CS 2550 Advanced Java Programming

3.0 CREDIT HOURS SALT LAKE COMMUNITY COLLEGE

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SALT LAKE COMMUNITY COLLEGE

Text
JAVA How to Program, 9/e, Deitel & Deitel, ©2010 Pearson Education, Inc.; ISBN 0-13-257566-3

Prerequisite
CS 2420

Description
This Programming course focuses on advanced Java topics, including: Swing/AWT, Threading, RMI, Servlets, Socket programming, JDBC, Java 2D, Java Beans, and Streams. Students will understand Java's role in Internet programming through a Web project.

Methodology
Lecture, discussion, demonstration, and hands-on laboratory experience. Homework and programming projects, both individual and small group, require the implementation of concepts demonstrated in class. Web project – students will create a web application to be deployed on a Java application server that utilizes servlets and JDBC.

Classroom

- **Lecture/Lab**
  - **Section 001**: MW, 05:30pm - 06:50pm, SI 091

NOTE: You must be prepared to spend a significant amount of time, over and above the scheduled class periods, working on homework assignments and programming projects.

Virtual Campus

Canvas Virtual Campus is where all your assignments will be posted, reviewed, and turned in, all electronically. Access Virtual Campus by logging into MyPage and logging in with your MyPage user name and password.

- **CS2550-001** Canvas Virtual Campus

Grading

Grading Scale	A 94% - 100%	A- 90% - 93%
B+ 87% - 89%	B 84% - 86%	B- 80% - 83%
C+ 77% - 79%	C 74% - 76%	C- 70% - 73%
D+ 67% - 89%	D 64% - 66%	D- 60% - 63%
E 59% and below		

- **Homework (50%)**: Homework is assigned from end of chapter exercises. The exercises, due dates and turn-in of assignments are managed through Virtual Campus. Late work may be submitted up to one week (7 calendar days) following the due date, but a **50% penalty** will be assessed. Homework is not accepted more than one week after the due date.
- **Quizzes | Exams (40%)**: Unannounced quizzes covering the weekly reading assignment are given in class and cannot be made up.

  Two midterm exams and one final exam are given. If you will not be present for a scheduled exam, you must notify me ahead of time so that arrangements can be made for you to take the exam with Student Testing Services. Without prior arrangements you may still take the exam, but a **20% penalty** will be assessed
- **Attendance/Participation (10%)**: Teamwork (plays nice in the sandbox), etc.
- **Programming Projects**
  - **Individual Assignments/Projects (40%)** are assigned in class and graded according to the criteria outlined in the project specification. Each assignment/ project is worth 100 points. 10 points are deducted for each specification not met. Additional points may be deducted if the utility, design, and documentation criteria are not met. Late projects may be turned in up to one week (7 calendar days) after the due date, but a **50 point penalty** will be assessed. Projects are not accepted more than one week after the due date.
  - **Team Project (10%)**: The team programming project encompasses all the major concepts covered in the course. The project is developed in phases throughout the duration of the course. Each team turns in a single copy of the project and all team members receive the same score.

Additions

Additions will be made from a waiting list on a first-in, first-out basis. No additions will be allowed after the second week of class.

Withdrawal Policy

You are responsible for dropping or withdrawing from classes you are not attending or do not intend to complete in the current semester. You can drop/withdraw by the deadline dates published in the
Academic Calendar for the current semester. If you are receiving Financial Aid or Veteran benefits, please notify the appropriate office when dropping classes. Withdrawals will be shown as a "W" on the transcript and are not calculated as part of the grade-point average (GPA). There are no refunds for withdrawn classes. If you stop attending classes without dropping/withdrawing by the published deadline, you will receive an "E" grade which is calculated in your GPA.

Work Ethic - Academic Dishonesty

You are expected to complete your work on your own. You will be given everything you need to complete each assignment. I have no objection to your interacting together in the lab, in fact I encourage it. However, you are expected to turn in original work.

