



## *Syllabus*

### *TOPICS IN ANALYTIC NUMBER THEORY - 80874*

*Last update 24-02-2019*

*HU Credits:* 2

*Responsible Department:* Mathematics

*Academic year:* 0

*Semester:* 2nd Semester

*Teaching Languages:* Hebrew

*Campus:* E. Safra

*Course/Module Coordinator:* tamar ziegler

*Coordinator Email:* [tamarz@math.huji.ac.il](mailto:tamarz@math.huji.ac.il)

*Coordinator Office Hours:*

*Teaching Staff:*

Prof Tamar Ziegler-Lehavi

*Course/Module description:*

*We will study analytic number theory from a pretentious point of view - following*

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*Granville and Sound.*

*We also plan to discuss the recent results on multiplicative functions in short intervals, and correlations of multiplicative functions.*

*Course/Module aims:*

*Analytic number theory from a pretentious point of view*

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

*Students will learn techniques in analytic number theory.*

*Attendance requirements(%):*

*90*

*Teaching arrangement and method of instruction: Lecture*

*Course/Module Content:*

*Classical theorems for a pretentious point of view. Matomaki-Radziwiłł theorem on multiplicative functions in short intervals, Tao's proof of the Erdős discrepancy problem.*

*Required Reading:*

*relevant papers*

*Additional Reading Material:*

*Course/Module evaluation:*

*End of year written/oral examination 0 %*

*Presentation 100 %*

*Participation in Tutorials 0 %*

*Project work 0 %*

*Assignments 0 %*

*Reports 0 %*

*Research project 0 %*

*Quizzes 0 %*

*Other 0 %*

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*Additional information:*