

The Hebrew University of Jerusalem

Syllabus

PYTHON PROGRAMMING AND MATLAB FOR PHYSICS -76641

Last update 01-09-2024

HU Credits: 4

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Programming Instruction Unit

<u>Academic year:</u> 0

Semester: Yearly

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> E. Safra

Course/Module Coordinator: Gadi Kassir

Coordinator Email: gadi@hadassah.org.il

Coordinator Office Hours: sunday 17:30

<u>Teaching Staff:</u> Mr. Gadi Kassir

<u>Course/Module description:</u> First semester - Matlab Second semester - Basic programming with Python.

<u>Course/Module aims:</u> Matlab software and basic programming concepts with Python.

Learning outcomes - On successful completion of this module, students should be able to:

Ability to write computer programs with Python and with Matlab.

Attendance requirements(%):

80

Teaching arrangement and method of instruction:

<u>Course/Module Content:</u> Matlab. variables types. Vectors and matrix. Standard input/output. Scripts. Basic programming issues. Two and three dimensional graphics.

Python:

Variables and object types (strings, lists, tuples, sets, dictionaries and more). Functions, files, map, enumerate , zip, List comprehension,object oriented programming. Classes, objects, methods.

<u>Required Reading:</u> moodle examples

Additional Reading Material:

<u>Grading Scheme:</u> Written Exam % 100

Additional information:

At least 2/3 of the exercises in Python and in matlab. After Fall semester, a matlab test will take place. After second semester a python test will take place. The final grade will be the average of these two tests.