

**Physics of Everyday Life**  
**(University non-science majors course)**  
with simulations used

**Physics of Everyday Life: 1<sup>st</sup> Semester**

1. Motion
  - Moving Man**
  - Maze Game**
  - Force 1D**
  - Lunar Lander**
  - Projectile Motion**
2. Spring Scales
  - Masses and Springs**
3. Work and Energy
  - Energy Skate Park**
  - Friction**
  - The Ramp**
4. Water Distribution
5. Sound: Speakers and Violins
  - Gas Properties**
  - Sound**
  - Wave on a string**
6. Lightbulbs, the Sun, and EM Radiation
  - Blackbody Spectrum**
7. Greenhouse Effect
  - Greenhouse**
8. Static Electricity
  - Balloons and Static Electricity**
  - Electric Field Hockey**
  - Charges and Fields**
  - John Travoltage**
9. Flashlights, circuits, batteries, and power
  - Signal Circuit**
  - Circuit Construction Kit**
  - Battery Voltage**
  - Battery-Resistor Circuit**
  - Ohm's Law**
10. EM Wave Generation and Radio waves
  - Radio Waves & Electromagnetic Fields**
11. Microwaves
  - Microwaves**
12. Discharge Lamps and Fluorescent Lights
  - Discharge Lamps**

**Physics of Everyday Life: 2<sup>nd</sup> Semester**

13. Photocopiers and semiconductors
  - Conductivity**
  - Semiconductors**
14. Transformers and Power Distribution
  - Circuit Construction Kit**
  - Faraday's Lab**
15. Sound, Speakers, and Amplifiers
  - Gas Properties**
  - Sound**
  - Faraday's Lab**
  - Semiconductors**
16. Light Emitting Diodes
  - Semiconductors**
17. TV and light/color
  - Discharge lamps**
  - Blackbody Spectrum**
  - Color vision**
18. Sunlight & Vision
  - Color vision**
  - Blackbody Spectrum**
19. Lasers
  - Lasers**
20. Cameras
  - Geometric Optics**
21. Hot air balloons and buoyancy
  - Gas Properties**
  - Balloons and Buoyancy**
22. Nuclear Weapons and Power
  - Nuclear Physics**
23. Medical Imaging (Ultrasound and MRI)
  - MRI**
24. Cosmology