

# COURSE SYLLABUS

## COM152: Object-Oriented Programming I

### Course Description

This course introduces the student to the object-oriented design / programming paradigm. The focus is on the creation of class hierarchies that provide solutions to real world problems. Concepts covered include class to object inheritance, class to class inheritance, encapsulation, code reusability, creation and use of interfaces and creation and manipulation of collections / lists.

### General Course Information

Number of Units/Weeks	8 units / 10 weeks
#Hours Lecture/#Hours Laboratory/#Hours HW*	80/0/160
Prerequisite(s)	COM107, COM112
Co-requisites (s)	none
Course Developer(s)	Charlie Morgan BA, BS
Date Approved / Last Review	February 2018

\* Homework

### Learning Outcomes

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

- Explain the concepts and constructs that constitute object-oriented programming.
- Define custom data structures that meet the requirements of a variety of provided software solutions.
- Implement logical inheritance hierarchies to benefit from maintainable code reuse.
- Implement algorithmic solutions for custom data types.
- Document algorithms and class structures to communicate their intended purposes, pre-conditions, and constraints.

### Instructional Methods Employed in this Course

Lecture and reading assignments

Hands-on exercises

Research

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

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

## Other Materials

**Drawing tools** N/A

## Web Site Readings

Java Platform, SE 7 API Specification (n.d.). Oracle. Retrieved from <http://docs.oracle.com/javase/7/docs/api/>  
[Java Tutorials. Oracle. Retrieved from http://docs.oracle.com/javase/tutorial/](http://docs.oracle.com/javase/tutorial/)

## Table/Topics & Assignments

### Types of Assignments:

**Lecture:** Considered Lecture Hours

**Classroom Discussion:** Considered Lecture Hours

**In Class Critique:** Considered Lecture Hours

**Delivering Oral Presentations:** 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 HW, work done outside of class

**Quiz, Midterm or Final:** Considered Lecture Hours

Week 1						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Reading	Chapter 9			3.6		W1
Lecture	Objects and Classes I	3				
IC 9.1	In class collaborative exercise	1			10	
P9.1	Individual project			6	20	
Lecture	Objects and Classes II	3				
IC9.2	In class collaborative exercise	1`			10	
P9.2	Individual project			6	25	
Q1	Quiz Chapter 1			1.5	10	W2
Totals		8		17.1	75	
Week 2						
		LEC	LAB	HW	Point	

Type	Topic/Description	Hours	Hours	Hours	Value	Due
Reading	Chapter 10			3.2		W2
Lecture	Object-Oriented Thinking 1	3				
IC10.1	In class collaborative exercise	1			10	
P10.1	Individual project			6	20	
Lecture	Object-Oriented Thinking 2	3				
IC10.2	In class collaborative exercise	1			10	
P10.2	Individual project			6	25	
Quiz2	Quiz Chapter 2			1.5	10	W3
Totals		8		16.7	75	

### Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Reading	Chapter 11			3.3		W3
Lecture	Inheritance and Polymorphism I	3				
IC11.1	In class collaborative exercise	1			10	
P11.1	Individual project			6	20	
Lecture	Inheritance and Polymorphism II	3				
IC11.2	In class collaborative exercise	1			10	
P11.2	Individual project			6	25	
Quiz 3	Quiz Chapter 11			1.5	10	
Totals		8		16.8	75	

### Week 4

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Reading	Chapter 12			3.6		W4
Lecture	Exception Handling	3				
IC12.1	In class collaborative exercise	1			10	
P12.1	Individual project			6	20	
Lecture	Text IO	3				
IC12.2	In class collaborative exercise	1			10	
P12.2	Individual project			6	25	
Quiz 4	Quiz Chapter 12			1.5	10	
Totals		8		17.1	75	

### Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
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Reading	Chapter 13			3.2		W5
Lecture	Abstract Classes	3				
IC13.1	In class collaborative exercise	1			10	
P13.1	Individual project			6	25	
Midterm	MC	1			50	
	Practical	3			100	
Total Week 5		8		9.2	185	
<b>Week 6</b>						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lecture	Interfaces	3				
IC13.2	In class collaborative exercise	1			10	W6
P13.2	Individual project			6.5	25	
Quiz 5	Quiz Chapter 13			1.5	10	
Reading	Chapter 14			4.1		
Lecture	JavaFX Basics I	3				
IC14.1	In class collaborative exercise	1			10	
P4.1	Individual project			6	25	
Total Week 6		8		18.1	80	
<b>Week 7</b>						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lecture	JavaFX Basics II	3				
IC14.2	In class collaborative exercise	1			10	
P14.2	Individual project			7	25	
Quiz 6	Quiz Chapter 14			1.5	10	
Reading	Chapter 15			3.5		W7
Lecture	Event-Driven Programming	3				
IC15.1	In class collaborative exercise	1			10	
P15.1	Individual project			7	25	
Total Week 7		8		19	80	
<b>Week 8</b>						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lecture	Animations	3				
IC15.2	In class collaborative exercise	1			10	
P15.2	Individual project			7	25	
Quiz7	Quiz Chapter 15			1.5	10	

Reading	Chapter 16			3.7		
Lecture	JavaFX UI Controls	3				
CL16.1	In class collaborative exercise	1			10	
P16.1	Individual project			7	25	
Total Week 8		8	0	19.2	80	
<b>Week 9</b>						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lecture	Multimedia	3				
IC16.2	In class collaborative exercise	1			10	
P16.2	Individual project			7	25	
Quiz 8	Quiz Chapter 16			1.5	10	
Reading	Chapter17			3.2		
Lecture	Binary IO I	3				
IC17.1	In class collaborative exercise				10	
P17.1	Individual project			7	25	
Total Week 9		8	0	18.7	80	
<b>Week 10</b>						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
Lecture	Binary IO II	3				
IC 17.2	In class collaborative exercise	1			10	
P17.2	Individual project			7	25	
Quiz	Quiz			1.5	10	
Final	MC	1			50	
	Practical	3			100	
Total Week 10		8	0	8.5	195	

## Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Objects and classes	8		17.1
2	Object-oriented thinking	8		16.7
3	Inheritance	8		16.8
4	Exceptions / Test IO	8		17.1
5	Abstract Classes	8		9.2
6	Interfaces / Java FX	8		18.1

7	Java FX / Event-Driven Programming	8		19
8	Animations / Java FX UI Controls	8		19.2
9	Multimedia / Binary IO	8		18.7
10	Binary IO	8		8.5
Total		80		160.4

## Table/Point Breakdown

Assignment Type	Possible Points	Percentage of Grade
In Class Exercises	180	18
Projects	430	43
Quizzes	90	9
Tests	300	30
Total	1000	100%

## 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
70 or above	PASS	0

## Requirements

**Assignments:** All assignments (including projects, lab work, quizzes and exams) must be completed as scheduled. The following will apply to late assignments:

1-24 hours after due date = 20% off point value  
 25-48 hours after due date = 60% off point value  
 49+ hours after due date = No points given

If an assignment equals less than 5 points, no points will be given for late work. If there are extenuating circumstances, the student must submit a written explanation to the department Senior Instructor. Upon evaluation, points will be given according to the Senior Instructor's discretion.

## Coleman University Policy on Academic Dishonesty:

Academic dishonesty is cause for dismissal from Coleman University. Presenting another person's ideas, methods, course work, or test answers with the intention that they be taken as one's own is theft of a special kind. It defrauds the originator of the work, the institution, its graduates, its students, and its future students.

The student has full responsibility for the authenticity of all academic work and examinations submitted. A student who appears to have violated this policy must submit to a hearing with the reporting instructor and the associate dean. If it is determined that a violation occurred, the matter will be referred to an Officer of the University with recommendations for an appropriate penalty. The student may be dismissed, suspended, or given another penalty.

Coleman University employs the plagiarism software known as Turnitin. Students are expected to use this tool in an appropriate manner with the sole purpose to support their own academic endeavors at Coleman University. Turnitin account information can not be shared with anyone. Contact your instructor if you have any questions about plagiarism related issues.

## **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](mailto: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.