

**Phys1331 GENERAL PHYSICS FOR PHARMACY First semester 2024-2025**

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**Textbook**: Introduction to Biological Physics for the Health and Life Sciences, 1st edition, 2010, Kirsten Franklin.

**Online Course**: <https://itc.birzeit.edu/>

**Introduction**: This course focuses on the fundamentals of biophysics and mechanistic behavior of Biosystems. Most of the physics principles covered in the scores are choosing to be relevant to health sciences.

**Learning objectives**: This course aims at providing the basic needed knowledge in physics to pharmacy students including: Newtonian Mechanics, Physics of Fluids, Fluid Flow and Pressure, Energy and Energy Conversions in Living Beings, Temperature and Thermodynamics, Electricity, Sound and Light Waves and Applications in Hearing and Vision, and Nuclear Physics, Radiation Effects and Applications.

**Grade Distribution** (Total 100 points):

• Quizzes and classwork: 20%

• midterm exam: 35%

• Final exam: 45%

**Course Syllabus:**

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| Chapter |  |
| 1 | Kinematics |
| 2 | Force and Newton’s Laws of Motion |
| 3 | Motion in a Circle |
| 11 | Pressure |
| 12 | Buoyancy |
| 14 | Fluid Dynamics of Non-viscous Fluids |
| 8 | Waves |
| 9 | Sound and Hearing |
| 17 | Temperature and the Zeroth Law |
| 19 | Phase and Temperature Change |
| 21 | Heat Transfer |
|  | Midterm exam |

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| 22 | Thermodynamics and the Body |
| 24 | Electric Force and Electric Field |
| 25 | Electrical Potential and Energy |
| 29 | The Nature of Light |
| 30 | Geometric Optics |
| 34 | The Nucleus and Nuclear Physics |
| 37 | Biological Effects of Ionizing Radiation |
|  | Final exam |