

## The Hebrew University of Jerusalem

Syllabus

## Mechanics for Med. students - 77141

Last update 06-10-2021

<u>HU Credits:</u> 3.5

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Physics

<u>Academic year:</u> 0

<u>Semester:</u> 1st Semester

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> E. Safra

Course/Module Coordinator: Prof, Ofer Biham

Coordinator Email: biham@phys.huji.ac.il

<u>Coordinator Office Hours:</u> Tuesday 13:00-14:00

Teaching Staff:

Prof Ofer Biham, Mr. Joseph Bach, Mr. dor lev.ari, Mr. akiva green

## <u>Course/Module description:</u> Introductory course in physics discussing general terms laws of mechanics

## Course/Module aims:

The course purpose is to impart basic terminology in physic for med students in order to create an understanding of basic physic systems that the students will encounter in their future studies and in the world of medicine.

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

Understanding general terms in physics including: work, force, energy, pressure, momentum.

The ability to solve basic problems in physics that includes conservation laws, spatial movement and hydrostatics.

Development of critical scientific thinking

Understanding measurements and measurement errors.

<u>Attendance requirements(%):</u> None

Teaching arrangement and method of instruction: Lecture + Tutorials

Course/Module Content:

Basic terminology: scalar, vector, physical units. Movement: constant velocity and acceleration. Kinetic and potential energy and energy conservation law. Fluids: pressure, pressure difference, Archimedes principle, liquid flow in a pipe and Bernoulli's law.

<u>Required Reading:</u> none Additional Reading Material:

Mechanics for high school and university, by Dr. Yoram Eshel (in Hebrew): textbook with homework problems and a book of solutions.

<u>Course/Module evaluation:</u> End of year written/oral examination 100 % Presentation 0 % Participation in Tutorials 0 % Project work 0 % Assignments 0 % Reports 0 % Research project 0 % Quizzes 0 % Other 0 %

<u>Additional information:</u> none