האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Elementary multivariate analysis - 80116

Last update 19-10-2021

HU Credits: 3

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Mathematics

Academic year: 0

Semester: 1st and/or 2nd Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Itamar Cwik

Coordinator Email: itamar.cwik@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Mr. Itamar Cwik,
Dr. Noa Nitzan

Course/Module description:
Elementary course in analytic geometry and functions of several variables

Course/Module aims:
To know basic notions in Euclidean and analytic geometry, geometry of paths, calculus of functions of several variable, computation of length/area/volume

Learning outcomes - On successful completion of this module, students should be able to:
On completion of the course students will know basic definitions and theorems of the topics studied in the course

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:
Euclidean geometry
Paths and their derivatives
curvature and torsion
quadratic and parametrized surfaces
functions of 2 variables
differential and tangent plane
Taylor formula
classification of critical points
double and triple integrals
computation of length, area, volume.

Required Reading:
None

Additional Reading Material:

Course/Module evaluation:

End of year written/oral examination 90 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 10 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:

The course 80132 must be studied before ot concurrently.
The course is required in the 2nd semester for mathematics students (single major) except those who began their studies before the 2021/22 academic year, and elective for or mathematics in joint degrees with other departments except math-physics.
Students taking 80142 may request exemption from the requirement to take this course (80116), subject to approval by the Bsc advisor.
To receive credit, the course must be studied in the first year.
No credit will be given if the student has completed one of the courses 80112,80114.