USF Sarasota-Manatee College of Hospitality and Technology Leadership
COP 3259 – 4 Credit Hours
CRN 22113 Section 592
Comprehensive Java
Spring 2014, USF Sarasota-Manatee

Instructor: Patricia Roy
E-Mail: PatriciaRoy@mail.usf.edu
Office: online
Office Telephone: none
Office Hours: by appointment

Classroom: Virtual class via Blackboard Collaborate
Time: Wednesday, 3pm

PREREQUISITES: COP 2250

COURSE DESCRIPTION: The focus of this course is the comprehensive Java 7 SE specification, which defines the advanced Java language features and capabilities.

COURSE TOPICS:
This course will cover the following content areas:
1. Using the Java programming language to implement selections and loops
2. Object-oriented programming
3. Java collection classes
4. Graphical user interface applications
5. Exceptions
6. Recursion
7. Writing a Java program utilizing networking protocols
8. Connect to a database and manipulate records using a Java program
9. Localization for different languages

COURSE OBJECTIVES: The course covers computer programming using the Java programming language. It is a comprehensive course covering the following topics: selections, loops, methods, arrays, classes, strings, inheritance, polymorphism, GUI, graphics, exceptions, abstract classes, event-driven programming, recursion, generics, Java collection classes, networking, database programming, and localization.

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MISSION STATEMENT: The mission of the Information Technology Program is to provide high quality educational opportunities for students interested in pursuing careers in the broad range of fields that support our computer/information-based society and economy. Additionally, the goal is to utilize the resources of the program to provide service to society; and to emphasize to students the need for lifelong learning, to have ethical conduct, and an understanding of the diverse social context in which Information Technology is practiced.

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAM LEARNING OUTCOMES (PLOs):
1. Demonstrate technical knowledge and skill sets (computational and analytic) needed for success in careers related to Information Technology.
2. Demonstrate an understanding of professional ethics in the development and application of Information Technology.
3. Design and develop computer processes and systems of advanced complexity.
4. Assess the potential value of new technologies and see possibly beneficial applications.
5. Conduct computer research, organize a structured presentation, and deliver it in a way that communicates to novice users as well as computer experts.

COURSE STUDENT LEARNING OUTCOMES:
Upon completion of this course, students will be able to:
1. Use selection and iteration statements in a Java program
2. Implement arrays in Java programs
3. Define and use new classes
4. Write Java programs that use inheritance and polymorphism
5. Construct event-driven programs
6. Handle exceptions when they occur during execution
7. Demonstrate using Java collection classes
8. Write programs using graphical user interface (GUI) components
9. Develop recursive methods
10. Use generics classes and interfaces
11. Create client and server networking programs
12. Use a Java program to connect to a database
13. Develop international applications using localization

TEXT AND MATERIALS
A. Required Text:

GRADING, EVALUATION AND ATTENDANCE POLICIES:
Synchronous class attendance is optional. Nevertheless, students are responsible for all of the material discussed in class. If you cannot attend class synchronously, then you must view the recording of the class session in a timely manner. Note that the course moves through the material at a rapid pace, and each topic builds on the ones that preceded it.

Student performance will be evaluated based on weekly programming assignments and a final project submitted to the Instructor via Canvas.

Each exercise will be graded out of a maximum value of ten (10) points. The final grade will be based on the total score of the grades (normalized to a percentage).

A grade will be determined based on the total of possible points earned, as follows: A 90-100; B 80-89; C 70-79; D 60-69; F 0-59.

Extra Credit
There will be no extra credit.

Incomplete Grade
An Incomplete grade is reserved for those with good reason for having missed a small amount
of work, and must be agreed by the student and instructor during the course as circumstances require. Otherwise, exams not taken or assignments not turned in will receive a zero grade and will be counted in the final grade accordingly. **Please note that it is the student’s responsibility to ensure that work is completed before the end of the following semester and the Incomplete changed to a regular grade. If this is not done before the end of the following semester, the Incomplete automatically becomes an F.** A grade of I (incomplete) will only be given in extreme circumstances with documented proof for this grade. A student must have a grade of 70% or better for an incomplete.

**Attendance Policy**

CLASS ATTENDANCE IS OPTIONAL. Attendance is automatically recorded by Blackboard Collaborate. Due to the highly interactive nature of the course and its subject matter, students are strongly encouraged to attend the live sessions. Material covered in class will not necessarily be contained in the textbook. Falling behind in assignments will affect students’ grades. Students are responsible for material covered in class, any announcements, schedule changes, etc. Absenteeism is not an excuse for late work or missed exams unless approval from your Instructor is obtained in advance. Sessions are recorded and will be made available to students after the class.

