



Welcome to IS660G - Web Services. Instructor: Prof. K.M. Burns  
Course Text: Java Web Services Unleashed, Brunner, Robert J., et al, SAMS Publishing  
2002

[Administration](#)[Announcements](#)[Lectures](#)[Tools](#)

## Announcements

1/27. Quiz 1 (covering Chaps 1 thru 3) will be available on [Blackboard](#) from 2/3 thru 2/10. Please make sure you can access [Blackboard](#) with your user id and password prior to 2/3. Contact [DoIT@pace.edu](mailto:DoIT@pace.edu) if you cannot access Blackboard.

[Assignment 1](#) (covering Chaps 4 thru 6) is posted and is due on 2/24.

Note: Assignment 1 and Quiz 1 will comprise 20% of your final grade so do not get off to a slow start in the course; in other words, plan your time accordingly on a weekly basis, starting immediately.

---

1/5. This is a web-assisted course that requires regular online participation replacing some scheduled face-to-face, on-campus meetings. A student new to online learning at Pace will be required to complete an online orientation. Visit <http://online.pace.edu> or see page 41 of the Spring 2004 Class Schedule for further information. Class meets on campus: 1/27, 2/24, 3/30 & 5/11 (Tuesday's 06:00 - 08:40 PM ).

---

## Learning Outcomes

Last modified 01/27/2004 09:44:24

- You will learn about the standard Web services stack of XML, UDDI, WSDL and SOAP.
- You will experience the depth of the Java XML package, otherwise known as the JAX pack.
- You will see some real working examples of Web Services in action.

## Prof. Burns' Philosophy on Learning

2400 years ago, Confucius  
declared:

What I hear, I forget.  
What I see, I remember.  
What I do, I understand.

### *Translation*

When I hear, I forget.  
When I hear and see, I remember a little.  
When I hear, see and ask questions or discuss with someone else, I  
begin to understand  
When I hear, see, discuss, and do, I acquire skill and knowledge.  
When I teach another, I master.

## Description

A Web Service is programmable application logic accessible using standard Internet protocols. Web Services combine the best aspects of component-based development and the Web. Like components, Web Services represent black-box functionality that can be reused without worrying about how the service is implemented. Unlike current component technologies, Web Services are not accessed via object-model-specific protocols, such as DCOM, RMI, or IIOP. Instead, Web Services are accessed via ubiquitous Web protocols (ex: HTTP) and data formats (ex: XML).

The software industry is finally coming to terms with the fact that integrating software applications across multiple operating systems, programming languages, and hardware platforms is not something that can be solved by any one particular proprietary environment. Traditionally, the problem has been one of tight-coupling, where one application that calls a remote network is tied strongly to it by the function call it makes and the parameters it requests. In most systems before Web services, this is a fixed interface with little flexibility or adaptability to changing environments or needs.

Web services uses XML that can describe any and all data in a truly platform-independent manner for exchange across systems, thus moving towards loosely-coupled applications. Furthermore, Web services can function on a more abstract level that can reevaluate, modify or handle data types dynamically on demand. So, on a technical level, Web services can handle data much easier and allow software to communicate more freely.

On a higher conceptual level, we can look at Web services as units of work, each handling a specific functional task. One step above this, the tasks can be combined into business-oriented tasks to handle particular business operational tasks, and this in turn allows non-technical people to think of applications that can handle business issues together in a workflow of Web services applications. Thus, once the Web services are designed and built by technical people, business process architects can aggregate them into solving business level problems. To borrow a car engine analogy, a business process architect can think of putting together a whole car engine with the car frame, body, transmission, and other systems, rather than look at the many pieces within each engine. Furthermore, the dynamic platform means that the engine can work together with the transmission or parts from other car manufacturers.

What rises from this last aspect is that Web services are helping to bridge the gap between business people and technologists in an organization. Web services make it easier for business people to understand technical operations. Business people can describe events and activities and technologists can associate them with appropriate services.

With universally defined interfaces and well designed tasks, it also becomes easier to reuse these tasks and thus, the applications they represent. Reusability of application software means a better return on investment on software because it can produce more from the same resources. It allows business people to consider using an existing application in a new way or offering it to a partner in a new way, thus potentially increasing the business transactions between partners.

Therefore, the primary issues that Web services tries to tackle are the issues of data and application integration, and that of transforming technical functions into business-oriented computing tasks. These two facets allow businesses to communicate on a process or application level with their partners, while leaving dynamic room to adapt to new situations or work with different partners on demand.

## Grading Policy

Last modified 01/27/2004 09:45:19

There will be four homework assignments, two quizzes and one team project for students to work on during the course. The course will be graded according to the total grade points a student accumulated in the following proportion.

- 4 Graded Homework Assignments – 40%
- 2 Quizzes - 20%
- 1 Team project - 30%
- Student participation – 10%

Students must submit assignments on the date they are due. Assignments handed in anytime after their due date are considered late. In fairness to all students, late assignments will be penalized one point for each calendar day it is late. Under no circumstances will assignments be accepted after the assignment has been returned and discussed in class.

Student participation includes participation in both onsite and remote discussions (i.e. email, .discussion boards, chat, ect.). Student participation will also be evaluated in terms of peer assistance. Please do not take student participation for granted. I take it very seriously.

All quizzes are open-book and will likely all be online on [Blackboard](#). They will be allotted a time period to be available and taken.

Office hours are 1 hr prior to the start of class. I will also be available by appointment and you can contact me via email ([kburns@pace.edu](mailto:kburns@pace.edu)) to schedule.

## Prof. Burns' Philosophy on Learning

2400 years ago, Confucius declared:

What I hear, I forget.  
What I see, I remember.  
What I do, I understand.

### *Translation*

When I hear, I forget.  
When I hear and see, I remember a little.  
When I hear, see and ask questions or discuss with someone else, I begin to understand  
When I hear, see, discuss, and do, I acquire skill and knowledge.  
When I teach another, I master.

## Syllabus

Last modified 01/27/2004 10:37:38

**Course Text:** [Java Web Services Unleashed, Brunner, Robert J., et al, SAMS Publishing 2002.](#)

Week	Topic	Where	Readings	Assignments
27-Jan	Introduction	Onsite	Chaps. 1 & 2	
3-Feb		Remote	Chaps 3 & 4	
10-Feb		Remote	Chaps 5 & 6	Quiz 1 Due (Available Feb. 3 thru Feb 10 on Blackboard)
17-Feb		Remote		
24-Feb	Web Services Tools	Onsite	Chaps 7 & 8	Assignment 1 Due
2-Mar		Remote	Chaps 9 & 10	
9-Mar		Remote	Chap 11	
16-Mar	Spring Break			Quiz 2 Due (Available Mar. 9 thru Mar 16 on Blackboard)
23-Mar		Remote		
30-Mar	JAX Pack	Onsite	Chaps. 12 & 13	Assignment 2 and 3 Due
6-Apr	Passover			
13-Apr		Remote	Chaps 14 & 15	
20-Apr		Remote	Chap 16	Assignment 4 Due
27-Apr	Completing Web Services	Remote	Chap 17	
4-May		Remote	Chap 18	
11-May	Team Presentations	Onsite	Chap 19	Team Projects Due

"Onsite" means on the designate Tuesday at Pace (1 Martine Ave., White Plains) from 6:00PM to 8:40PM in room 430.

"Remote" means working on your own asynchronously unless otherwise designated (i.e. chat room). Please be attentive to email and refer to the announcements on our class website regularly.

**Distribution List**

Simon Chan [sc75888n@pace.edu ];  
Igor Draytsel [id03183n@pace.edu ];  
Ardian Haliti [ah11163n@pace.edu ];  
Prashant Karmarkar [pk76717w@pace.edu ];  
Michelle Kissel [mk50996w@pace.edu ];  
Lisa Lau [ll42504n@pace.edu ];  
Ian Loe [il85227w@pace.edu ];  
Jenny Lok [jl77062n@pace.edu ];  
Muhammad Nadeem [mh73195n@pace.edu ];  
Andrew Newsome [an53199w@pace.edu ];  
Joy Ojji [jo75918w@pace.edu ];  
Larry Perrone [lp01201p@pace.edu ];  
Michael Perrone [mp75213w@pace.edu ];  
Zheng Qin [zq06317n@pace.edu ];  
Rosa Quezada [rq92323w@pace.edu ];  
Dashawn Robinson [dr35741w@pace.edu ];  
Arvinder Singh [as17821w@pace.edu ];  
Piotr Szczepkowski [ps70997w@pace.edu ];  
Julian Tsisin [jt66008n@pace.edu ];  
Smitha Venkatesh [sv78946w@pace.edu ];  
Patricia Zamorski [pz67938n@pace.edu ]

## Assignment 1 - Due in class on Feb 24<sup>th</sup>

Last modified 01/27/2004 10:45:53

1. Install and setup Apache Tomcat (see Chap 4)
2. Download and setup Apache AXIS (see Chap 5)
3. Download and setup Apache Xerces (see Chap 5)
4. Run examples locally in Chaps 5 & 6
5. Connect to Pace website via user accounts and run examples on server
6. Printout results and submit to me on Feb 24th

Note: I will also look on the Pace server to ensure you've uploaded your results.