האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

ADVANCED ANALYTICAL CHEMISTRY LAB - 69501

Last update 20-07-2020

HU Credits: 4

Degree/Cycle: 2nd degree (Master)

Responsible Department: Chemistry

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Prof. Ovadia Lev and Prof. Daniel Mandler

Coordinator Email: daniel.mandler@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Prof Daniel Mandler,
Prof Ovadia Lev

Course/Module description:
The lab presents analytical techniques , which are abundant nowadays in analytical laboratories in industry and research.

Course/Module aims:
This is a new class that targets the different methods that are typically found in an analytical laboratory.

Learning outcomes - On successful completion of this module, students should be able to:
Familiarize with numerous analytical methods.

Determine which of the methods to use according to the materials to determine.

Explore the advantages and limitations of the analytical methods.

Attendance requirements(%):
100%

Teaching arrangement and method of instruction: There will be 8 meetings. In each meeting an experiment on a different techniques, such as HPLC, ICP, microanalysis, etc, will be conducted. Each experiment will be divided into three parts: introduction to the technique, thorough understanding of the various parameters that affect the measurement and finally working on a real life sample.

Course/Module Content:
The student will be experienced with 8-10 different techniques including HPLC, ICP, GC, MS, IR, UV-vis and many more. Each experiment is divided into three parts: introductory section to be able to operate the instrument, an in-depth part that will focus on more advanced features and finally the analysis of real samples.

Required Reading:
Material for each experiment is in moodle.huji.ac.il

Additional Reading Material:

Additional materials can be found in the website of the course in Moodle.

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 30 %
Project work 0 %
Assignments 0 %
Reports 30 %
Research project 0 %
Quizzes 0 %
Other 40 %
Colloqvium

Additional information: