

CMP 1001 – Introduction to Programming – Fall 2020

Objectives & Description: This course aims to provide an overview of programming concepts, design and an introduction to coding using the C++ language. The course has a focus on creating working computer programs in C++. This course will address fundamental concepts of analysis, design, code development, and testing.

Outcomes:

- Identifying the components of a computer system
- Defining and analyzing the problem, finding a logical sequence of precise steps, developing algorithms
- Having knowledge of the fundamental programming concepts
- Developing computer programs with C++
- Understanding the basics of structured programming

Instructors: Assist. Prof. M. Şükrü Kuran (**Room:** D519, mehmetsukru.kuran@eng.bau.edu.tr) **Office Hour:** TBA)

Assistants: (**Room:** D412)

- Erkut Arıcan (erkut.arican@eng.bau.edu.tr, **Office Hour:** TBA)
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Textbooks:

“C++ *How to Program*,” Deitel, P. and Deitel, H., 10th Edition, Pearson, 2016.

“C++ *Primer*,” Stanley B. Lippman, Josée Lajoie, and Barbara E. Moo, 5th Edition, Addison-Wesley, 2012.

Week 1: Introduction to Programming and C++ Development

Week 2: Variables and Basic Operators

Week 3: Conditional Statements in C++, Part I - if, else, switch

Week 4: Conditional Statements in C++, Part II - if, else, switch

Week 5: Repetitive Statements in C++ (i.e., while, for)

Week 6: Functions in C++, Part I

Week 7: Midterm #1

Week 8: Functions in C++, Part II

Week 9: Arrays and Vectors in C++

Week 10: 2D & Multidimensional Arrays in C++

Week 11: Midterm #2

Week 12: Pointers, Passing values to functions in C++

Week 13: Bitwise operators and File operations in C++

Week 14: Classes and Objects in C++

Attendance: Due to the course being an online course, no attendance will be taken.

Grading:

20% Quizzes*

40% Midterms* (**Midterm #1:** 4th week of November, **Midterm #2:** 4th week of December)

40% Final (TBA)

[*] The details of quizzes, midterms, and the final exam are explained in the “Course Evaluation Document”.