



Syllabus

RELATIVITY AND GRAVITATION - 77909

Last update 29-07-2015

HU Credits: 5

Responsible Department: physics

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Tsvi Piran

Coordinator Email: tsvi.piran@mail.huji.ac.il

Coordinator Office Hours: tuesday 11-12

Teaching Staff:

Prof Tsvi Piran
Mr. Doron Grossman

Course/Module description:

This is a basic course in the General theory of relativity

Course/Module aims:

Understanding the basic principles of the special and general theories of relativity and usage of these principles for solving simple relativistic problems.

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

To solve basic problems in special and general relativity

Attendance requirements(%):

0

Teaching arrangement and method of instruction: lecture and exercise classes

Course/Module Content:

Short introduction and review of the special theory of relativity.

Basis of differential geometry.

Einstein equations.

Simple problems in General relativity

Required Reading:

Some chapters from Weinberg - Gravitation and Cosmology

Additional Reading Material:

Misner Thorne and Wheeler - Gravitation

Landau Lifshitz - The classical theory of fields.

Wald - General Relativity

Course/Module evaluation:

End of year written/oral examination 80 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 20 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information:

Excellent students can take this course as undregraduates in third year after a pre approval of the lecturer.