האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

Syllabus

Representations of Finite Groups - 80830

Last update 19-09-2016

HU Credits: *3*

Responsible Department: *mathematics*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *E. Safra*

Course/Module Coordinator: *Dr. Ori Parzanchevski*

Coordinator Email: *parzan@math.huji.ac.il*

Coordinator Office Hours:

Teaching Staff:
Dr. Ori Parzan

Course/Module description:
Introduction to the theory of complex representations of finite groups, with

emphasis on examples and applications.

Course/Module aims:

Learning outcomes - On successful completion of this module, students should be able to:
Know the basic theorems in representation theory
Understand the computation of the irreducible representations of some finite groups

Learn more advanced topics in representation theory
Be familiar with applications of representation theory
Be aware of more advanced applications

Attendance requirements(%):

Teaching arrangement and method of instruction:

Course/Module Content:
Representations of groups
Subrepresentations and irreducibility
Charaters and orthogonality relations
Introduction to discrete harmonic analysis
Examples for concrete groups: Cyclic, Dihedral, Symmetric, GL2
Examples of applications in group theory, number theory, geometry, physics

Required Reading:
None

Additional Reading Material:
Steinberg - Representation Theory of Finite Groups: An Introductory Approach

James & Liebeck - Representations and Characters of Groups

Serre - Representations of finite groups

Course/Module evaluation:

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

Additional information: