

Environmental Geochemistry – 2 credits

Course Number:

Lecturer: Prof. Nadya Teutsch

Office Hours: By prior arrangement; email: [nadya.teutsch@gsi.gov.il](mailto:nadya.teutsch@gsi.gov.il)

Course Type: Lecture

Course Level: MSc/ PhD; Undergraduate 3<sup>rd</sup> year students with a strong background in sciences can also participate with the lecturer permission.

Prerequisites: None.

Course Overview: The course will provide an overall picture on sources, pathways and geochemical cycles of contaminants in the environment, including the marine environment. Particular attention will be given to heavy metals and their contamination in various environmental settings. The Haifa Bay will be discussed as a case study of a marine environmental contaminated area. The course will take place in four meetings and a one-day visit to the Geological Survey of Israel.

The following topics are discussed along the course:

- Ancient and modern metal contamination
- Coal fly ash usage and its environmental assessment
- Microplastics
- Isotopic tools for tracing metal contamination
- Ocean pollution

Grading: An oral presentation of a selected topic in environmental geochemistry – 90%, and participation – 10%.

Reading List: The course will be partially based on chapters from the volume  
“Environmental Geochemistry” of the series “Treatise on Geochemistry”.

[https://haifa-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=972HAI\\_MAIN\\_ALMA51171964780002791&context=L&vid=HAU&lang=iw\\_IL&tab=default\\_tab&query=any%2Ccontains%2CTreatise%20on%20Geochemistry](https://haifa-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=972HAI_MAIN_ALMA51171964780002791&context=L&vid=HAU&lang=iw_IL&tab=default_tab&query=any%2Ccontains%2CTreatise%20on%20Geochemistry)