General Education Objectives:
After successful completion of this course, students will enhance their skills of programming basics especially program control structures and should be able to understand concepts of object-oriented principles and their implementations in Java. Students will be provided with computational problem solving techniques based on object-oriented programming using Java, including program design with objects and classes, inheritance and polymorphisms, encapsulation and information hiding, exceptions and handling, stream I/O and file processing, interface design and implementation using AWT and Swing, and event and event listeners. The basic data structures such as array lists, stack, queue, and linked lists as well as related algorithms will be briefly introduced to prepare for the future classes such as data structures and algorithms.

Course Description:
The principle concepts of object-oriented programming in Java will be discussed. Students will be provided with a thorough conceptual grounding in object-oriented programming techniques and strategies, program design with objects and classes, inheritance and polymorphism, encapsulation and information hiding, exception handling, file processing, interface design, event-driven programming, and the object-oriented paradigm. The basic data structures such as array lists and linked lists, and abstract data structures stack and queue will be described, developed, and analyzed. Generics and Java collections framework will also be introduced. Three hours of lecture and two hours of activity per week will be offered.


Course Objectives – Student Learning Outcomes:
By the end of this course, the students will be able to demonstrate:
- understanding and use of object-oriented programming concepts including classes, objects, inheritance, polymorphisms, and information hiding
- familiarity of program design with classes, methods, and objects in Java
- ability to identify classes and their attributes and methods from the problem description
- mastery of object-oriented programming skills and strategies such as class hierarchy and class diagrams
- understanding and use of exceptions and exception handling
- understanding and use of stream I/O and random access file processing
- capability of designing and implementing user interfaces in Java
- mastery of event-driven programming and developing event listeners
- familiarity of abstract data structures and implementations
- understanding of generics and Java collection framework

Course Requirement:
Tests: There will be TWO scheduled in-class midterm tests and ONE final test. Tests will cover information contained in the text as well as information presented in lecture.

Quizzes: TEN in-class pop quizzes will be randomly given at the beginning of classes. Pop quizzes will be very short and simple, and each usually takes 3 to 5 minutes to write. The pop quizzes will be graded as half for participation and half for question answering. You are encouraged to do all exercises of each chapter of the textbook as your homework, although they will not be collected or graded. The quiz questions may or may not be from these exercises.

Projects: Five individual programming projects will be scheduled throughout the semester. You can work on these projects anytime and anywhere, unless otherwise instructed. Discussion with other students and the instructor is encouraged, but copying from others’ work will not be acceptable.
Teaching Strategy:
Pair-programming:
This course will be based on pair-programming, which means that two students will be paired as a study group during the class and laboratory. All laboratory assignments will be pair-programming projects.

Flipped and project-based classes:
For each topic, we will have compressed lecture to focus on the concepts and will have more time focus on hands-on examples. Students are required to review the course notes that are posted on the blackboard prior to the classes and discussed during the classes as well as related textbook sections. Pop quizzes will be given in terms of these materials to test your previews and post-reviews.

Study advices:
- **Practice, practice, and practice**, this is my strong advice to all my students in this class to be successful. Since programming/coding is a skill, like all other kinds of skills such as swimming, skating, skiing, practice is the most important approach to improve and enhance the mastery of skills. Learning by doing also means practice.
- Team learning helps students learn from each other. Peer or peer led discussions clarify your understanding about the basic concepts and problem solving approaches.
- Be well-prepared when you come to the classroom or lab room. Preview and post-review the materials that the instructor provides.
- Complete all assignments: reading and programming, homework and projects. Check your work with sample solutions posted by the instructor to find out your strength and weakness.
- Don't be shy. Communicate with the instructor in a timely manner. Keep in mind, the instructor is always ready to help you.