Academic dishonesty, including cheating, plagiarism, misrepresentation or collaboration, will not be tolerated. On the first offense, be it confirmed or merely suspected, I will notify you and the CS Department Chair in writing. I will meet with you to determine the circumstances and facts related to the alleged misconduct and decide on a course of action. If you do not agree with the action taken, you may appeal the decision to the Department Chair to continue the due process. If a second offense occurs, you will receive a E for the course and meet with the CS Department Chair to discuss your future at SLCC. For additional information review the Student Code of Conduct.

Click here to review more detailed department-wide administrative policies.

ADA

Students with medical, psychological, learning or other disabilities desiring accommodations or services under ADA, must contact the Disability Resource Center (DRC). The DRC determines eligibility for and authorizes the provision of these accommodations and services for the college. Please contact the DRC at the Student Center, Suite 244, Redwood Campus, 4600 So. Redwood Rd, 84130. Phone: 801.957.4659, TTY: 801.957.4646, FAX: 801.957.4947 or Email: linda.bennett@slcc.edu

Classroom Courtesy

Electronic devices that may disrupt class (cell phones, pagers, etc.) must be turned off or placed in silent mode. Checking email, surfing the net, playing games and/or other non-class related activities are also considered distractions and are not welcome.

Class Schedule

Week	Topic	Reference
1 **1/14**	Course Orientation JavaBeans Concepts Remote Method Invocation (RMI) – Java distributed computing – http://java.sun.com/javase/technologies/core/basic/rmi/whitepaper/index.jsp Java API Documentation, JDK, and IDEs	Online Research Java – Appendix E
1 **1/16**	UML: Use Case and Activity Diagrams (Review) Determine Basis for Web Design project Generating Java code from class diagrams; javadoc	UML – Ch. 2, 4 Online review Java – Appendix M
2 **1/23**	Classes, Objects, and Methods (Review) Inheritance, Polymorphism (Review) UML: Class, Collaboration & Sequence Diagrams (Review) Packages and JAR files	Java – Ch. 6, 8 Java – Ch. 9, 10 UML – Ch. 5 – 9
2 **1/28**	Exception Handling (Review) Using the Debugger, JUnit Testing (JUnit.org) Arrays, Strings and Files (Review)	Java – Ch. 11 Java – App. F Java – Ch. 7, 16, 17
3 **1/30 – 2/4**	GUI Components (Review) Data Structures, Recursion, Searching and Sorting, & Generics (Review) UML: Statechart and Implementation Diagrams (Review)	Java – Ch. 14, 25 Java – Ch. 18 – 22 UML – Ch. 10, 11
4 **2/6 – 2/11**		
5 **2/13 – 2/20**	Midterm 1 Review **Midterm Exam 1**	 **All Previous**
6 **2/25 – 2/27**	Graphics and Java 2D & Java Applets Building reusable self-contained components using JavaBeans	Java – Ch. 15, 23 NetBeans
7 **3/4 – 3/6**	Multimedia, Multithreading, and Networking	Java – Ch. 24, 26, 27
8 **3/11 – 3/13**	JDBC, JavaServer Web Applications, and Web Services	Java – Ch. 28 – 31
9 **3/25 – 3/27**		
10 **4/1 – 4/3**	Midterm 2 Review **Midterm Exam 2**	 **All Previous**
11 **4/8 – 4/10**		
12 **4/15 – 4/17**	Web Application Project	Group Study
13 **4/22 – 4/24**	Web Application Project	Group Study
14 **4/29 – 5/1**	Web Application Project	Group Presentations
5/8	**Final Exam 5:50 – 7:50 PM SI 091**	

JavaTools

Downloads

- Java SE Development Kit (JDK 7 Update 11 or above) - includes the Java Runtime Environment (JRE) and command-line development tools that are useful for developing applets and applications.
- Netbeans 7.2 - suggest "full" download and select API Documentation plugin.

Tutorials

- The Java Tutorials - from Sun Microsystems
- Java Platform - SE 7 API Specification