CS305 – Programming Languages  
2021-2022 Fall

Syllabus

Instructor: Hüsnü Yenigün
TAs: Mohammad Yusaf Azimi (azimi@sabanciuniv.edu)
      Ceren Yıldırım (cerenyildirim@sabanciuniv.edu)
      Giray Coşkun (giraycoskun@sabanciuniv.edu)
LA: Giray Coşkun (giraycoskun@sabanciuniv.edu)
Lectures: Monday 11:40-13:30 [ PAC & Online ]
      Friday 09:40-10:30 [ FENS G077 & Online ]
Office Hours: Hüsnü Yenigün Tuesday 09:40-10:30, 12:40-13:30 [Online]
      Mohammad Yusaf Azimi Monday 18:40-20:30 [Online]
      Ceren Yıldırım Thursday 09:40-11:30 [Online]
      Giray Coşkun Thursday 11:40-13:30 [Online]

Textbooks
[1] “Programming Languages: Concepts and Constructs” by Ravi Sethi

Note: A lecture notes document prepared based on the references above will be provided.

Grading
- Midterm 1 (20%) Date: October 26, 2021 Tuesday 20:00-21:30
- Midterm 2 (20%) Date: November 25, 2021 Thursday 20:00-21:30
- Final (30%) Date: TBA by SR
- Make-up Date: TBA [ after the final exam ]
  ○ Policy: If you miss exactly one of the midterm or final exam, and if you have a valid excuse (e.g. a medical condition, an official university event participation, etc.), then you can take the make-up exam. In this case, the grade of the make-up exam counted as the grade of your missing exam. The make-up exam can be an oral exam, a written exam, or both.
- Homeworks (30%) 5-7 homeworks (mostly programming homeworks)
Tentative Outline

Week 01: Introduction, Describing Syntax and Semantics of Programming Languages

Week 02: Flex and Scanner Implementation

Week 03: Context Free Grammars

Week 04: Bison and Parser Implementation

Week 05: Abstract Syntax Trees, Semantic Analysis

MIDTERM 1

Week 06: Expressions, Types and Type Checking, Statements, Scoping Rules

Week 07: Subprograms – Referencing Environments, Parameter Passing

Week 08: Subprograms – Activation Records

Week 09: Functional Programming – Expressions, Procedures

MIDTERM 2

Week 10: Functional Programming – Data types

Week 11: Functional Programming – Interpreters

Week 12: Logic Programming – Relations, Rules/Facts, Inferencing

Week 13: Logic Programming – Unifications, Programming Techniques

Week 14: Parallel Programming

FINAL