich Client Frameworks -- Flash Builder, AJAX, Google Web Toolkit, Silverlight & WPF -- JavaFX	Week 1
Module 2 (Flash & Flex)	
-- Flex Programming elements -- MXML, ActionScript, Events, Data Access -- User Interface Components, Custom Components -- Application Design, Development, and Deployment -- Mobile Application Development with Flash Builder "Burrito"	Weeks 2, 3, 4
Module 3 (Google Web Toolkit)	
-- JavaScript & AJAX Review -- User Interface Library (Widgets and Panels) -- Server Integration Techniques -- Effectively using the Toolkit, Internationalization	Weeks 5, 6
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 8, 9, 10, 11
Module 5 (JavaFX)	
-- Script Programming elements -- Scene graphs -- User Interface Components -- Sample Applications	Week 12

Final Project Presentation