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 the Java 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	80/0/160
Prerequisite(s)	COM 100, COM 101
Co-requisites (s)	None
Course Developer(s)	Morgan, BA, BS
Date Approved / Last Review	February 2018

Learning Outcomes

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

1. Explain the objectives and functions of modern operating and software systems [Familiarity].

2. Use a programming language to implement, test, and debug algorithms for solving simple problems. [Usage]

3. Write programs that use primitive data types. [Usage]

4. Write software that implements good programming practices.[Create]

5. Design, implement, test, and debug programs that use: basic computation, simple I/O, standard selection and iterative structures, as well as modularization implementing parameter passing [Usage]

6. Write programs that use arrays for data storage and algorithms used to manipulate them [Usage]

Instructional Methods Employed in this Course

- Lecture and reading assignments
- Quizzes
- Hands-on in-class exercises
- 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
- Open Lab TBD

Information Resources for this Course

 **Textbook**

Gaddis, T. (2016). Starting Out with Programming Logic & Design (4th ed.). Pearson Education. Inc.

Liang, Y.D. (2015), Introduction of Java Programming, Comprehensive. (10th ed.). Pearson Education, Inc. as Prentice Hall.

 **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
My Programming Lab: www.myprogramminglab.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 (non-online courses) -
Considered Homework (HW), work done outside of class
Quiz, Midterm or Final -
Considered Lecture Hours

General Course Layout

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	JIC1	10	1
	JP1	20	2
	QL1	10	1
	JIC2.1	10	1
	JP2a	20	2
2	JIC2.2	10	1
	JP2b	20	2
	QL2	10	1
	DIC1	10	1
	DP1	20	2
	QG2	10	1
3	DIC4	10	1
	DP2	20	2
	QG4	10	1
	JIC3.1	10	1
	JP3a	25	2.5
4	JIC3.2	10	1
	JP3B	25	2.5
	QL3	10	1
	JIC4	10	1
	JP4	20	2
	QL4	10	1
5	DIC5	10	1
	DP3	20	2
	QG5	10	1
	Midterm	150	15
6	JIC5.1	10	1
	JP5a	25	2.5
	JIC5.2	10	1
	JP5B	25	2.5
	QG7	10	1
	QL5	10	1

7	DIC3	10	1
	DP4	20	2
	QG3	10	1
	JIC6	10	1
	JP6	20	2
	QL6	10	1
8	DIC8	10	1
	DP5	20	2
	QG8	10	1
	JIC7	10	1
	JP7	20	2
	QL7	10	1
9	JIC8	10	1
	JP8	20	2
	QL8	10	1
	DIC9	10	1
	DP6	20	2
	QG9	10	1
10	JP9	20	2
	Final	150	15
Total		1000	100%

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Introduction to Java / Java Basics	8		16.7
2	Java Basics Cont. / Design Intro	8		17
3	Design for Selection / Java Selection	8		19.5
4	Java Selection Cont. / Java API	8		17
5	Design for Iteration / Midterm	8		11
6	Java Iteration	8		20.5
7	Design for Modularization / Java Methods	8		20.9
8	Design for Arrays / Java Arrays (one dimension)	8		20.4
9	Java Multi-dimensional arrays / Advanced Array Algorithm Design	8		18
10	Utility Classes	8		4
Total		90		165

Note: Assignments (labs and projects) with the ‘J’ prefix are concerned with Java programming and are associated with the Liang text. Those that are prefixed with a ‘D’ are design assignments associated with the Gaddis text.

Week 1						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Reading	Liang Ch1			2		
Lecture	Introduction to Course Introduction to application design Introduction to Java Programming style	4				
JIC1	“Hello, World!”			1	10	W1
JP1	Display statements			4	20	W1
QL1	Quiz Liang Chapter 1			1.5	10	W1
Reading	Liang Ch2.			3.2		
Lecture	Java Basics I	4				
JIC2.1	Variables and manipulation			1	10	W2
JP2a	Manipulating variables			4	20	
Total Week 1		8		16.7	70	
Week 2						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Reading	Liang Ch2 (as needed)					
Lecture	Java Basics II	4				
JIC2.2	User input			1	10	W2
JP2b	Interactive program			4	20	W2
QL2	Quiz Liang Chapter 2			1.5	10	W2
Reading	Gaddis Ch.2			4		
Lecture	Introduction to program design	4				
DIC1	Simple Program			1	10	W1
DP1	Independent Program			4	20	W2
QG2	Quiz Gaddis Chapter 2			1.5	10	W2
Total Week 2		8		17	80	
Week 3						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**