The last day to drop a course with a grade of “W” is March 22, 2014. There will be no refund and no academic penalty.
USFSM Policies

A. **Academic Dishonesty**: The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the catalog, [USFSM Undergraduate Catalog](#) or [USFSM Graduate Catalog](#), the USF System Academic Integrity of Students, and the [USF System Student Code of Conduct](#).

B. **Academic Disruption**: The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the catalog: [USFSM Undergraduate Catalog](#) or [USFSM Graduate Catalog](#), USF System Academic Integrity of Students, and the [USF System Student Code of Conduct](#).

C. **Contingency Plans**: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: CANVAS, Blackboard Collaborate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor CANVAS site for each class for course specific communication, and the main USFSM and College websites, emails, and [MoBull](#) messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the [Safety Preparedness Website](#) for further information.

D. **Disabilities Accommodation**: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714, disabilityservices@sar.usf.edu; [http://www.usfsm.edu/students/disability](http://www.usfsm.edu/students/disability).

E. **Fire Alarm Instructions**: At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See [Emergency Evacuation Procedures](#).

F. **Religious Observances**: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

G. **Web Portal Information**: Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and CANVAS course information via that address.

**GENERAL INSTRUCTION FOR STUDENTS**
Students are not permitted to take notes or tape lectures for the purpose of sale. This includes Blackboard Collaborate recordings.

Microsoft Office may be used to supplement this course. The online course tools package, which may be accessed from campus computer labs and via the Internet at https://my.usf.edu, will be used to enhance the course. Internet access and a reasonable up-to-date web browser are required. Except for response speed, there should be no difference in functionality between accessing from a lab and from home. Any exceptions to this will be announced as they become apparent.

**NOTE:**
The instructor reserves the right to make adjustments to this syllabus as necessary.
**COURSE SCHEDULE:** Please note this is a tentative schedule – some shifting could occur as we progress into the semester.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Assignment Due</th>
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| Week 1  | Class Introductions  
Syllabus Review  
Readings:  
Chapter 1 Introduction to Computers, Programs, and Java  
Chapter 2 Elementary Programming  
Chapter 3 Selections |  |
| Week 2  | Readings:  
Chapter 4 Loops  
Chapter 5 Methods | 2.3, page 75  
3.11, pages 123 - 124 |
| Week 3  | Readings:  
Chapter 6 Single-Dimensional Arrays  
Chapter 7 Multidimensional Arrays | 4.1, page 167  
4.7, page 168  
5.5, page 21 |
| Week 4  | Readings:  
Chapter 8 Objects and Classes  
Chapter 9 Strings | 6.5, page 256  
7.5, page 282 |
| Week 5  | Readings:  
Chapter 10 Thinking in Objects  
Chapter 11 Inheritance and Polymorphism | 8.7, page 331  
9.3, page 362 |
| Week 6  | Readings:  
Chapter 12 GUI Basics  
Chapter 13 Graphics | 10.3, page 400  
11.1, page 442 |
| Week 7  | Readings:  
Chapter 14 Exception Handling and Text I/O  
Chapter 15 Abstract Classes and Interfaces | 12.1, page 476  
13.7, page 510 |
| Week 8  | Readings:  
Chapter 16 Event-Driven Programming  
Chapter 17 GUI Components | 14.3, page 554  
14.9, page 556  
15.7, page 593 |
| Week 9  | Readings:  
Chapter 18 Applets and Multimedia  
Chapter 19 Binary I/O | 16.5, page 631  
17.3, page 664 |
| Week 10 | Readings:  
Chapter 20 Recursion  
Chapter 21 Generics | 18.19, page 702  
19.5, page 734 |
| Week 11 | Readings:  
Chapter 22 Lists, Stacks, Queues, and Priority Queues  
Chapter 23 Sets and Maps | 20.9, page 761  
21.5, page 790 |
| Week 12 | Readings:  
Chapter 25 Sorting | 22.1, page 823  
23.1, page 850 |
| Week 13 | Readings:  
| Chapter 27 Binary Search Trees  
| Chapter 28 Hashing  
| 25.11, page 922  
| 26.1, page 957  
| Week 14 | Readings:  
| Chapter 32 Multithreading and Parallel Programming  
| Chapter 33 Networking  
| 27.1, page 992  
| 28.1, page 1024  
| Week 15 | Readings:  
| Chapter 35 Internationalization  
| 32.5, page 1171  
| 33.1, page 1208  
| Chapter 26 Implementing Lists, Stacks, Queues, and Priority Queues  
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