



## Course syllabus

Faculty of Technology

Department of Informatics

1IK161 Grundläggande programmering, 7,5 högskolepoäng  
1IK161 Fundamentals of programming, 7.5 credits

### **Main field of study**

Informatics

### **Subject Group**

Informatics/Computer and Systems Sciences

### **Level of classification**

First Level

### **Progression**

G1N

### **Date of Ratification**

Approved by Faculty of Technology 2022-02-07

The course syllabus is valid from autumn semester 2022

### **Prerequisites**

General entry requirements for university studies.

## Objectives

After completing the course, students are expected to be able to:

- A.1 to understand the basic programming concepts, such as sequence, comparison, selection and loops
- A.2 create simple programs and algorithms in a general purpose programming language
- A.3 explain the concepts of syntax and semantics
- A.4 explore and use various applications of text handling (string) and compound data types (array)
- A.5 learn basic development techniques with the help of subprograms and parameter transfer

## Content

This course is an introductory course in programming. It aims to equip students with basic knowledge about the fundamental concepts of structural programming through developing simple applications. The content will include the following topics: primitive data types, selection statements, iterative loops, strings, arrays, subprograms

(functions/methods) and recursion.

## Type of Instruction

Teaching takes place in the form of lectures, assignments and laboratory work. The laboratory assignments and their presentations are individual.

## Examination

The examination of the course is divided as follows:

Code	Designation	Grade	Credits
2201	Practical work	U/G	3,50
2202	Written exam	U/G/VG	4,00

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

The course ends with a written examination. After passing the labs, the final grade is decided by the written exam.

Repeat examination is offered in accordance with Local regulations for courses and examination at the first and second-cycle level at Linnaeus University. If the university has decided that a student is entitled to special pedagogical support due to a disability, the examiner has the right to give a customised exam or to have the student conduct the exam in an alternative way.

## Objectives achievement

The examination elements are linked to the course objectives in the following ways:

Goal	2201	2202
A.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2	<input checked="" type="checkbox"/>	
A.3		<input checked="" type="checkbox"/>
A.4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Course Evaluation

During the implementation of the course or in close conjunction with the course, a course evaluation is to be carried out. Results and analysis of the course evaluation are to be promptly presented as feedback to the students who have completed the course. Students who participate during the next course instance receive feedback at the start of the course. The course evaluation is to be carried out anonymously.

## Required Reading and Additional Study Material

### Mandatory literature

Liang, Daniel. Introduction to Java Programming and Data Structures, latest edition. Pearson Education Limited. (800 pages)

**Recommended reading material**

Gaddis, Tony (2018), Starting Out with Python. 4 edition. London: Pearson Education Limited (744 p)