LAMAR INSTITUTE OF TECHNOLOGY

SYLLABUS

Lamar University, a Member of The Texas State University System, is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award Associate, Baccalaureate, Masters, and Doctorate degrees (for more information go to http://www.lit.edu).

Course Title:	**Programming Fundamentals II**
Course Number:	**COSC 1436**
Course Section:	**1A1**
Department:	**Computer Science**
Professor:	**Greg Yera**
Office Hours:	**Mon 3pm – 4pm, Wed 3pm-4pm, or by Appointment**
Contact Information:	**LU email: gyera@lamar.edu** **Office: Maes 208A** **Phone: 409-880-7213**

PERSONAL INTRODUCTION

Welcome to Lamar University. My name is Greg Yera, and I will be your instructor of record for COSC 1436 this semester. I earned my baccalaureate in Computer Science and Mathematics and a master's degrees in Computer Science, all from Lamar University. My master's degree specialized in cyber security, and I have been working for 5 years in Information Technology here at Lamar as well. I am very excited to be joining the faculty at Lamar University this year, and I am currently an Adjunct Instructor for the Department of Computer Science in the College of Arts and Sciences.

COURSE DESCRIPTION

This course introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing and debugging. This course assumes computer literacy.

COURSE-LEVEL OBJECTIVES

After completing this course, as measured by students' assignments and projects, students will be able to:
1) Design and run Java programs using the Microsoft Windows operating system.
2) Create applications that demonstrate Object-Oriented thinking
3) Demonstrate an understanding of the basic programming fundamental structures

STUDENT LEARNING OUTCOMES (Department Specific, if needed)

1. Software Fundamentals: Graduates will demonstrate their ability to use fundamental computer science knowledge to design, document, implement, and test software solutions to a wide range of problems, using at least two high-level programming languages.
2. Computer Science Technology Skills: Graduates will demonstrate expertise in the main content areas of computer science including.
    - Discrete and continuous mathematics including skills in logic and proof writing
    - Analysis and design of algorithms
    - Formal languages and computability theory
    - Operating systems

- Database systems
- Computer architecture
- Computer networks and distributed computing concepts

3. Scientific Method: Graduates will be able to gather requirements, analyze, design and conduct simulations or other computer experiments and evaluate and interpret the data generated.
4. Societal Awareness: Graduates will be aware of and understand the impact of computer technology on society at large, on the workplace environment, and on individuals.
5. Ethical Standards: Graduates will be able to recognize and understand the importance of ethical standards as well as their own responsibilities with respect to the computer profession.
6. Collaborative Work Skills: Graduates will demonstrate the ability to work effectively in teams to conduct technical work through the exercise of interpersonal communication skills.
7. Oral Communication Skills: Graduates will demonstrate their ability to communicate clearly.
8. Written Communication Skills: Graduates will demonstrate their ability to write effectively both technical and non-technical materials with appropriate multimedia aids.
9. Continuing Education and Lifelong Learning: Graduates will demonstrate that they can independently acquire new computing related skills and knowledge in order to pursue either further formal or informal learning after graduation.

TECHNOLOGY SKILLS REQUIREMENTS

TECHNOLOGY PREREQUISITES
In order to be successful in the class, students need to be familiar with basic internet searching techniques to research ideas and develop conceptual thinking points of view.

LU LEARN / BLACKBOARD Learning Management System (LMS)
Students will utilize the Lamar University's Learning Management System (LMS), Blackboard, for online courses. For Blackboard support go to (https://blackboardsupport.lamar.edu) for more information.

SOFTWARE USED IN THIS CLASS
Java SDK

RESPONSE TIMES
Emails about the course will be responded to within 48 hours. Homework will be graded within one week after submitting. Writing Assignments will be graded within 2 weeks after submission.

COURSE MATERIALS
Introduction to Java Programming and Data Structures, Comprehensive Version, 11th Edition
Y. Daniel Liang, Georgia Southern University ©2018 |Pearson ISBN-10: 0134670949 ISBN-13: 9780134670942.

GRADING POLICY AND EVALUATION
Grading Scale:

A	B	C	D	F
100-85	**84-75**	**74-60**	**59-50**	**49 - below**

GRADING OF ASSIGNMENTS AND ASSESSMENTS
Student grades are assessed on assignments, homework, graded discussion questions, writing assignments, and projects. Students are required to submit assignments on time. Unless otherwise indicated, all assignments are due as assigned in Blackboard (BB).

Homework	50%
Discussion Questions	20%
Project	30%

PARTICIPATION REQUIREMENTS

Students are expected log into Blackboard regularly during this course. All assignments will be posted in Blackboard with an associated due date. Students should monitor Blackboard regularly for announcements and email. Students should expect to spend between 6-12 hours weekly working on this class. This includes class time, reading the textbook chapters, working on homework, completing discussion questions, writing assignments, and projects.

MAKE-UP WORK

If an assignment cannot be completed on time, please contact the instructor as soon as possible to make arrangements.

DROP DATES

This course adheres to the add/drop standards for each term as stated by Lamar University. For more details, refer to the http://www.lit.edu and search "Academic Calendar."

COURSE EVALUATION

Instruction as well as student performance is subject to evaluation. Procedures for evaluation will be provided near the end of this course via email from the University and also within the Resources area of the course. Please respond to the evaluation link provided in each course or each email.

COURSE SUBJECT OUTLINE:

- Introduction to Programs and Java
- Elementary Programming
- Selections
- Mathematical Functions, Characters, and Strings
- Loops
- Methods
- Single-Dimensional Arrays
- Multidimensional Arrays
- Objects and Classes
- Inheritance and Polymorphism
- Exception Handling and Text I/O
- Abstract Classes and Interfaces
- JavaFX Basics
- Event-Driven Programming and Animation
- JavaFX UI Controls and Multimedia
- Binary I/O
- Recursion
- Generics

University Policies

Please see the LIT website directly at www.lit.edu for all school wide policies.