Programming II
CS 206

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Office:	Building # 19, 2nd floor, office # 8
Office hours:	Mon & Wed, 9:15 AM to 10:00 AM (in the same lecture's Lab)
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Credits Hours:	4
Lecture Hours Per week:	4
Prerequisites:	Programming I 153
Text book:	Java How to Program, 9th ED, Paul Deitel and Harvey Deitel, Pearson.
Course Description:	A first course using the Java programming language.
Course Objectives:	• Design and create algorithms for solving simple problems. • Consider the language translation phases of compiling, interpreting, linking and executing, and differentiate the error conditions associated with each phase. • Compare the primitive datatypes of the Java programming language; describe how each is stored in memory; and identify the criteria for selection. • Apply the program development process to problems that are solved using fundamental Java programming constructs and predefined data structures. • Verify program correctness through the development of sound test plans and the implementation of comprehensive test cases. • Analyze and trace the execution of Java computer programs. • Decompose a program into subtasks and use parameter passing to exchange information between the subparts. • Differentiate between object-oriented, structured, and functional programming methodologies.

Attendance policy

PAAET class attendance regulation will be followed:

_ fail to attend 2 lectures => initial warning

_ fail to attend 4 lectures => final warning

_ fail to attend 5 lectures => fail

Assessment Plan for the Course

Midterm I	25%
Presentation	10%
Quizzes	15%
Exercises	5%
Classwork	5%
Final Exam	40%
Total	**100%**

Major Topics Covered in the Course

Unit	Topic	Number of teaching hours
2	**Introduction to Java Applications**	8
3	**Introduction to Classes, Objects, Methods and Strings**	8
4	**Control Statements: Part I**	8
5	**Control Statements: Part II**	8
6	**Methods: A Deeper Look**	8
7	**Arrays and ArrayLists**	8
8	**Classes and Objects: A Deeper Look**	8

Detailed Study Plan

#	Topics Covered	Reading Assignment	Exercises
Week 1 (Jan 27)	Introduction Your First Program in Java Modifying Your First Program Displaying Text With *printf*	2.1, 2.2, 2.3, 2.4	E2.18, E2.22, E2.23, E2.24, E.2.25
Week 2 (Feb 3)	Adding integers Memory Concepts Arithmetic Decision Making: Equality & Relational Operators	2.5, 2.6, 2.7, 2.8	E2.8, E2.10, E2.12, E2.13, E2.15, E2.16, E2.17, E2.22, E2.23
Week 3 (Feb 10)	Declaring a Class with a Method and Instantiating an Object of a Class Declaring a Method with a Parameter Instance Variables, *set* Methods and *get* Methods Primitive Types vs. Reference Types	3.1, 3.2, 3.3	E3.11(a), (b) E3.12
Week 4 (Feb 17)	Initializing Objects with Constructors Floating-Point Numbers and Type Double (GUI) Using Dialog Boxes Algorithms & Pseudocode Control Structures If Single-Selection, Double-Selection and the Conditional Operator	3.4, 3.5, 3.6, 3.7, 4.1, 4.2, 4.3, 4,4, 4.5, 4.6	E3.11(c), (d) E3.13, E3.14, E3.15, E4.15(a), E4.18, E4.27, E4.28,
Week 5 (Mar 2)	While Repetition Statement Formulating Algorithms: Counter-Controlled and Sentinel-Controlled Repetition Nested Control Statements Compound Assignment Operators Increment & Decrement Operators Primitive Types (GUI) Creating Simple Drawings **Quiz 1**	4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13	E4.15(b), (c), (d), E4.16, E4.17, E4.20, E4.25, E4.26, E4.29, E4.33, E4.34, E4.37(a)
Week 6 (Mar 9)	Essentials of Counter-Controlled Repetition *for* Repetition Statement Examples Using the *for* Statement *do…while* Repetition Statement **Quiz 2**	5.1, 5.2, 5.3, 5.4, 5.5	E5.9(a), (c), (d), E5.11, E5.12, E5.14, E5.15(a), (d),

Week 7 (Mar 16)	Midterm Exam		
Week 9 (Mar 30)	*switch* Multiple-Selection Statement *break* and *continue* Statements Logical Operators Structured Programming Summary (GUI) Drawing Rectangles and Ovals	5.6, 5.7, 5.8, 5.9, 5.10	E5.9(b), E5.17, E5.19, E5.24
Week 10 (Apr 6)	Arrays Declaring and Creating Arrays Examples Using Arrays Enhanced *for* Statement Passing Arrays to Methods	7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8	E7.10, E7.11
Week 11 (Apr 13)	Multidimensional Arrays Variable-Length Argument List Using Command-Line Arguments Class Arrays Introduction to Collection and Class *ArraysList* (GUI) Drawing Arcs **Quiz 3**	7.9, 7.10, 7.11, 7.12	E7.8, E7.9, E7.14, E7.15, E7.16
Week 12 (Apr 20)	Presentation		
Week 13 (Apr 29 Sun 9 AM)	Final Exam		