

Introduction to programming in Python

SYLLABUS

VU Graduate Winter School

January 6-17 2025



Any general questions for the Winter School support team? Contact graduatewinterschool@vu.nl.

Course Details

Title	Introduction to programming in Python
Coordinator(s)	Nick Schutgens
Other lecturers	
Study credits	3 ECTS
Form(s) of tuition	Online, self-study
Approximate contact hours	30
Approximate self-study hours	15 (before course) + 18 (during course)

Teaching staff (in order of appearance)

Nick Schutgens

Course description

This course is a comprehensive introduction to Python. Python code is relatively easy to read and understand and has a vast number of practical applications, including everything from the sciences to the arts. The skills you'll pick up in this course will be transferable to other programming languages.

With supervised practicals and assignments, students will learn how to program through active coding. Lectures will be light yet highly interactive, with many small exercises to engage student's abilities under professional guidance.

Learning objectives

- Computer programming concepts
- Programming as a problem-solving tool
- The Python language
- The use of Google colab notebook
- Best coding practices
- Debugging code
- Visualisation

Assignments

Each lecture will come with small hands-on exercises. After each lecture, there will be a practical with bigger assignments. Students are encouraged to work in pairs. Both exercises and assignments will be supervised, and solutions to the assignments will be discussed in class.

Grading

Grading will be done based on a final assignment. This final assignment will be done in pairs at the end of the course. As the other assignments, it will be supervised.

Provisional reading list

Students are expected to prepare for the course by doing an online course. Details will be provided by the teacher. This on-line course takes about 15-20 hours and is the starting point for the Winterschool course.

Course Schedule

	Monday January 6	Tuesday January 7	Wednesday January 8	Thursday January 9	Friday January 10
9:00 - 10:30	Introduction (starts at 9:30)	Lecture II + Exercises II	Quiz I + feedback + Quiz II	Assignments III	Lecture IV + exercises IV
Coffee break [15 min]					
10:45 - 12:15	Lecture I + Exercises I	Assignment II	Lecture III + exercises III	Feedback	Assignment IV

	Monday January 13	Tuesday January 14	Wednesday January 15	Thursday January 16	Friday January 17
9:00 - 10:30	Quiz III + feedback	Assignments V	Final assignment	Final assignment	Final assignment
Coffee break [15 min]					
10:45 - 12:15	Lecture V + exercises V	Quiz IV + feedback	Final assignment	Final assignment	Final assignment

