Hochiminh City University of Technology

Computer Science and Engineering

[CO1027] - Fundamentals of C++ Programming

Course Introduction

Lecturer: Duc Dung Nguyen
Credits: 3

Introduction

❖ Audience: students who have no background in computer programming

❖ Aims: provide basic knowledge and skill on programming with two important programming paradigms: structure programming and object-oriented programming.

❖ Demonstration language: C++

❖ Prerequisite: basic math knowledge

❖ Requirement:

    ❖ Class attendance

    ❖ Self-study

    ❖ Work hard

Learning outcome

❖ What you will get from the course

- Be able to describe the algorithm for your problem

- Understand and be able to use structure programming techniques

- Be able to implement a given algorithm using C++

- Understand basic concepts of Object-Oriented Programming (OOP)

- Improve your coding style

- The process of solving problem

Contents

❖ Basic of programming language (C++)

❖ Control structures

❖ Array and structure

❖ Pointer

❖ Recursive

❖ Class

  ❖ Inherirance, template, polymophism, and advanced topics

Syllabus

- ❖ Course meeting time:
  - ❖ Lecture: 3 hours/week for 8 weeks
  - ❖ Laboratory: 2 hours/week for 9 weeks
- ❖ Course mechanics:
  - ❖ Textbook: C++ How to program
  - ❖ Reference book: *Fundamentals of C++ Programming* – Richard L. Halterman
  - ❖ Lecture notes
  - ❖ Online materials

Syllabus

❖ Assessment

  ❖ Assignment

  ❖ Lab test

  ❖ Final exam: 90'

  ❖ Ratio: lab (10%), test (20%), assignment (30%), final exam (40%)

(This is a tentative ratio, it may change a bit)

❖ Coding environment:

  ❖ Recommend: Visual studio

  ❖ Other IDEs are welcome

Regulations

❖ Any plagiarism act will lead to zero in all tests!

❖ Final grade of assignment depends on the exam

    ❖ $A_{final} = N \sum_{i=1}^{N} \frac{1}{T_i^{-1}}$

❖ Detail mapping of exam questions and assignments will be announced during the progress of the course.