The Hebrew University of Jerusalem

Syllabus

PHYSICS FOR AGRONOMY MAJORS A - 71061

Last update 10-11-2020

HU Credits: 3

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Soil and Water Sciences

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Rehovot

Course/Module Coordinator: Mr. Itay Bar-Eli.

Coordinator Email: itay.bar-eli@mail.huji.ac.il

Coordinator Office Hours: by appointment.

Teaching Staff:

Mr. itay Bar eli,
Mr. Maor Rosenberg,
Mr. Moshe Alon,
Mr. Isaac Kramer

Course/Module description:

In this course we will meet physical and mathematical values, and we will define units and how to convert them. We will study the Newtonian mechanics and explore different types of motion.

Course/Module aims:

Provide basic mathematical and physical knowledge when solving problems in physics. Ability to solve problems in physics (especially mechanics) with an emphasis on an orderly solution and standard units.

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

1. To control the basic trigonometric functions
2. Handle vectors in a cartesian coordinate system
3. Convert units as well as control scientific order of magnitude
4. To present an orderly solution that expresses analytic thinking
5. Organize data - understand what is missing - and solve a suitable equation
6. Characterize different types of motion.
7. Analyze graphs and make conclusions.

Attendance requirements(%):

none.

Teaching arrangement and method of instruction: Lectures and tutorials.

Course/Module Content:

Vectors and scalars, values and units, kinematics, dynamics, work and energy, circular motion, hydrostatics & hydrodynamics.

Required Reading:

"Fundamentals Physics" - The Open University.

"Mechanics" - Shlomo Nir.

"*Mechanics for Preparatory and University*" - *Yoram Eshel.*

"*Understanding physics*" - *Reznik*

Additional Reading Material:
We recommend enriching your knowledge by watching relevant videos on YouTube.

Course/Module evaluation:
End of year written/oral examination 70 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 15 %
Reports 0 %
Research project 0 %
Quizzes 15 %
Other 0 %

Additional information:
Lots of practice!

Good luck!