

CEN111 Algorithms and Programming I

Fall 2025-2026

Instructor: Dr. Barış ATA (bata@cu.edu.tr)

Office Hours: Tuesday, 10:00-12:00

Description:

This course aims to teach students the basics of computer programming using C Programming Language. This course focuses on Algorithm design tools: flowcharts, pseudocodes, C programming language primitives, I/O functions, Random Numbers, Operations, Type Conversions, Precedence of Evaluation, Conditions, Loops, Functions, Recursive Functions, Arrays.

Textbooks:

- C How to Program - 9th ed, Paul Deitel, Harvey Deitel, Pearson
- Problem Solving and Program Design in C — 7th ed, Jeri R. Hanly, Elliot B. Koffman

Required Software:

- Raptor Flowchart based Programming Environment
- Microsoft Visual Studio

References:

- C Programming Language (2nd Edition), Brian W. Kernighan, Dennis M. Ritchie
- C Programlama Dili, Rifat Çölkesen
- C Dersi: Programlamaya Giriş, Nergiz Ercil Çağıltay, C. Fügen Elbes, Gül Tokdemir, Çiğdem Turhan

Course Schedule:

Week 1:	Introduction
Week 2:	Algorithmic Thinking Steps
Week 3:	Problem Solving
Week 4:	Introduction to C Programming
Week 5:	Selection Structures
Week 6:	Review
Week 7 :	Repetition Structures I
Week 8 :	Repetition Structures II
Week 9 :	Functions II
Week 10:	Functions I
Week 11:	Arrays II
Week 12:	Arrays II
Week 13:	Review

Grading: Midterm 40 %, Final exam 60 %.