



Nanchang University CS 37: Principles of Programming Languages

Credit: 4

Contact Hours

This course is composed of 24 lecture sessions, 3 tutorial sessions and 9 office contact hours. Each lecture session takes 2 contact hours in length; each tutorial session takes 3 contact hours in length; There will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours) at the end of this term. This course has 72 contact hours in total.

Course Description

This course covers programming language concepts and design principles of programming paradigms (imperative, object-oriented, functional, logic, and concurrent). Topics include a history of programming languages, data types, control structures, compilation process, and comparison of syntactic and semantic features of these languages.

Textbook Information:

Concepts of Programming Languages, eleventh edition, Robert W. Sebesta. Addison-Wesley, 2016. ISBN13: 978-0-13-394302-3

Grading

- Participation 10%
- Project 20%
- Homework 10%
- Midterm 30%
- Final Exam(including writing paper) 40%

A+ 96-100	A 90-95	A- 85-89
B+ 82-84	B 78-81	B- 75-77
C+ 71-74	C 66-70	C- 62-65
D 60-61	F < 60	

Course Schedule

The course has 24 class sessions in total. All sessions are 2 contact hours in length. At the end



of this term, there will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours).

Note: the course outline and required readings are subject to change.

Class 1:

Introduction to the course and syllabus

Class 2:

History of programming languages. Study of language

Class 3:

Programming Language Syntax

Class 4:

Describing Syntax and Semantics

Class 5:

Semantic Analysis

Class 6:

Names, Bindings, and Scopes

Class 7:

Expressions and Assignments Statements

Class 8:

Statement-Level Control Structures

Class 9:

Data types and polymorphism

Class 10:

Blocks, scope, subprograms

Class 11:

Review

Class 12:

Midterm

Class 13:

Implementing block structured languages

Class 14:



Abstract Data types and Encapsulation Constructs

Class 15:
Support for Object-Oriented Programming

Class 16:
Support for Object-Oriented Programming

Class 17:
Functional Programming Languages

Class 18:
Imperative programming

Class 19:
Logic Programming Languages

Class 20:
Concurrent and distributed programming

Class 21:
Concurrent and distributed programming(Cont)

Class 22:
Memory management

Class 23:
Memory management(Cont)

Class 24:
Some notes on Implementation

Attending Policy

Regular and prompt attendance is required. Under ordinary circumstances, you may miss two times without penalty. Each absence over this number will lower your course grade by a third of a letter and missing more than five classes may lead to a failing grade in the course. Arriving late and/or leaving before the end of the class period are equivalent to absences.

Policy on "Late Withdrawals"

In accordance with university policy, appeals for late withdrawal will be approved ONLY in case of medical emergency and similar crises.



Academic Honesty

Nanchang University expects all students to do their own work. Instructors will fail assignments that show evidence of plagiarism or other forms of cheating, and will also report the student's name to the University administration. A student reported to the University for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.

General Expectations:

Students are expected to:

- Attend all classes and be responsible for all materials covered in class and otherwise assigned;
- Complete the day's required reading and assignments before class;
- Review the previous day's notes before class and make notes about questions you have about the previous class or the day's reading;
- Participate in class discussions and complete required written work on time;
- Refrain from texting, phoning or engaging in computer activities unrelated to class during the class period;
- While class participation is welcome, even required, you are expected to refrain from private conversations during the class period.

Special Needs or Assistance

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.