

Syllabus

Course Name: Programming Languages and Compilers
Course Level: Sophomore
Lectured by Prof. Chung Yung

1. Course Objectives:

This course introduces the basic concepts of programming languages and compilers with the following objectives:

- 1) To introduce the computation models of programming languages,
- 2) To study the process of programming languages, and
- 3) To learn the architecture of syntax-direct compilers.

2. Course Schedule:

Week	Date	Contents	Topics
1	2/18, 20		Course Overview
2	2/25, 27	Chapters 1 & 2	Introduction, A Simple Compiler
3	3/4, 6	Chapter 3 (3, 4.2)	Scanning
4	3/11, 13	Chapters 4&5 (4.4)	Grammars and Top-Down Parsing
5	3/18, 20	Chapter 6 (4.5)	Bottom-Up Parsing
6	3/25, 27	Chapter 6	LR Parsing
7	4/1, 3	No Meeting	(Ching Ming Festival)
8	4/8, 10	Lab Session 1	Programming Assignment #1
9	4/15, 17		Midterm Exam
10	4/22, 24	Lab Session 2	Programming Assignment #1 (bonus due)
11	4/29, 5/1	Chapter 1	Introduction to programming Languages
12	5/6, 8	Chapter 2	Evolution of programming Languages
13	5/13, 15	Chapter 5	Names, Bindings, and Scopes
14	5/20, 22	Chapter 6	Data Types
15	5/27, 29	Lab Session 3	Programming Assignment #2 (#1 due)
16	6/3, 5		Final Exam
17	6/10, 12	Lab Session 4	Programming Assignment #2 (bonus due)
18	6/17, 19	Remote	(Optional) Late Hand-ins (#2 due)

3. Course Overview:

This course introduces the basic concepts of programming languages and compilers, including the issues in syntax and semantics of programming languages, the process of programs, and the principles of compilers.

4. Scoring Policy:

1. 20%: 2 Programming Assignments (15% each)
2. 20%: 9 Quiz
3. 25%: Midterm Exam
4. 35%: Final Exam

5. Textbooks and Reference:

- (Textbook 1) *Crafting a Compiler*, by C. N. Fischer, R. K. Cytron, and R. J. LeBlanc, Jr., Pearson Press, 2010.
- (Textbook 2) *Concepts of Programming Languages*, 12th Edition, R. W. Sebesta, Pearson Education Ltd., 2019.

6. Contact Information:

- Tuesday 2:10-3:50pm at EC310 (EC315),
- By appointment in advance: yung@mail.ndhu.edu.tw, or
- Add me to your Facebook/Messenger friends (recommended).