Reading	Gaddis Chapter 4			4		
Lecture	Designing for Selection	4				
DIC4	Creating selection Structures			1	10	W3
DP2	Section Algorithm			4	20	W4
QG4	Quiz Gaddis Chapter 4			1.5	10	W4
Reading	Liang Chapter 3			3		
Lecture	Simple selection in Java	4				
JIC3.1	Single and Dual alternative “if”			1	10	W4
JP3a	Basic Selection			5	25	W4
Total Week 3		8		19.5	75	
Week 4						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Lecture	Nested Selection Structures	4				
JIC3.2	Nested Selection Lab			1	10	W4
JP3b	Nested Selection Project			5	25	W4
QL3	Quiz Liang Chapter 3			1.5	10	W4
Reading	Liang Chapter 4			3		
Lecture	Using Predefined Classes	4				
JIC4	API Lab			1	10	W4
JP4	API Project			4	20	W5
QL4	Quiz Lang Chapter 4			1.5	10	W5
Total Week 4		8		17	85	
Week 5						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Reading	Gaddis Chapter 5			4.5		
Lecture	Designing Repetitive Structures	4				
DIC5	Basic Loops			1	10	W6
DP3	Advanced Loops			4	20	W6

QG4	Quiz Gaddis Chapter 5			1.5	10	W6
Midterm	Completion Questions	1			50	W5
	Programming Key Assignment 1	3			100	W5
Total Week 5		8		11	190	

Week 6						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Reading	Liang Chapter 5			3.3		
Lecture	Repetition in Java	4				
JIC5.1	Repetition in Java Lab			1	10	Week 6
JP5a	Repetition Project			5	25	Week 6
Reading	Gaddis Chapter 7			2.2		
Lecture	Defensive Programming	4				
JIC5.2	Error Trapping			1	10	Week 6
JP5b				5	25	Week 7
QG7	Quiz Gaddis Chapter 7			1.5	10	Week 7
QL5	Quiz Liang Chapter 5			1.5	10	Week7
Total Week 6		6		20.5	90	

Week 7						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Reading	Gaddis Chapter 3			3.4		
Lecture	Designing for Modularization	4				
DIC3	Modularization Lab			2	10	W7
DP4	Modularization Project			4	20	W7
QG3	Quiz Gaddis Chapter 3			1.5	10	W7
Reading	Liang Chapter 7			3.5		
Lecture	User Defined Methods	4				
JIC6	Methods Lab			1	10	W8
JP6	Methods Project			4	20	W8

QL6	Quiz Liang Chapter 6			1.5	10	W8
Total Week 8		8		20.9	80	

Week 8

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Reading	Gaddis Chapter 8			4.7		
Lecture	Simple Array Algorithms	4				
DIC8	Arrays Lab			1	10	Week 8
DP5	Arrays Project			4	20	Week 8
QG8	Quiz Gaddis Chapter 8			1.5	10	
Reading	Liang Chapter 7			2.7		
Lecture	One-Dimensional Arrays	4				
JLIC7	Single-Dimensional Arrays Lab			1	10	W8
JP7	Single-Dimensional Arrays Project			4	20	W9
QL7	Quiz Liang Chapter 7			1.5	10	W9
Total Week 8		8		20.4	80	

Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Reading	Liang Chapter 8			1.4		
Lecture	Multi-Dimensional Arrays	4				
JIC8	Multi-Dimensional Arrays Lab			1	10	Week 9
JP8	Multi-Dimensional Arrays Project			4	20	Week 9
QL8	Quiz Liang Chapter 8			1.5	10	Week 9
Reading	Gaddis Chapter 9			3.6		
Lecture	Sorting and Searching Arrays	4				
DLIC9	Advanced Arrays Lab			1	10	Week 10
DP6	Advanced Arrays Project			4	20	Week 10
QG9	Quiz Gaddis Chapter 9			1.5	10	Week 10
Total Week 9		8		18	80	

Week 10						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
Lecture	Using API Pre-written Methods to process Arrays	4				
JP9	Array Sorting and Searching			4	20	Week 10
Final	Fill-in Test	1			50	
	Programming Key Assignment 2	3			100	
Total Week 10		8		4	170	

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.