ANKARA UNIVERSITY
Computer Engineering Department
COM102: Computer Programming II
Syllabus

Instructor: Asst. Prof. Dr. Hacer Yalım Keleş

Contact: hkeles@ankara.edu.tr

Textbook:

"The C++ Programming Language (Third Edition or Special Edition)", Bjarne Stroustrup, Addison-Wesley, ISBN 0-201-88954-4 and 0-201-70073-5.

Aim:

The aim of this course is best stated by Bjarne Stroustrup (taken from the textbook):

"The most important thing to do when learning C++ is to focus on concepts and not get lost in language-technical details. The purpose of learning a programming language is to become a better programmer; that is, to become more effective at designing and implementing new systems and at maintaining old ones. For this, an appreciation of programming and design techniques is far more important than an understanding of details; that understanding comes with time and practice."

Course Topics:

We will focus on language features supporting data abstraction, object oriented programming and generic programming. In the first part of our course we will study the subset of C++ that supports the styles of programming traditionally done in C. It covers fundamental types, expressions and control structures for C++. Modularity will be discussed, as supported by namespaces and source files. In the second part, we'll introduce C++ facilities for defining and using new types. Concrete and abstract types (classes), together with operator overloading, polymorphism and the use of class hierarchies. We'll also study templates for defining families of types and functions. Moreover, we'll work on exception handling, standard library and input/output mechanisms supported by C++.

Student Assessment:

Student grades will be determined by the student performance on:

- Labs (%10)
- Programming Assignments (%10)
- Exams:
    - Midterm (%10)
    - Final (%80)

Class Policies:

- Students who are absent for more than 3 labs will FAIL the lab and programming assignments part of the evaluation. Hence, 20% of the couse credit will be lost.
- Any form of cheating is strictly forbidden. While students are encouraged to openly discuss the problems conceptually, the work must be the student's own. Exchanging homeworks or lab solutions is cheating and will be reported to the University. At minimum, you will **fail the course.**

Course Outline:

Week #	**Contents**
1	Introduction (Discussion on OOP)
2	Types and Declerations, Expressions & Statements
3	Pointers, Arrays and Structures
4	Functions
5	Classes
6	Classes, Operator Overloading
7	Classes, Operator Overloading
8	MIDTERM 1
9	Namespaces, Derived Classes
10	Derived Classes
11	Class Hierarchies
12	Class Hierarchies
13	Templates
14	Templates
15	Exception Handling