

# Functional and Imperative Programming, Part 1

Programme course

6 credits

Funktionell och imperativ programmering, del 1

TDDE23

Valid from: 2017 Spring semester

**Determined by**

Board of Studies for Computer Science  
and Media Technology

**Date determined**

2017-04-24

**Offered for the last time**

Autumn semester 2025

**Replaced by**

TDDE82

## Main field of study

Computer Science and Engineering, Computer Science

## Course level

First cycle

## Advancement level

G1N

## Course offered for

- Computer Science and Engineering, M Sc in Engineering
- Computer Science and Software Engineering, M Sc in Engineering

## Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

## Intended learning outcomes

The aim of the course is that the students should gain enough experience in using the computer labs to facilitate future course work, and also that the students should gain basic understanding of programming. After the course, the student will be able to:

- without problems use the department computer labs
- design and implement simple algorithms in a programming language
- methodically solve programming related problems using an interactive way of work with implementation, testing and troubleshooting
- construct computer programs using Python

## Course content

The following topics are addressed during lectures:

- the university's IT systems
- The Python programming language
- methods for interactive and incremental program development
- methods for testing and troubleshooting

## Teaching and working methods

The course starts with a short section where basic Linux skills are trained. Theoretical background is introduced during a couple of lectures, but the main work is done during laboratory sessions. After this, the main part of the course starts, dealing with basic programming skills. A series of weekly seminars constitute the backbone of the course. The different seminar groups have different approaches to learning, and the students are free to choose group, based on learning style and previous experience. The main work is done during laboratory sessions. A few lectures are given as support.

## Examination

LAB1	Laboratory work	5 credits	U, G
UPG1	Exercises	1 credits	U, G

Grades are given as "Fail" or "Pass".

## Grades

Two-grade scale, U, G

## Other information

Supplementary courses: Funktionell och imperativ programmering i Python part 2.

## Department

Institutionen för datavetenskap

## Director of Studies or equivalent

Peter Dalenius

## Examiner

Peter Dalenius

## Course website and other links

<http://www.ida.liu.se/>

## Education components

Preliminary scheduled hours: 46 h

Recommended self-study hours: 114 h

## Course literature

### Additional literature

#### Books

Zelle, John M., (2010) *Python Programming: An Introduction to Computer Science*. Franklin, Beedle & Associates Inc  
ISBN: 978-1-59028-241-0