

CS646: Enterprise System Integration with Web Services

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Lectures 100% online through Pace Blackboard at <http://blackboard.pace.edu>

Office Hours Daily two hours online, Mondays 3PM – 8PM upon appointment at PLV or GC offices

Syllabus

Functions of XML and Web services for B2B system integration. XML, HTTP and SOAP. Integrating B2B services with Web services. Implementation and consumption of Web services on MS .NET and Java WebSphere platforms. Cross-platform system integration. Web service registries. Web service security.

Learning Objectives

After taking this course, the students should be able to

- 1) understand the basic concepts and role of XML for Web services
- 2) understand the fundamental concepts, advantages and architecture of Web services;
- 3) implement simple Web services on MS .NET and IBM WebSphere platforms;
- 4) find, connect to, and consume an existing Web service on either Java or MS .NET platforms;
- 5) generate WSDL file for a new Web service and broadcast it with Web service registries;
- 6) have working knowledge of IBM WebSphere and DB2 development environment;
- 7) have working knowledge of C# and MS .NET Framework;
- 8) have working knowledge of MS Visual Studio .NET;
- 9) have good understanding of key security issues for Web services;
- 10) understand the limitations of Web service architecture.

Textbooks

- *Developing J2EE Applications with IBM WebSphere Studio*, Howard Kushner, IBM Press 2004
- *Microsoft .NET XML Web Services: Step by Step*, Adam Freeman and Allen Jones, Microsoft Press 2003, ISBN 0-7356-1720-1 (you may want to visit <http://www.bookfinder4u.com/> to find a better price, or you can buy the textbook at Pace Online Bookstore at <http://direct.mbsbooks.com/Pace.htm>)

- *Instructor course material*

Weekly Course Assignments

Every week, read file WhatToDoWeekX.pdf under Course Documents|WeekX (X will be replaced by a digit) to see which tasks you need to finish for the week.

Projects

Every five students or so will make a group (you can check your group's members by clicking on "Communication|Group Pages|Group X"). Each group will propose, design, implement, and present a project that can demonstrate the strength of Web services. Your project could be similar to BookFinder4U at <http://www.bookfinder4u.com/>, which integrates existing public Web services to provide value-added new Web services. Each project should have a well-written project report including project objectives, design and implementation highlights, known bugs, build and deployment manual, and user manual.

Programming Assignments

There will be three equally weighted programming assignments on Web services.

Participating in Course Discussions

Every week the instructor will post one or more questions in Pace Blackboard Discussion Board (Discussion Board|WeekX). Each group will conduct discussion on the posted questions within its group's discussion board (Communication|Group Pages|GroupX|Group Discussion Board), and a representative of the group will post summaries of the discussion result as the group's joint responses to the instructor's questions in the course level discussion board (Discussion Board|WeekX) within one week from the posting of the questions. For each question, each student needs to respond at least once, and comment on another student's response once, in the group's discussion board. A grade will be assigned each week for each student based on the student's number and quality of participation in the discussion boards. All postings must be formal with proper syntax and style, with citations to textbook pages to back up the arguments.

Quizzes

There will be three one-hour quizzes on September 30, October 28, and November 25. The quizzes will cover fundamental concepts of the course.

Grading Scheme

Project	20%
Assignments	30% (10% each)
Discussion	20%
Quizzes	30% (10% each)