האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Introduction to G.I.S - 70511

Last update 02-08-2021

HU Credits: *3*

Degree/Cycle: *1st degree (Bachelor)*

Responsible Department: *Geology*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Adi Ben-Nun*

Coordinator Email: *gis.bennun@gmail.com*

Coordinator Office Hours: *By appointment*

Teaching Staff:

Mr. Adi Ben-Nun,
Ms. Laor May,
Ms. Alyno Kuzmenko

Course/Module description:
This course is designed for students with little or no experience using Geographic Information Systems (GIS).
Participants will receive instruction on the use of GIS software and an introduction to commonly used and readily available data sources.
At the end of the course participants will have created several thematic map(s) illustrating the results of spatial analyses of data related to Earth science applications.

Course/Module aims:
Constructing a theoretical background practical work experience in GIS

Learning outcomes - On successful completion of this module, students should be able to:
Theoretical knowledge in GIS Knowledge are acquired playback capability combined with various research interests

Attendance requirements(%):
00%

Teaching arrangement and method of instruction: Lecture and exercises

Course/Module Content:
Basic familiarity with the ArcGISPro environment:
Spatial data formats and conversion between formats
ArcGISPro interface: spatial and attributes query, export and share data
projections: Understand the major types and differences
Data tables: join, basic statistics
Spatial Analysis - The Toolbox, Buffers, Clip
Map design (basic principles of cartography)
Create new data layers:georeferencing aerial photographs, coding entities, adding fields to a table, editing, integration with Google Earth
Raster spatial analysis:
Model Builder
Map algebra

functions:local,focal,zonal, global
DTM and its deriviatives
Interpolation methods: IDW, Spline and Kriging
hydrological modeling
Volume filling and removal,
Iteration and feedback in Models

Required Reading:
None

Additional Reading Material:
None

Course/Module evaluation:
End of year written/oral examination 40 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 40 %
Reports 0 %
Research project 0 %
Quizzes 20 %
Other 0 %

Additional information:
None