האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Algorithms in Computational Biology - 76558

Last update 03-07-2016

HU Credits: 3

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: computer science & computational biology

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Dr. Tommy Kaplan

Coordinator Email: tommy@cs.huji.ac.il

Coordinator Office Hours: Sundays 9-10 or upon request

Teaching Staff:

Dr. Tommy Kaplan
Ms. Noa Moriel

Course/Module description:
Introduction to computational methods for analysis of biological sequences

Course/Module aims:
The structure of guiding principles for developing methods and algorithms to solve problems in computational biology methods.

Learning outcomes - On successful completion of this module, students should be able to:
The student will be able to figure out how to put biological problems mathematically to formulate solutions to those problems and statistical algorthmis.

Attendance requirements(%):
100

Teaching arrangement and method of instruction: Frontal Lecture

Course/Module Content:
Dynamic programming sets its probabilistic models of series. Hidden Markov-Models. Phylogenetics analysis methods.

Required Reading:
Biological Sequence Analysis, by Durbin et al.

Additional Reading Material:
None

Course/Module evaluation:
End of year written/oral examination 30 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 50 %
Reports 0 %

Research project 0 %
Quizzes 0 %
Other 20 %
Scribes and Participation

<u>*Additional information:*</u>
None