The Hebrew University of Jerusalem

Syllabus

Data structures and algorithms - 52411

Last update 12-09-2019

HU Credits: 4

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Statistics

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Mt. Scopus

Course/Module Coordinator: Gal Elidan

Coordinator Email: galel@huji.ac.il

Coordinator Office Hours: Monday at noon, by appointment

Teaching Staff:

Prof
Mr.

Course/Module description:
The course will covers basic data structures and algorithms that are used to solving real problems ranging from sorting and search to transportation planning. There will be a mix of theory and practice both in class and in exercises.

Course/Module aims:
- Understanding of basic data structures
- Understanding of core algorithmic approach
- Develop ability for run-time analysis
- Develop ability for proving correctness
- Develop capability for development of algorithms for problem solving

Learning outcomes - On successful completion of this module, students should be able to:
- Pick the right data structure / algorithm for a range of real problems
- Propose a new/adapted efficient algorithm for a problem
- Analyze the run-time of the proposed algorithm
- Prove correctness of the proposed algorithm

Attendance requirements(%):
0

Teaching arrangement and method of instruction: Lecture, TA sessionss

Course/Module Content:
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Required Reading:
None

Additional Reading Material:
Introduction to Algorithms is a book by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein

Course/Module evaluation:

End of year written/oral examination 50 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 20 %
Reports 0 %
Research project 0 %
Quizzes 30 %
Other 0 %

Additional information:

The average of the best n-1 of n programming exercises will account for 20% of the final grade. Two mid-term quizes will account for an additional 30% of the grade. You must get a passing grade in the exam to pass the course.