Grading Policy:
The following weights will be applied to calculate your final score:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>2 Midterm Exams:</td>
<td>30%, 15% each</td>
</tr>
<tr>
<td>15 Pop Quizzes:</td>
<td>15%</td>
</tr>
<tr>
<td>5 Programming Projects:</td>
<td>15%, 3% each</td>
</tr>
<tr>
<td>1 Final exam:</td>
<td>20%</td>
</tr>
<tr>
<td>CSC121A Labs:</td>
<td>20%</td>
</tr>
</tbody>
</table>

The score will be mapped to your course one-letter grade as follows

$$
[94, 100] \rightarrow A \quad [90, 94) \rightarrow A-
[85, 90) \rightarrow B+ \quad [80, 85) \rightarrow B \quad [75, 80) \rightarrow B-
[70, 75) \rightarrow C+ \quad [65, 70) \rightarrow C \quad [60, 65) \rightarrow C-
[55, 60) \rightarrow D+ \quad [50, 55) \rightarrow D \quad [0, 50) \rightarrow F
$$

Tentative Class Schedule (subject to change):
We will do our best to adhere to the following schedule. If any changes are necessary, you will be notified in class and by emails. You are always expected and encouraged to have read the appropriate chapters/sections of the text before coming to class.

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter/Topic</th>
<th>Programming Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chapter 1-8: Java Programming Review</td>
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</tr>
<tr>
<td>2</td>
<td>Chapter 9: Objects and Classes I</td>
<td>Wk 2: PP1</td>
</tr>
<tr>
<td>2-4</td>
<td>Chapter 10: Objects and Classes II</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>Chapter 11: Designing with Classes and Objects</td>
<td>Wk 4: PP2</td>
</tr>
<tr>
<td>4-5</td>
<td>Chapter 12: Inheritance</td>
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</tr>
<tr>
<td>5-6</td>
<td>Chapter 13: Polymorphism</td>
<td>Wk 7: PP3</td>
</tr>
<tr>
<td>7</td>
<td><strong>Review and Midterm Exam 1</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Chapter 14: Wrappers and Exceptions</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Chapter 15: Stream I/O and Random Access Files</td>
<td>Wk 9: PP4</td>
</tr>
<tr>
<td>10</td>
<td>Chapter 18: AWT and Swing</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Chapter 19: Event-Driven Programming</td>
<td>Wk 11: PP5</td>
</tr>
</tbody>
</table>
AMERICANS WITH DISABILITIES ACT
CSUDH adheres to all applicable federal, state, and local laws, regulations, and guidelines, with respect to providing reasonable accommodations for students with temporary and permanent disabilities. If you have a disability that may adversely affect your work in this class, I encourage you to register with Disabled Student Services (DSS) and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the DSS. For information call (310) 243-3660 or to use the Telecommunications Device for the Deaf, call (310) 243-2028 or go to:  http://www4.csudh.edu/dss/

COMPUTER INFORMATION LITERACY EXPECTATIONS
It is expected that students will:
1. Use Microsoft Word for word processing unless otherwise approved by the instructor;
2. Be familiar with using email as a communication tool and check your official campus email account at least every other day;
3. Be able to access websites and online course materials which may require Flash and other plug-ins;
4. Use the library databases to find articles, journals, books, databases and other materials;
5. Be able to create an effective PowerPoint presentation;
6. Be able to record audio (ideally video) to share with the instructor via the web; and
7. Have regular access to a computer and internet access for the term of this course.

ACADEMIC INTEGRITY
Academic integrity is of central importance in this and every other course at CSUDH. You are obliged to consult the appropriate sections of the University Catalog and obey all rules and regulations imposed by the University relevant to its lawful missions, processes, and functions. All work turned in by a student for a grade must be the students' own work. Plagiarism and cheating (e.g. stealing or copying the work of others and turning it in as your own) will not be tolerated, and will be dealt with according to University policy. The consequences for being caught plagiarizing or cheating range from a minimum of a zero grade for the work you plagiarized or cheated on, to being dropped from the course.

BEHAVIORAL STANDARDS
Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. The instructor may require a student responsible for disruptive behavior to leave class pending discussion and resolution of the problem and may also report a disruptive student to the Student Affairs Office (WH A-410, 310-243-3784) for disciplinary action.

RESOURCES FOR STUDENTS IN NEED
Students occasionally have financial difficulties. There are a number of resources on campus that may be available to you if you find yourself in need of food, shelter, or other help. Food pantries are located in LSU 121 and SCC 148. You can find these and other resources through Toro Food Pantry on ToroLink and here: http://www4.csudh.edu/student-services/food-shelter-resources/index