



Nanchang University

CS12: Introduction to Java Programming

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 summer course is for international school, for undergraduate students. No prior knowledge on computer programming is required. The course starts from the very beginning of the introduction of computers, programs, and the design philosophy of JAVA. Then the lecture advances to cover topics including elementary programming, selections, mathematical functions, loops, methods, arrays, objects and classes, object-oriented programming, I/O, abstract classes and interfaces, basic data structures, and networking.

The course is designed to be self-contained, which covers a prodigious range from the basic of programming knowledge to J2SE, data structure and advanced programming skills. Students are suggested to take self-study before and after each given lecture.

Course Learning Outcomes

The goal is to teach from the fundamentals of java programming to high-level network programming. The key is to teach students to master the programming design, coding, compiling, and debugging skills. It starts from very beginning, from the basic elements of programming until into high level methodologies and applications. The detailed goals include:

1. Let students be competent with basic coding features provided by object-oriented programming.
2. Be competent with writing computer programs to implement basic applications.
3. Be familiar of using basic data structure such as arrays and maps.
4. Be familiar of using basic algorithm provide by JAVA SE.
5. Be familiar of using computer I/Os and network programming.
6. Be familiar with abstract concepts and other advanced programming ideas.

Textbook Information:

Textbook: Introduction to Java Programming



Author: Y. Daniel Liang
Edition: 7th Edition
Publisher: Prentice Hall

Grading

Paper 1	15%
Paper 2	15%
Midterm Exam	30%
Final Exam	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 computers, programs and java

Class 2:

Elementary programming

Class 3:

Selections

Class 4:

Mathematical functions, characters and strings

Class 5:

Loops

Class 6:

Methods

Class 7:

Review and Paper No. 1

Class 8:

Single dimensional arrays



Class 9:

Multi-dimensional arrays

Class 10:

Objects and classes

Class 11:

Object-oriented design

Class 12:

Inheritance and polymorphism

Class 13:

Exception handling

Class 14:

Text I/O

Class 15:

Review and Midterm

Class 16:

List, stack and queues

Class 17:

Sets and Maps

Class 18:

Java FX basics

Class 19:

Java Animations

Class 20:

Review and Paper No. 2

Class 21:

Java UI and multimedia

Class 22:

Networking

Class 23:



Networking project

Class 24:
Final Exam

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.