COLEMAN UNIVERSITY

San Diego CA

Course Syllabus

COM285: Intermediate Java

COURSE DESCRIPTION

The course teaches students the basics of Object Oriented programming including the concepts of Object, Inheritance, Polymorphism, Abstraction and Interfaces. The course teaches students to apply OOP concepts using GUI, Threads, Streams and Networking. The course covers customized exception handling.

GENERAL COURSE INFORMATION

Number of Units / Weeks	8.0 / 10
# Hours Lecture / # Hours Laboratory	60 / 40/120
Prerequisite(s)	COM 107
Course Developer(s)	Priyadevi Jayapal, MS; M. Sandman, MBA, CDP
Date Approved / Last Review	December 2012 / August 2014

LEARNING OUTCOMES

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

At the end of this course, students will be able to explain the three pillars of object-oriented programming including encapsulation, inheritance and polymorphism. Students will also get introduced to generics. Students will be able to do the following with Java Programs

1. Create classes in Java based on object oriented concepts.
2. Create interfaces and abstract classes. Inherit from abstract classes and override methods
3. Apply polymorphism concepts to handle objects
4. Gracefully handle exceptions using the rich Java classes
5. Apply OOP concepts to create GUI applications using Swing components, event handling
6. Use common data structures such as linked lists, binary search trees, and members of the Java Collection class.
7. Apply multi-threading concepts to applications
8. Perform stream operations both locally and on the network

INSTRUCTIONAL METHODS EMPLOYED IN THIS COURSE

A number of instructional/learning methods are employed in this course, including the following:

- Lecture and reading assignments
- Hands-on exercises and labs
- Practical application of theory and skills in authentic programming projects
- Build on prior knowledge and experience of students to enhance richness of class activities

INFORMATION RESOURCES FOR THIS COURSE

Textbook

Tymann, Paul T. and G. Michael Schneider. Modern Software Development Using JAVA, 2nd Edition. Boston: Thompson Course Technology, 2008. ISBN-13: 978-1-4239-0123-5.

Other Materials

Netbeans 6.8 Integrated Developer Environment

J2SE JDK 6.0

Web Site Readings

http://java.sun.com

Head First Java, Kathy Sierra Bates

COURSE OUTLINE

Session	Topic	Reading (n) # of pages	Assignment (n) Lines of Code	Assignment Due
1	Modern Software Dev Object Oriented Programming: Encapsulation, Inheritance Object Oriented Programming using Java: Polymorphism, Abstract Classes, & Interfaces	Chapter 1 (29) Chapter 2 (40) Chapter 3 (79) 14.8 Hours **Evaluation**: Midterm Exam	Project 1: Inventory Classes Creation (120) 6 Hours Ex: Blood Pressure (40) 2 Hours	
2	Analysis of Algorithms Linear Data Structures Generics, Exceptions	Chapter 5 (33) Chapter 6 (90) 12.3 Hours **Evaluation**: Midterm Exam	Ex: Read a file to a Linked List (40) 2 Hours	Project 1 Due
3	Hierarchical Data Structures	Chapter 7 (104) 10.4 Hours **Evaluation**: Midterm Exam	Project 2: Inventory Classes with Inheritance based on Project 1 (120) 6 Hours Ex: Read a file to a Binary Tree (40) 2 Hours	
4	Data Structures	Chapter 8 (91) 9.1 Hours **Evaluation**: Midterm Exam	Ex: Read a file to an ArrayList (40) 2 Hours	Project 2 Due
5	Mid Term Exam Graphical User Interfaces & Event Handling	**Review** Chapters 1, 2, 3, 5, 6, 7 & 8 --- **Reading:** Chapter 12 (62) 6.2 Hours **Evaluation**: Final Exam	Project 3: GUI Development for Store Front based on Project 2 (120) 5 Hours	
6	The Java Collection Framework Exceptions and Streams	Chapter 9 (58) Chapter 10 (44) 10.2 Hours **Evaluation**: Final Exam		
7	Threads	Chapter 11 (68) 6.8 Hours **Evaluation**: Final Exam	Project 4: Spinner Control (40) 2 Hours	Project 3 Due
8	Network Programming	Chapter 13 (48) 4.8 Hours **Evaluation**: Final Exam	Project 5: Client-Server based on Project 3 (120) 6 Hours	Project 4 Due
9	Project Completion & Review			
10	Final Exam	Chapters 9, 10,		Project 5 Due

		11, 12 & 13		

READINGS: 74.6 HOURS

EXAM REVIEW: 37 HOURS

PROJECTS: 33 HOURS

Total Hours Homework: 144.6 Hours

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.
Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0

60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required tooffer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.