The Hebrew University of Jerusalem

Syllabus

Programming in python 1 - 71201

Last update 31-07-2023

HU Credits: 3

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: agro informatics

Academic year: 0

Semester: 1st and/or 2nd Semester

Teaching Languages: Hebrew

Campus: Rehovot

Course/Module Coordinator: Aleks Danov

Coordinator Email: aleks.danov@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Ms. Aleks Danov

Course/Module description:
  The course introduce the basic and advanced python topics.

Course/Module aims:
  Introduce basic concepts from programming world, develop iterative thinking and ability to formulate programming solution and its python implementation

Learning outcomes - On successful completion of this module, students should be able to:
  By the end of the course students will
a. identify problems that have programming solutions
b. express programming solution using python programming language

Attendance requirements(%):
  80

Teaching arrangement and method of instruction: live in zoom

Course/Module Content:
  Basic concepts
Idle and Spyder environment
Python Interpreter
Scripting and Debugging
Variables, statements, expressions, built-in functions
spyder environment
debugging in spyder
colab
Strings, string functions
Program Flow:
Branching and decision making
Boolean expressions,
The if statement

Repetitions, Loops: for and while.
Defining Functions
(positional vs key word)
(arbitrary arguments list)
(default arguments)
(lambda anonymous function)
(higher order functions)
Data Containers: sequences ,lists,
tuples, dictionaries, sets
Working with text files
4 types of Comprehension
Numpy, Pandas, matplotlib

Required Reading:
in moodle

Additional Reading Material:

Grading Scheme:
Essay / Project / Final Assignment / Home Exam / Referat 55 %
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 15 %
Mid-terms exams 30 %

Additional information:
The course can be taken only by students who did not take 71250
The course is prerequisite to 71202
Two midterm exams will be given during the semester.

Between 12-14 exercises will be given in moodle. There will be interviews with random students to approve the solutions.
The final project 55% will be given in the end of the semester and presented to teacher/in class