

PROGRAMMING I (37C00400, 6 ECTS)

SYLLABUS

Version 1 (30.09.2022)

Instructor's contact information	Course information
<p>Johanna Bragge, PhD, Principal University Lecturer johanna.bragge@aalto.fi Aalto BIZ, Ekonominaukio 1, V217 Office Hours via Zoom (to be agreed via email) https://www.aalto.fi/en/people/johanna-bragge</p> <p>Teaching Assistant: Sampsa Suvivuo sampsa.suvivuo@aalto.fi https://www.aalto.fi/en/people/sampsa-suvivuo</p> <p><i>Address general course inquiries to Bragge</i></p>	<p>BSc level course in Information and Service Management (ISM) programme 2022, Period II Sessions in Zoom (NO compulsory attendance required, first lecture will be recorded) https://aalto.zoom.us/j/68535713482?pwd=YUkxa2pkWXNIZG5QUmtqNGI0bFd1Zz09 Language of Instruction: English MyCourses page: https://mycourses.aalto.fi/course/view.php?id=37000 Zulip chat: https://37c00400.zulip.aalto.fi/</p>

1. OVERVIEW

Programming I will be arranged as a MOOC (Massive Online Open Course), which utilizes modules 1-7 of the **Introduction to programming** with Python course (<https://programming-22.mooc.fi/>) provided by the University of Helsinki. An Aalto BIZ-specific 2022 course link to the MOOC is used. The instructions how to set up the programming environment are given when the course starts (Wednesday, October 26, 2022 at 16.15 o'clock, the Zoom lecture will be recorded also). No previous experience from coding is needed – the exercises start from the basics.

The coding exercises should be completed by December 4, the night before the first exam, which is arranged by Aalto on December 5, 2022. Thus, there is a single deadline for all exercises, and 80% of each exercise module should be completed in order to proceed to the next module. It is advisable to aim for 100% as the skills you learn are needed in subsequent exercises. You should reserve plenty of time for conducting the coding exercises (do them weekly, ca. 10-20 hours per week), as there's around 200 of them in total. The weight of the final exam is 50% of the grade. There are no compulsory lectures in the course, but online help sessions on Wednesdays will be arranged via Zoom, first one on Oct 26 at 16.15 o'clock (after the general introduction). Also, a Zulip chat platform <https://37c00400.zulip.aalto.fi/> will be in use for Q&A and peer support during the course.

2. PREREQUISITES

No prerequisites.

3. LEARNING OUTCOMES

Students learn to understand the software development process. They are familiar with the core set of algorithms and data structures. They are able to program medium sized applications and master a modern programming language, Python. The following topics will be taught and rehearsed at the course: Input/Output, variables, conditional statements, loops, strings, own functions, lists and other data structures, files, external libraries.

4. ASSESSMENT, GRADING AND EXAM FEEDBACK

1. Introductory lecture and weekly online support sessions via zoom, 12h (voluntary), link: <https://aalto.zoom.us/j/68535713482?pwd=YUkxa2pkWXNlZG5QUmtqNGl0bFd1Zz09>
2. Exercises at <https://programming-22.mooc.fi/> (Parts 1-7, conducted via VS Code editor) (50% of the grade, at least 101/202 points from the exercises must be earned)
3. Exam, online in MyCourses (50% of the grade, at least 15/30 points must be earned).

Feedback from the exam will be given via MyCourses announcements (generally) and via personal appointments to be agreed as needed.

5. SCHEDULE

#	Date	Topic	Deadline
1	26.10. at 16-18	Intro to the course (voluntary, the lecture will also be recorded) https://aalto.zoom.us/j/68535713482?pwd=YUkxa2pkWXNlZG5QUmtqNGl0bFd1Zz09	
2	2.11. at 16-18	Online support session (voluntary), above zoom link for all sessions	
3	9.11. at 16-18	Online support session (voluntary)	
4	16.11. at 16-18	Online support session (voluntary)	
5	23.11. at 16-18	Online support session (voluntary)	
6	30.11. at 16-18	Online support session (voluntary)	
7	4.12. midnight	Deadline for submitting the programming exercises via VS Code environment's TestMyCode extension	4.12. at 23.59 o'clock
7	5.12. at 13-16	Online EXAM at 13-16 o'clock	
	6.2.2023 at 16-19	Re-take online exam at 16-19 o'clock	

6. EXERCISES

The programming exercises (altogether 202) will be conducted in 7 parts under the following themes:

1	Introduction, I/O, variables, conditional statements
2	More conditions, loops
3	More loops, strings
4	Own functions
5	Lists and other data structures
6	Files
7	External libraries

The exercises are conducted and submitted using the **Visual Studio Code** editor, which needs a Python extension and a TestMyCode extension to check the exercises. The installations of all these to your own computer are instructed step-by-step in the MOOC page <https://www.mooc.fi/en/installation/vscode/> and also briefed at the first lecture / slide handouts.

7. COURSE BOOK AND MATERIALS

There is no course book – all material and instructions can be found at <https://programming-22.mooc.fi/>

The points you receive from conducting the exercises can be seen at: <https://tmc.mooc.fi/> and clicking your account email icon on top right.

NOTE: Do not sign-up to the general MOOC course on the above page, but to the Aalto BIZ-specific course instance created by us (this is instructed in detail in the first lecture & in slide handouts). *The Aalto teachers can see the points earned only from the Aalto BIZ course's exercises submitted via VS Code's TestMyCode (TMC) extension.*

8. COURSE WORKLOAD

Opening lecture	2h
Weekly help sessions	10h
Independent work with the programming exercises	128h
Exam and preparing for exam	20h
Total	160h (6 op)

9. ETHICAL RULES

Aalto University Code of Academic Integrity and Handling Violations Thereof

See <https://into.aalto.fi/display/ensaannot/Aalto+University+Code+of+Academic+Integrity+and+Handling+Violations+Thereof>

10. OTHER ISSUES

- Registration to course and to re-exam: Via Sisu. Course registration enrolls you automatically to the first exam (KT), but not to the re-take exam.