# Programming Languages

## CSCI 374-01, Summer 2025

- Instructor: Dr. Jinwoo Kim


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  - Office Hours: Tuesday by appointment


- Course Description

  - This course is a gentle introduction to basic concepts in the design of programming languages. This course aims to provide a foundation for understanding, designing, and implementing programming languages. In this course, we will study essential concepts and structures found in modern programming languages. We will not focus on any language, but instead, we will examine features found in many different languages. I assume you already know how to program, so it is not for you if this is your first programming course. We will also compare different programming paradigms, including imperative, functional, logic, and script. We will study the specification of programming language syntax and the verification of program properties.

- Learning Outcomes

  - Understand the principles and components of programming language design, such as control structures, names, types, exceptions, etc.
  - Become familiar with the various paradigms of programming languages (conventional or imperative, functional, script, and logic programming languages) and learn the differences among them.
  - Learn how to specify syntax and semantics for a language.
  - Learn the features of the most successful and more influential of many different programming languages.
  - Learn the program development strategies through programming examples. You will learn and write programs in Perl and ML.

- Prerequisites
    - You must have completed CSCI 271 or have some experience in C or C++ or other programming languages. There will be several programming projects in different programming languages and homework, and a final exam.

- Class homepage: http://jjcweb.jjay.cuny.edu/jwkim/class/csci374-summer-25/
    - I DO NOT use Blackboard.
    - The class homepage provides essential information, including class lecture notes, project assignments, and various announcements.
      It is your responsibility to check the class homepage often for various announcements like new project assignments, due dates, and exams. In addition, all class lecture notes will be electronically available at least 24 hours before the class for you to preview before coming to the class. All class handouts are in PDF format, and if you use your home machine to print them out, you need to install Acrobat Reader from http://www.adobe.com.

- Text
    - Concept of Programming Languages, 12th edition by Sebesta, Pearson, 2018 (ISBN-13: 978-0135102268)

- Grading Policy
    - Several homework and programming assignments: 50%
    - Final exam: 50%

- Class Schedule
    - I will post lecture recordings on the class homepage.
    - It is your responsibility to follow the class schedule by study relevant chapter and lecture recordings
    - You will be assigned homework questions each week, and the due date is by midnight following Monday
    - I will NOT accept any late homework submission, so keep the deadline.

- You will be assigned two programming projects from Perl and ML programming languages.
- Keep your email at CUNYfirst up to date not to miss any critical class notifications.

| **Date** | **Key Sections** |
|---|---|
| Week 1 (6/5 ~ 6/11) | Introduction, Chapter 1 ~ 3 |
| Week 2 (6/12 ~ 6/18) | Perl |
| Week 3 (6/24 ~ 6/26) | Perl, Chap 5 ~ 8 |
| Week 4 (7/1 ~ 7/3) | ML |
| Week 5 (7/8 ~ 7/9) | Chap 9 ~ 10 |
| 7/10 | Final Exam |

✦ Special Notes

- I will be available for questions by email. In addition, if you have difficulty meeting the requirement of the course for any reason, please feel free to contact me at the earliest possible dates.

✦ Honor Code

- The Honor Code applies to this course: All work submitted must be your own. You may discuss the assignments with other students in class, but you should write up your answers and create and type in your programs and their documentation.

✦ Statement of the College Policy on Plagiarism

- Plagiarism is the presentation of someone else's ideas, words, or artistic, scientific, or technical work as one's creation. Using the ideas or work of another is permissible only when the original author is identified. Paraphrasing and summarizing, as well as direct quotations, require citations to the original source.
- Plagiarism may be intentional or unintentional. Lack of dishonest intent does not necessarily absolve a student of responsibility for plagiarism.

- It is the student's responsibility to recognize the difference between statements that are common knowledge (which do not require documentation) and restatements of the ideas of others. Paraphrase, summary, and direct quotation are acceptable forms of restatement, as long as the source is cited.

- Students who are unsure how and when to provide documentation are advised to consult with their instructors. The Library has free guides designed to help students with problems of documentation. *(John Jay College of Criminal Justice Undergraduate Bulletin,* http://www.jjay.cuny.edu/academics/654.php, see Chapter IV Academic Standards)

***Have an enjoyable and fruitful semester!***