

## *The Hebrew University of Jerusalem*

### *Syllabus*

## *Physics for decision makers for high-school students - 49669*

*Last update 01-02-2022*

*HU Credits:* 0

*Degree/Cycle:* 1st degree (Bachelor)

*Responsible Department:* Enrichment Program for High School students

*Academic year:* 0

*Semester:* 1st Semester

*Teaching Languages:* Hebrew

*Campus:* E. Safra

*Course/Module Coordinator:* Prof Nir Shaviv

*Coordinator Email:* [nir.shaviv@mail.huji.ac.il](mailto:nir.shaviv@mail.huji.ac.il)

*Coordinator Office Hours:*

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Teaching Staff:

Prof Nir Shaviv,  
Mr. Shmuel Gilbaum

Course/Module description:

Energy, Nuclear Energy, Terrorism, Internet, Space....

In the modern age economics and politics are strongly tied to an understanding of science and technology.

Misunderstanding the science will lead to wrong decisions. This class will attempt to provide an understanding of the physics of such topics to students lacking the math background. The class will present the important topics of today's physics, emphasizing understanding, rather than math.

Course/Module aims:

The class is designed to provide basic scientific tools to citizen in modern day society, and more importantly, to decision makers.

The class will enable the students to apply critical scientific thinking to modern day technological/scientific questions.

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

The class is designed to provide basic scientific tools to citizen in modern day society, and more importantly, to decision makers.

The class will enable the students to apply critical scientific thinking to modern day technological/scientific questions.

Attendance requirements(%):

80%

Teaching arrangement and method of instruction:

Course/Module Content:

The topics to be covered are:

1. Forces and energy.
2. Electricity and light.
3. Modern physics - quantum mechanics and relativity.
5. Atoms, molecules, and heat.

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6. Radioactivity - nuclear reactors, nuclear and thermonuclear weapons, nuclear terrorism.

7. Alternative (green?) energy and global warming.

Required Reading:

None

Additional Reading Material:

None

Course/Module evaluation:

End of year written/oral examination 90 %

Presentation 0 %

Participation in Tutorials 10 %

Project work 0 %

Assignments 0 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information: