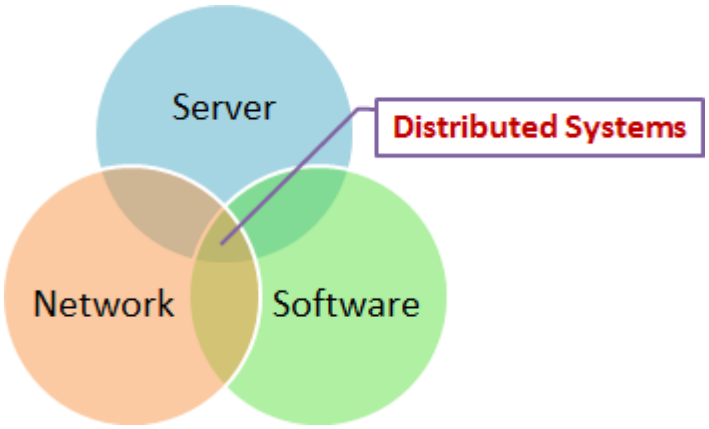
IS 651 Distributed Systems

Course Description



This course covers distributed computing architectures (emphasizing service-oriented architectures) and web services. You are assumed to have taken IS650 or equivalent, have an elementary knowledge of web technology, and have taken elementary object-oriented programming. A major focus of the course is on doing technical, hands-on exercises. We learn XML basics and XML Web Services in this course. We also take a technical look at server-side frameworks for web services. The first half of the course concentrates on architectures and the second half on implementation details.

The schedule shows all the book chapter, slide, exercise and homework. Each slides link consists of the lecture slides for that chapter/week. The exercise and homework links show a page with exercise, homework and references. The exercises are usually related to the homework. The main difference between exercise and homework is that you can ask help for exercise but homework should be done by yourself. You should read the corresponding chapter before coming to class. Exercises and homework are subject to change prior to the class, so if you save files, recheck the web each week. We will standardize on the Chrome and Firefox browsers.

No cell phone use is allowed in class. You may not check your phone or even have it visible. It must be *put away and off or on vibrate during class*. No eating in class. Please be on time for class. Finally, never use a computer for non-classroom tasks during class lecture.

Contact Information

- **Instructor:** Jianwu Wang, PhD
- **Instructor Office:** ITE 423, UMBC 1000 Hilltop Circle, Baltimore, Maryland, 21250
- **Instructor Office Hours:** Friday 4:30-6:00pm
- **Grader:** Rishi Sankineni
- **Grader Office Hours:** By appointment only
- **Contact:** email for personal issues, Slack for course content issues

Textbook

- Title: Distributed Systems: Architecture and Implementation
  Author: Kip Canfield, Jianwu Wang
- Table of contents for textbook

Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism,

and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. See more at Academic Policies/Student Rights and Responsibilities at UMBC Gradudate School.

Grading

- Discussion - 10*0.5=5 points for 5%
- Case study - 10 points for 10%
- Homework - 10*3.5=35 points for 35%
- 3 *non-comprehensive* exams - 15+20+15=50 points for 50%

Grades are curved with the average total points being middle B, but the curve never exceeds a standard grading scale. This means, for example, that one always gets an A(-) for >=90%, B(+/-) for >=80%, etc. Plus/minus grading is used. Exams are all 75 minutes only.

Schedule

Note: Unless otherwise stated, homework is due on following *Monday*. Grader will grade them the next morning.

Week	Class Date	Topic	Book Chapters	Slides	Homework and Notes
1	01/31	Introduction	Chapter1	Chapter1	ex0 (nothing due)
2	02/07	Evolution of IT Architectures	Chapter2	Chapter2	ex1 and hw1
3	02/14	Web Technologies	Chapter3		ex2 and hw2
4	02/21	Exam1	Joy		nothing due
5	02/28	SOAP	Chapter4		ex3 and hw3
6	03/07	WSDL	Chapter5		nothing due
7	03/14	WS-*	Chapter6		ex4 and hw4
X	03/21	No Class	Spring Break		nothing due
8	03/28	REST Web Services	Chapter7		ex5 and hw5
9	04/04	Distributed System Basics	Chapter8		ex6 and hw6
10	04/11	Exam2	Joy		nothing due
11	04/18	Web Frameworks	Chapter9		ex7 and hw7
12	04/25	SOAP revisited	Chapter10		ex8 and hw8
13	05/02	REST revisited	Chapter11		ex9 and hw9
14	05/09	Semantic Web and Cloud Computing	Chapter12, 13		ex10 and hw10
15	05/16	Exam3	Joy		nothing due