

# BU CAS CS 525: Compiler Design and Implementation

(Syllabus)

- **Semester** Fall 2023
- **Instructor:** Hongwei Xi
- **Lecture Times:** MW 2:30-3:45PM
- **Classroom:** SOC B57 @ 24 Cummington Mall
- **Reference Book:** *Modern Compiler Implementation in ML* by Andrew W. Appel. ISBN 0-521-58274-1. Cambridge University Press.
- **Homepage:** <http://hwxi.github.io/TEACHING/CS525/2023F>
- **Overview:** *Compiler Design and Implementation* is a course that introduces students to some basics in the design and implementation of compilers. In this course, we are to teach the theory behind various components of a compiler as well as the programming techniques involved to put the theory into practice. The chosen programming language for implementation is ATS. However, you are free to choose another *functional* programming language if you so wish.
- **Grades** The final score is calculated using the following formula.

$$\text{final score} = 40\% \cdot (\text{homework}) + 20\% \cdot (\text{midterm}) + 30\% \cdot (\text{final}) + 10\% \cdot (\text{participation})$$

The final letter grade is calculated as follows.

- **A:** final score is 80% or above
  - **B:** final score is 70% or above
  - **C:** final score is 60% or above
  - **D:** final score is 50% or above
- **Homework Assignments** There will be a homework assignment every one or two weeks depending on the amount of effort and time needed to finish the assignment. An assignment that is turned in after its due time is accepted but penalized according to the following policy.
    - 20% point deduction if the assignment is turned in within 24 hours after its due time.
    - 50% point deduction if the assignment is turned in between 24 and 48 hours after its due time.
    - no credit if the assignment is turned in more than 48 hours later after its due time.

From time to time, students may be requested to explain in details their solutions to the instructor, the TFs, and/or the TAs. Those who cannot adequately explain their solutions may see that their acquired points be deducted partly or wholly.

- **Academic Integrity:** We adhere strictly to the standard BU guidelines for academic integrity. For this course, it is perfectly acceptable for you to discuss the general concepts and principles behind an assignment with other students. However, it is not proper, without prior authorization of the instructor, to arrive at collective solutions. In such a case, each student is expected to develop, write up and hand in an individual solution and, in doing so, gain a sufficient understanding of the problem so as to be able to explain it adequately to the instructor. Under *no* circumstances should a student copy, partly or wholly, the completed solution of another student. If one makes substantial use of certain code that is not written by oneself, then the person must explicitly mention the source of the involved code.