# GSET - Programming with Mr. Hill

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Module 0 - Introduction to C++



#### Module 0 - Introduction to C++

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# Course Structure

# Lectures and Assignments

- This programming course is organized into topic based modules.
   Each module contains a lecture with slides, and a tutorial with instructions and example code.
- The lectures will be held in class, and after each lecture we will
  work on the tutorials as a group. After completing each tutorial you
  will write a short summary (README) documenting your program
  and the work you have done.
- In addition to the tutorials, programming challenges will be assigned throughout the course to test the skills you have acquired. After completing each programming assignment you will write a short report documenting your program and the work you have done.

### Course Structure

### Exams and Grading

- You will take a midterm and a final exam in class, and each exam will have a paper and programming component.
- Your final grade comes from participation in the tutorials (25%), completion of the programming challenges(25%), as well as the two graded exams (25% + 25%).
- See the published syllabus for the complete course details and policies.

### Course Structure

#### Collaboration and Group Work

- Discussion between peers and the instructors is encouraged for all assignments except during the exams.
- Some assignments may be completed as a group, but some must be completed as individuals. Ask the instructor if you are unsure.
- Sharing of code between students or is <u>not allowed</u> unless the activity is designated as a group assignment by the instructor.

The Tennessee Technological University academic misconduct policy clearly states that all submitted work must be original and authored by the student(s) submitting the assignment.

# Course Topics - Learning Objectives

During this course we are going to learn about structured computer programming and the C++ Language. The following topics will be covered.

- Variables, Expressions, and Assignment
- Basic Input and Output Operations
- Computer Memory and Common Data Structures
- Logic and Selection Statements
- Looping and Iteration
- Introduction to Object Oriented Programming



# Anatomy of A Computer

#### Major Components

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# The C++ Programming Language

#### A Few Questions

- What is a computer program? What is computer programming?
- Have you ever learned about programming before? If so what languages did you use, and where did you learn about them? What types of problems did you solve?
- ► Have you ever learned about C++? Why is C++ important for scientists and engineers?
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# Tutorial 0 - Hello World

- Overview: In the first tutorial you are going to choose your programming environment on your computer and write your first program, Hello World.
- Assignment: Complete the tutorial in the document tutorial0 \_introduction\_cpp.pdf on ilearn. You must be able to display a custom message from your program to the the terminal or standard output.
- ▶ **Deliverable:** Write a brief summary of what you accomplished and what you struggled with the most. Include a screen shot or copy of the output of your program.
- ▶ **Next Week:** After completion of Module 0 , you are ready to learn about Variables, Expressions and Assignment.