



# *The Hebrew University of Jerusalem*

## *Syllabus*

### *ADVANCED IMAGE PROCESSING - 67288*

*Last update 21-09-2015*

*HU Credits: 2*

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

*Responsible Department: computer sciences*

*Academic year: 0*

*Semester: 2nd Semester*

*Teaching Languages: Hebrew*

*Campus: E. Safra*

*Course/Module Coordinator: raanan fattal*

*Coordinator Email: [raananf@cs.huji.ac.il](mailto:raananf@cs.huji.ac.il)*

*Coordinator Office Hours: after class*

*Teaching Staff:*

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Prof Raanan Fattal

Course/Module description:

wavelets, sparsity, non-parametric image synthesis and image statistics. The topics will be taught in the context of various image restoration problems, such as denoising, deblurring and super-resolution.

Course/Module aims:

Provide knowledge about natural image modelling with emphasis on application to restoration problems

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

Provide knowledge about natural image modelling with emphasis on application to restoration problems

Attendance requirements(%):

0

Teaching arrangement and method of instruction: Lectures  
home exercises  
exam

Course/Module Content:

wavelets, sparsity, non-parametric image synthesis and image statistics. The topics will be taught in the context of various image restoration problems, such as denoising, deblurring and super-resolution.

Required Reading:

A Wavelet Tour of Signal Processing, Third Edition: The Sparse Way  
Mallat

Additional Reading Material:

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Course/Module evaluation:

End of year written/oral examination 50 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 50 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information:

The introduction to image processing course is a prerequisite for this course