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

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 Pyhon

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