The Hebrew University of Jerusalem

Syllabus

Advanced Signal Processing - 67656

Last update 21-10-2021

HU Credits: 6

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Computer Sciences

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Dr. Or Ordentlich

Coordinator Email: or.ordentlich@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Prof Or Ordentlich,
Mr. Gavish Noam

Course/Module description:
The course deals with random processes and their applications in signal processing.

Course/Module aims:
Achieve a deep understanding of random processes and their applications in signal processing.

Learning outcomes - On successful completion of this module, students should be able to:
Understand signal processing applications such as noise filtering, adaptive prediction, source separation, radar and communications, and write simulations.

Attendance requirements(%):

Teaching arrangement and method of instruction: Frontal

Course/Module Content:
-Markov Processes
-Jointly stationary random processes and optimal filtering (Wiener filter)
-Adaptive filtering
-Detection of signal in noise and the radar problem
-Digital communication
-Image compression
-More topics, if time permits

Required Reading:
Lecture notes in the course's website.

Additional Reading Material:

Course/Module evaluation:

End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 60 %
Reports 0 %
Research project 0 %
Quizzes 40 %
Other 0 %

Additional information:
Some of the assignments in the course will be submitted after the end of the semester.