COURSE SYLLABUS
COM 107: Introduction to Java Programming

Course Description

This course introduces the student to the basics of computer programming / application development. Production of quality application software stands at the core. Emphasis is on the implementation of application design documents and the testing of the software produced. Students will gain experience in solving real world problems by working in the interface between application design and application programming. Design techniques incorporated will include the use of IPO (input/process/output) charts, hierarchy charts, pseudocode and flow charts. Implementation will be accomplished in a high level programming language. Emphasis is on processing of data of both primitive and abstract types as well as the manipulation of that data. The standard programming structures sequence, selection and repetition receive intense focus. Modularization is also covered.

General Course Information

Number of Units/Weeks	8/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	60/40/120
Prerequisite(s)	COM 100, COM 101
Co-requisites (s)	None
Course Developer(s)	Morgan, BA, BS
Date Approved / Last Review	May 2017

Learning Outcomes

Upon completion of the course the student will be able to:

- Implement a solution for a given problem using standard programming structures and techniques *using a high level language.*

- Implement basic error handling techniques including IDE tools and test cases to produce error free software.

- Generate usable internal and external documentation for software applications.

- Create software that uses simple data structures and the algorithms used to process them.

- Create applications that incorporate input / output mechanisms including file input and output.

- Communicate effectively within the classroom using the vocabulary of Java programming

Instructional Methods Employed in this Course
- Lecture and reading assignments
- Quizzes
- Hands-on exercises and labs
- Group Exercises
- Practical application of theory and skills in authentic projects
- Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course

Textbook
Malik, D.S. (2013), java programming from problem analysis to program design. (5th ed.). Course Technology.

Other Materials

Web Site Readings
Java API reference: http://download.oracle.com/javase/7/docs/api/
Coleman CIS wiki: http://cisfundamentals.wikispaces.com/
Tutorials: http://java.sun.com/docs/books/tutorial/java/TOC.html
Publisher's Student Files: http://cengagebrain.com

Table/Topics & Assignments
Types of Assignments:
Lecture -
Considered Lecture Hours
Classroom Discussion -
Considered Lecture Hours
In Class Critique -
Considered Lecture Hours
In Class Recitation -
Considered Lecture Hours
In Class (IC) Exercise -
Considered Lecture Hours
Reading -
Considered Homework (HW), work done outside of class

WebClass lesson (no online courses) -
Considered Homework (HW), work done outside of class
Lab Work -
Considered Lab Hours
Quiz, Midterm or Final -
Considered Lecture Hours

Week 1

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 1	Introduction to Course Introduction to Java	3				
LAB 1.1	"Hello, World!" in Java Graded		1	1	10	W Week 1
P1	Project 1: Mastering Output Graded			2	10	M Week 2
HW 1.1	Read Chapter 1			2.1		W Week 1
HW 1.2	Vocabulary Tracker CH 1 - Graded			4.2	21	Th Week 2
HW 2.1	Read Chapter 2 Focus pp. 26-47			2.2		W Week 1
HW 2.2	Vocabulary Tracker CH2a Graded			4	20	W Week 1
LEC 2.1	Java Basics	3				
LAB 2.1	Declaring and Displaying Variables Graded		1	1	10	W Week 2
P2a	Project 2a: Arithmetic manipulations Graded			3	15	M Week 2
Total Week 1		6	2	19.5	86	

Week 2

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 2.2	Read Chapter 2 Focus: 48-93			4.6		
HW 2.3	Vocabulary Tracker CH2b - Graded			3.4	17	M Week 2
LEC 2.2	User Input, Error Handling and Good Programming	3				

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
	Practices					
LAB 2.2	Try / catch Graded		1	1	10	M Week 2
P2b	Project 2b: Good Programming Summer Job Graded			4	20	Th Week 2
HW 3.1	Read Chapter 3 Focus: 48-93			3.5		W Week 2
HW 3.2	Vocabulary Tracker CH3a Graded			0.7	4	
Lec 3.1	Introduction to prewritten classes	3				
LAB 3.1	Working with Math class, and Strings Graded		1	1	10	W Week 2
P3a	Project 3a: Working with API classes Graded			3	15	M Week 3
Lab Day	Communal Learning: Debug Exercises Power Programming Interactive Reviews		4			
Total Week 2		6	6	21.2	71	

Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 3.3	Read Chapter 3 Focus: 114-148			3.5		
HW 3.4	Vocabulary Tracker CH3b Graded			0.8	4	M Week 3
LEC 3A	Classes used in file input and output	3				
LAB 3.2	Working with File IO Graded		1	1	10	M Week 3
P3b	Project 3b: Temperature Conversion Graded			4	20	M Week 4
HW 4.1	Read Chapter 4 Focus 178-203			1.6		
HW 4.2	Vocabulary Tracker CH4a Graded			2.6	13	M Week 3
LEC 4.1	Boolean Expressions and Intro to Selection	3				
LAB 4.1	Selection with simple Booleans		1	1	10	W Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
	Graded					
P4a	Project 4a Graded			6	30	M Week 4
Total Week 3		6	2	20.5	87	

Week 4

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 4.3	Read Chapter 4 Focus: 204-249			4.6		
HW 4.4	Vocabulary Tracker CH4b Graded			1.5	8	M Week 4
LEC 4.2	Adv. Selection	3				
LAB 4.1	Using Complex Boolean expressions Graded		1	1	10	W Week 4
P4b	Project 4b: Selection part b Graded			6	30	M Week 5
HW 5.1	Read Chapter 5 Focus: 250-274			2.6		
HW 5.2	Vocabulary Tracker CH5a Graded			0.8	7	M Week 6
LEC 5.1	Introduction to Repetition - While loops	2				
LAB 5.1	Counted while loop Graded		1	1	10	M Week 5
P5a	Project 5a: Repetition part a Graded			5	25	M Week 6
Total Week 4		6	6	22.5	90	

Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 5.3	Read Chapter 5 Focus: 278-297			2.0		
HW 5.4	Vocabulary Tracker CH5b Graded			1.0	5	M Week 5
LEC 5.2	For and do loops, break, continue	3				
LAB 5.2	Practice with repetitive structures Graded		1	1	10	M Week 6
P5b	Project 5b: Repetition part b			6	30	M Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
	Graded					
Midterm	Multiple Choice		1		50	
	Practical	3			100	
Total Week 5		6	2	10	195	

Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 6.1	Read Chapter 6, pages 332-362			3		
HW 6.2	Vocabulary Tracker CH6 Graded			2.2	11	
LEC 6.1	Introduction to GUI	3				
LAB 6.1	Lab 8a:Building a Basic Interface Graded		1	1	10	M Week 8
P6a	Project 7a: Business Interface Graded			4	20	W Week 8
HW 6.3	Read Chapter 12 Pages 791-840			4.9		
HW 6.4	Vocabulary Tracker CH12 Graded			1.6	8	W Week8
LEC 12.1	More components	3				
LAB 12.1	Enhancing GUI		1	1	10	W Week 8
P6b	Enhancing Business Interface			4	20	Th Week 8
LAB 8C	Communal Learning: Debug Exercises Power Programming Interactive Reviews		4			
Total Week 6		6	6	21.7	79	

Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 7.1	Read Chapter 7 Focus: 384-413			2.7		
HW 7.2	Vocabulary Tracker CH7 Graded			2.3	11	M Week 7
LEC 7.1	Introduction to Methods	3				
LAB 7.1	Practice with methods		1	1	10	W Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
P7a	Project 6a: Creating Methods			4	20	W Week 7
HW 7.3	Read Chapter 7 Focus: 414-442			2.8		
Lec 7.2	Additional Classes and Techniques	3				
LAB 7.2	Debugging Technques		1	1	10	M Week 8
P6b	Using Stringbuffer and Wrapper Classes			4	20	M Week 8
Total Week 8		6	6	17.8	71	

Week 8

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 8.1	Read Chapter 8			4.4		
HW 8.2	Vocabulary Tracker 8.1			0.8	4	M Week 8
LEC 8.1	Intro to User Defined Classes	3				
Lab 8.1	Basic Class		1	1	10	W Week 8
P8a	Book Class			4	20	Th Week 8
HW 8.3	Read Chapter 8			4.4		
HW 8.4	Vocabulary Tracker 8.2			1	4	W Week 8
LEC 8.2	ADT cont.	3				
Lab 8.2	Add convenience methods		1	1	10	M Week 9
P8b	AddingEquals			4	20	M Week 9
Total Week 8		6	6	20.6	68	

Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 9.1	Read Chapter 9 Focus 552-580			2.9		
HW 9B	Vocabulary Tracker CH9 Graded			1.8	9	M Week 9
LEC 9A	Array Basics	3				
LAB 9A	Lab 9a Graded		1	1	10	M Week 9
HW 9C	Project 9			4	20	W Week 9
HW 14.1	Read Chapter 14 Focus:908-933			2.6		W Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
HW 14.2	Vocabulary Tracker CH14 Graded			0.8	4	W Week 9
LEC 14.1	Advanced Array Algorithms	3				
Lab 14.1	Practice with array sorting algorithms Graded		1	1	10	M Week 10
P 10	Project 8b: Using advanced array algorithms Graded			4	20	M Week 10
Total Week 9		6	2	18.1	73	

Week 10

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lec Spec	Using the Arrays Class	3	1	1		
P11	Programming with Utility Classes			4	20	W Week 10
EXAM 10A	Final Exam Multiple Choice 50 points		1		50	Th Week 10
Exam 10B	Final LASA 100 points	3			100	Th Week 10
Total Week 10		6	1	5	160	

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	Introduction to Course, Introduction to Java		
	Terminology	41	4.1
	In class labs	20	2
	Projects	25	2.5
2	Good Programming, Intro to API		
	Terminology	21	2.1
	In class labs	20	2
	Projects	30	3
3	API continued, Intro to Selection		
	Terminology	17	1.7
	In class labs	20	2
	Projects	50	5
4	Selection, Intro to Repetition		
	Terminology	15	1.5
	In class Labs	20	2
	Projects	60	6
5	Repetition, Midterm		

	Terminology	5	0.5
	In class labs	10	1
	Project	30	3
	Midterm terminology	50	5
	Midterm programming practical	100	10
6	Graphical User Interfaces		
	Terminology	19	1.9
	In class labs	20	2
	Projects	40	4
7	User Defined Methods		
	Terminology	11	1.1
	In class labs	20	2
	Projects	40	4
8	Introduction to User Defined Classes		
	Terminology	8	0.8
	In class labs	20	2
	Projects	40	4
9	Array Algorithms		
	Terminology	13	1.3
	In class labs	20	2
	Projects	40	4
10	Using Utility Classes		
	In class lab	20	2
	Final Terminology	50	5
	Final Programming Practical	100	10
Total		1000	100%

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Intro, Java Basics	6	2	19.5
2	User input, exception handling, good programming practices, using predefined classes	6	6	21.2
3	Using predefined classes, selection	6	2	20.5
4	Selection	6	6	22.5
5	Repetition	6	2	10
6	Repetition	6	6	21.7
7	User Defined Methods	6	2	17.8
8	Graphical User Interfaces	6	6	20.6
9	Arrays	6	2	18.1
10	Utility classes	6	6	5
Total		60	40	176.9

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 to offer 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.