ST. CLAIR
COLLEGE

Course Syllabus: MAD100 'Java Programming 1'

15-Week Course Syllabus

Week #	Topics	Chapter Readings
1	**Introduction to Java:** **Lecture Topics: -** -Programming Languages -Hardware vs Software -Integrated Development Environment -Creating, Compiling and Executing Java Programs -Programming Style -Writing a simple program -Reading input from the console -Mathematical Operators -BEDMAS **Labs:** Lab 1, Lab 2	Chapter 1, 2
2	**Elementary Programming:** **Lecture Topics: -** -Variables -Assignment Statements & Expressions -Naming constants and conventions -Data Types -Operator -Numeric type conversions -Math.pow(), Math.ceil(), Math.floor()… **Labs:** Lab 3, Lab 4, Lab 5 Quiz #1	Chapter 2, 4

3	**Selections & Repetition Structures**	Chapter 3 & 5

	Lecture Topics:
	-Boolean Data Type
	-Selection Structures
	  -switch statement
	  -If statement
	  -Nested if	

	-If-else statement -Boolean conditions -Relational Operators -Logic Operators -Conditional Expressions **Labs:** Lab 6, Lab 7, Lab 8	
4	**Repetition Structures Lecture** **Topics:** -Math.Random -For Loop -While Loop -Do While Loop -Seeding random numbers **Labs:** Lab 9, Lab 10, Lab 11, Lab 12 Quiz #2	Chapters 3, 5
5	**Functions & Review Lecture** **Topics:** -Defining a function -Min, Max, Equals -Function Modifiers -Function return types -Function Parameters -Functions Signatures -Method Overloading	Chapter 4, 6
6	**EXAM 1** **Weighted 15%** ***Monday October 12th (Thanksgiving)**	

7	**Functions & Methods Continued, Arrays** -Methods Continued -Creating, adding, removing, deleting values in arrays - Arrays.sort() **Labs:** Lab 13, Lab 14 Quiz #3	Chapter 4, 6, 7
8	**String Functions & Type Conversions** -String Tokenization -String Manipulation -TypeCasting -ASCII Table -&& and || operators -intro to OOP	Chapters 4, 6
	Labs: Lab 15, 16	
9	**Object Oriented Programming (OOP)** -Constructors -Getters & Setters -Methods Vs Functions -Instantiating Objects -Member Variables **Labs:** Lab 17, Lab 18, Lab 19 Quiz #4	Chapter 9, 10
10	**OOP Continued** -Super & Sub Classes -Member Variables -Storing Objects in Arrays -Polymorphic Methods & Functions	Chapter 11
11	**EXAM 2** **Weighted 20%**	

12	**ArrayList, Gradle, JavaFX** -ArrayLists -Creating, Adding, Removing, Modifying value in an ArrayList - Gradle -JavaFX -Stage, Panes, Nodes, Scenes **Labs:** Lab 20, Lab 21, Lab 22 Quiz #5	Chapter 11, 13, 14
13	**JavaFX & SimpleEvents** -Color -Buttons, -ListView -Observable Lists	Chapter 14
14	**Java Review**	
15	**EXAM 3** Weighted 25%	

Course Policies

- **Academic misconduct, including cheating of any kind, will not be tolerated. Consequences may include but not be limited to a warning, a grade of 0 on the assignment / examination, or a failing grade in the course. (Code of Students' Rights and Responsibilities: Section 4.3 & 5.3). All students and employees of this College have a right to study and work in an environment that is free from harassment and discrimination.**
- **This syllabus is a guide. Changes from week to week may occur**
- **All Tests must be written when posted, unless prior arrangements have been made with the instructor/professor**

Assessments	Weight
Programming Assignments: Lab 1, 2, 3, 4, 5, 8	6% total (Each lab is weighted equally)

Repetition Structure Assignments: Lab 9, 10, 11, 12, 13, 14	6% total (Each lab is weighted equally)
Selection Structure Assignments: Lab 6, 7, 15, 16	6% total (Each lab is weighted equally)
OOP Assignments: Lab 17, Lab 18, Lab 19	6% total (Each lab is weighted equally)
Simple GUI Assignments: Lab 20, Lab 21, Lab 22	6% total (Each lab is weighted equally)
Quiz: Quiz 1, Quiz 2, Quiz 3, Quiz 4, Quiz 5	10% total (Each lab is weighted equally)
Exam 1:	15%
Exam 2:	20%
Exam 3:	25%
Total	**100%**