Programming Languages

CSCI 374/ Spring 2025

- Instructor: Dr. Jinwoo Kim

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  - Office Hours: 2 ~ 3 PM (NB. 6.67), Tuesday and by appointment

- Course Description

  - This course is a gentle introduction to basic concepts in the design of programming languages. This course provides a foundation for understanding, designing, and implementing programming languages. We will study essential concepts and structures in modern programming languages by examining features, and comparing them in different programming paradigms, including imperative, functional, logic, and script. I assume you already know how to program in one of the high-level programming languages like C, C++, Java, or Python.

- 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 their differences.
  - Learn how to specify syntax and semantics for a language.
  - Learn the most successful and influential features of many different programming languages.
  - Learn the program development strategies through programming examples. The set of languages you will write programs in includes Perl and ML.

- Prerequisites

  - ENG 201, and CSCI 272.

- Class homepage: http://jjcweb.jjay.cuny.edu/jwkim/class/csci374-spring-25/

    - The class homepage provides essential information, including class lecture notes, project assignments, and announcements. Please note that class handouts will be made available only from the class homepage, and no hard copies will be distributed in class. And it is your responsibility to check the class homepage often for various announcements like new project assignments, due dates, and exams. All lecture notes will be electronically available 24 hours before the class. You are responsible for printing out hard copies if necessary, briefly reviewing them, and bringing them into the course. 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, 2019 (ISBN-10: 0134997182| ISBN-13: 978-0134997186)

- Grading Policy

    - Several homework and programming assignments: 30%
    - Midterm exam: 25%
    - Final exam: 40%
    - Class participation: 5% (Mandatory in-person classes attendance and more than four unjustifiable absences are considered excessive for failing. On the other hand, if you come to the class regularly and actively participate in the course, you could expect extra credit toward your final grade.)

- Special Notes

    - Besides the office hours stated above, I am also available for questions after the class or by e-mail. If you have difficulty meeting the course requirement, please feel free to see me at the earliest possible date.
    - If you have any comments or questions on this course, you can always e-mail me.

- 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 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)

✦ Tentative Class Schedule

Lecture #	Key Topics
1	Introduction
2	Chapter 1
3	Chapter 2
4	Chapter 3
5	Chapter 3
6	Chapter 5
7	Chapter 5
8	Perl
9	Perl
10	Perl
11	Perl
12	Perl
13	Perl
14	Perl
15	Midterm Exam
16	Review of Midterm Exam
17	Chapter 6
18	Chapter 7
19	Chapter 8
20	Chapter 9
21	ML
22	ML
23	ML
24	ML
25	ML
26	ML
27	Chapter 9
28	Chapter 10
29	Final Exam

Have an enjoyable and fruitful semester!