האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

# *The Hebrew University of Jerusalem*

## *Syllabus*

# *Programming in Python - 40358*

*Last update 24-12-2023*

*HU Credits: 3*

*Degree/Cycle: 2nd degree (Master)*

*Responsible Department: Geography*

*Academic year: 0*

*Semester: 1st Semester*

*Teaching Languages: Hebrew*

*Campus: Mt. Scopus*

*Course/Module Coordinator: Dr. Roie Knaanie*

*Coordinator Email: ofer.corshid@mail.huji.ac.il*

*Coordinator Office Hours: Sunday, 17:15 after the lab*

*Teaching Staff:*

*Dr. Ofer elior*

*Course/Module description:*
*Understanding computer programming, learning to program and solve problems using Python.*

*Course/Module aims:*
*Presenting the computing principles, learning to program in Python.*

*Learning outcomes - On successful completion of this module, students should be able to:*
*Understanding the computing principles, ability to program in python, write functions and use python data containers to solve problems using Python*

*Attendance requirements(%):*
*0*

*Teaching arrangement and method of instruction: Frontal lecture in a computer lab, weekly programming exercises.*

*Course/Module Content:*
*Python Interpreter*
*Variables, statements, expressions, built-in functions*
*Input/Output, using files*
*Program execution, from a file, interpreter, compiler*
*Strings, strings functions*
*Branching and decisions, Boolean expressions, if statement*
*Defining Functions*
*Data Containers:*
*strings, lists, tuples, dictionaries, sets*
*Nested Data structures, Repetitions.*
*List Comprehension.*

*Required Reading:*
*None*

*Additional Reading Material:*
*Course's textbook:*

*Introduction to Python Programming, by Ofer Elior,*
*online book:*
*https://hebrewscience.org/python/*

*Grading Scheme:*
*Written / Oral / Practical Exam 85 %*
*Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 15 %*

*Additional information:*
*A programming assignment will published after every lesson. It is required to pass 7 of the assignments. Passing this requirement earns 15 points in the final grade. At least one lecture in the course will be based on the flipped classroom approach: bBefore the lecture(s) the students will watch videos explaining the lecture's materials, and the lecture itself will focus on practicing them. Lectures will be recorded and published.*