GALALA UNIVERSITY

Structured Programming

Fall 2022

Time: Mondays: 9:30 – 11:30 AM

CLASS GUIDELINES

Instructors:

1. **Prof. Hany Ammar**, email: ammar.hany@gmail.com, https://hanyammar.faculty.wvu.edu/
2. **Eng. Iman Khater**
3. **Eng. Mohammad**

Reference Books:

Programming Fundamentals - A Modular Structured Approach using C++, By Kenneth Leroy Busbee, http://cnx.org/content/col10621/1.22/ Connexions, Rice University, Houston, Texas

Structured Programming with C++, By Kjell Bäckman, bookboon.com ISBN 978-87-403-0099-4, https://bookboon.com/en/structured-programming-with-c-plus-plus-ebook?mediaType=ebook

Class Objectives: The objective of the class is to explain the fundamentals of software development using a structured programming approach. The course will start with an introduction to programming and describe briefly the software development life cycle phases. The structured programming concepts based on modularizations will be discussed using the C++ programming language. An Integrated Development Environment (IDE) will be introduced and used in the Lab assignments.

Expected Learning Outcomes: Upon successful completion of this course, students should have the ability to:

1. Develop programming skills using a modular structured approach in C++

2. Apply disciplined approach to develop software using an IDE .

Topics Covered

Introduction to Programming and the software life cycle phases

Modularization and the C++ Program Layout

Program Planning and Design

Data and Operators

Program Control and Functions

Structured Programming: Sequence, Selection, and Iteration

Introduction to Arrays and Strings

File Input/output