# San José State University
## College of Engineering,
## Department of Computer Engineering
## CMPE 273-01, Enterprise Distributed Systems
## Spring 2018

**Course and Contact Information**

| | |
|---|---|
| **Instructor**: | Simon Shim, Ph.D. |
| **Office Location**: | ENGR 269 |
| **Telephone**: | (408) (924-7853) |
| **Email**: | simon.shim@sjsu.edu |
| **Office Hours**: | T 3:00pm – 4:30pm |
| **Class Days/Time**: | T 4:30pm – 7:15pm |
| **Classroom**: | WSQ 109 |
| **Prerequisites**: | Java programming, CMPE 272 or instructor consent. |

**Course Format**

**Course Website**

Copies of the course materials such as the syllabus, major assignment handouts, etc. may be found on course home page in Canvas Leaning Management System course login website at http://sjsu.instructure.com. You are responsible for regularly checking with the messaging system through MySJSU at http://my.sjsu.edu (or other communication system as indicated by the instructor) to learn of any updates.

**Course Description (Required)**

Introduction to application protocols for large scale distributed systems including object request brokers, asynchronous messaging, and Web services. Lab is based on using protocols to build distributed systems

**Course Learning Outcomes (CLO) (Required)**

| | Description |
|---|---|
| **CLO 1** | Understand the distributed programming architecture |
| **CLO 2** | Understand techniques involved in programming Web Services |
| **CLO 3** | Understand techniques involved in programming Java Messaging Services |
| **CLO 4** | Apply distributed communication to distributed software development |
| **CLO 5** | Apply critical thinking to the solution of software development problems |

Upon successful completion of this course, students will be able to:

**Course Learning Objectives Support Program Outcomes**

|  | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 |
|---|---|---|---|---|---|---|
| **CLO 1** | X | X |  |  |  |  |
| **CLO 2** | X | X |  |  |  |  |
| **CLO 3** | X | X |  |  |  |  |
| **CLO 4** |  | X |  |  |  |  |
| **CLO 5** |  | X |  |  |  |  |

|  | **Description** |
|---|---|
| **PO 1** | Be able to demonstrate an understanding of advanced knowledge of the practice of software engineering, from vision to analysis, design, validation and deployment. |
| **PO 2** | Be able to tackle complex engineering problems and tasks, using contemporary engineering principles, methodologies and tools. |
| **PO 3** | Be able to demonstrate leadership and the ability to participate in teamwork in an environment with different disciplines of engineering, science and business. |
| **PO 4** | Be aware of ethical, economic and environmental implications of their work, as appropriate. |
| **PO 5** | Be able to advance successfully in the engineering profession, and sustain a process of life-long learning in engineer or other professional areas. |
| **PO 6** | Be able to communicate effectively, in both oral and written forms. |

## Required Texts/Readings (Required)

**Textbook**

**Recommended**

Client/Server Programming with Java and CORBA, Second Edition
by Orfali and Harkey (Wiley, 1998) (Electronic version available)

Java Messaging by Eric Bruno (Charles River Media, 2005)

**Other Readings**

**Lecture notes and other reading materials**.
**Pure CORBA**, by Fintan Bolton (Sams, 2002)
**Java RMI**, by William Grosso (O'Reilly, 2001)
**Java Generics and Collections**, by Maurice Naftalin (O'Reilly, 2006)

**Course Requirements and Assignments (Required)**

**Assignment**: Assignments will be given in the form of survey, programming, analysis of tools/techniques, etc.

**Quizzes**: Quizzes will be given to students during lectures. Questions may include explanation to terms, comparison between different design and technologies, etc.

**Exams**: One final exam for this course. Both exams consist of multiple choices questions and paragraph questions. **There will be no make-up tests.**

**Labs**: there will be three programming assignments

**Project**: Students will work in groups on a semester-long project. The purpose of the project is encouraging you to explore the area of database systems, strengthen your understanding, and bring your new findings to the class. You will be required to give a presentation and submit project documents.

**Deadlines**: Homework and projects are due before class. That means that I will collect all the hardcopies at the beginning of class. Late assignments incur an automatic penalty of 5%, plus 2% per hour for each hour till 9 PM. You will lose a 15% of points for the first day and after the first day, 10% of points for each day. **All late homework MUST be time stamped in order to receive any credit.** Exceptions will be granted only if arranged prior to the due date or a documented illness intervenes.

**Final Examination or Evaluation**

*There is one final exam at the scheduled time*

**Grading Information (Required)**

Grades will be assigned on a curve. Your final grade will be based on assignments, project, exams, and class participation. These will be weighted as follows.

| | |
|---|---|
| Quizzes and assignments | 15% |
| Labs | 35% |
| Class projects | 25% |
| Final | 25% |

- The instructor reserves the right to change the percentages listed above by ±5%.

**Grade     Overall Score**

A+  95-100
A    90-94
B+  85-89
B    80-84
C+  75-79
C    70-74
D+  65-69
D    60-64
F    0-59

**Classroom Protocol**

*You are expected to attend all classes and complete all assigned programming Lab and projects through the course.*

**University Policies (Required)**

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/"

# CMPE 273, Enterprise Distributed Systems

*Please note that this schedule is subject to change. Any changes will be notified 2 weeks in advance.*

**Course Schedule**

| Week | Date | Topics, Readings, Assignments, Deadlines |
|------|------|------------------------------------------|
| 1 | 1/30 | Introduction |
| 2 | 2/6 | Introduction, FTP/ORB |
| 3 | 2/13 | REST/Mean Stack |
| 4 | 2/20 | REST/Mean Stack |
| 5 | 2/27 | REST/Mean Stack |
| 6 | 3/6 | REST/Mean Stack |
| 7 | 3/13 | REST/Mean Stack |
| 8 | 3/20 | AMQP/JMS |
| 9 | 3/27 | Spring Recess |
| 10 | 4/3 | AMQP/JMS |
| 11 | 4/10 | AMQP/JMS |
| 12 | 4/17 | Web Services |
| 13 | 4/24 | Web Services |
| 14 | 5/1 | Project Presentation |
| 15 | 5/8 | Project Presentation |
| Final Exam | 5/17 | Thursday, May 17 14:45 – 17:00 |