



## *The Hebrew University of Jerusalem*

### *Syllabus*

## *Environmental Pollution and Risk Assessment - 73933*

*Last update 26-09-2024*

*HU Credits: 3*

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

*Responsible Department: Environmental Quality Sciences*

*Academic year: 0*

*Semester: 1st Semester*

*Teaching Languages: English*

*Campus: Rehovot*

*Course/Module Coordinator: Evyatar Ben Mordechay*

*Coordinator Email: [evyatar.mordechay@mail.huji.ac.il](mailto:evyatar.mordechay@mail.huji.ac.il)*

*Coordinator Office Hours: by appointment*

*Teaching Staff:*

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Dr. Evyatar Mordechay

Course/Module description:

The course will cover basic concepts in chemistry and environmental chemistry. It will be divided into two parts: in the first part we will learn and understand the main processes contaminants undergo in the environment, and in the second part, we will get to know different contaminants (organic and inorganic), their main routes to enter the environment, distribution, physicochemical properties, and their impact on human health

Course/Module aims:

Understanding the main processes pollutants undergo in the environment based on their physicochemical properties, as well as getting to know main contaminants

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

Based on the information provided in the course, students will be able to assess the various processes that pollutants undergo in the environment, based on their properties and the relevant environmental conditions (water, soil, air).

Attendance requirements(%):

100

Teaching arrangement and method of instruction: lectures

Course/Module Content:

Introduction,  
Basic Chemistry and Intermolecular Bonds,  
Solubility,  
Water Chemistry,  
Sorption Processes and Soil Environment,  
Wastewater Treatment as a Source of Pollution,  
Complexation and Chelation,  
contaminants in the Environment

Required Reading:

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Additional Reading Material:

*Manahan, Stanley E. Environmental chemistry. CRC press, 2022.*

Grading Scheme:

*Written / Oral / Practical Exam 50 %*

*Presentation / Poster Presentation / Lecture/ Seminar / Pro-seminar / Research proposal 50 %*

Additional information: