

## *The Hebrew University of Jerusalem*

### *Syllabus*

## **SEPERATION METHODS IN BIOLOGY - 73521**

*Last update 29-01-2017*

*HU Credits:* 2

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

*Responsible Department:* animal & veterinary science

*Academic year:* 0

*Semester:* 2nd Semester

*Teaching Languages:* Hebrew

*Campus:* Rehovot

*Course/Module Coordinator:* Orna Halevy

*Coordinator Email:* [orna.halevy@mail.huji.ac.il](mailto:orna.halevy@mail.huji.ac.il)

*Coordinator Office Hours:* By appointment

*Teaching Staff:*

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Prof Orna Halevy

Course/Module description:

General knowledge of the theory behind chromatography. Study of methods for separation of micromolecules (e.g., vitamins, lipids) and macromolecules (e.g., proteins).

Course/Module aims:

General knowledge of the theory behind chromatography. Study of methods for separation of micromolecules (e.g., vitamins, lipids) and macromolecules (e.g., proteins).

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

Plan experiments including the chromatography methods  
Determine purity level of protein  
Solve problems of zone spreading  
Solve problems of protein identification

Attendance requirements(%):

80%

Teaching arrangement and method of instruction: Frontal class

Course/Module Content:

Principles of chromatography, chromatography of macromolecules: absorption, reverse-phase, ion exchange, gel filtration, affinity.  
Electrophoresis according to charge, molecular weight, iso-electrofocusing, Western blots, identification of molecules,

Required Reading:

Articles

Additional Reading Material:

Articles, Websites

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Course/Module evaluation:

End of year written/oral examination 100 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 0 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information:

Recommended to first year MSc students