

UNIVERSITY OF PUERTO RICO AT ARECIBO  
PHYSICS/CHEMISTRY DEPARTMENT  
BACHELOR OF TECHNOLOGY IN INDUSTRIAL CHEMICAL PROCESSES

**Course N°:** FISI 3002

**Title of Course:** General Physics II

**Credits:** 3

**Open to:** Industrial Chemical Processes  
Technology students

**Contact Hours:** 3/weekly

**Pre-requisite:** FISI 3001

**Textbook:** *Física: Conceptos y Aplicaciones*

**Author:** Paul E. Tippens

**Co-requisite:** none

**Publisher:** Mc Graw Hill

**Publication Year:** 2007

**Supplemental Materials:**

- *Diccionario de Física*, McGraw Hill, 1991.
- Encyclopedia of Physics, VCH Publishers, 1991.
- [www.wolframalpha.com](http://www.wolframalpha.com)

**Term:** Second Semester

**Course Coordinator:** Prof. Ángel Acosta

**Course Description:** Study of the fundamental principles of modern physics and structure of matter. It emphasizes waves, electric and magnetic fields, and electronics.

**Course Objectives:**

- Study the laws of physics.
- Apply the physical and mathematical principles that govern nature.
- Develop reasoning and analysis skills in the solution of problems involving physical principles.

**Relation of Course to Program Objectives:**

1	2	3	4
x			

**Relation of Course to Program Outcomes:**

1	2	3	4	5	6	7	8	9	10	11
x	x	x								

**Evaluation/Grade Reporting:** 2 partial exams (60%), homework (10%) and final exam (30%)

<b>Topics</b>	<b>Teaching/Learning Strategies Time Distribution (hours)</b>
Vibratory Movement	Lecture (5)
Mechanic Waves	Lecture (5)
Stationary Waves	Lecture (5)
Sound Waves	Lecture (5)
Electrostatics	Lecture (5)
Electric Fields	Lecture (5)
Electric Potential	Lecture (5)
Continuous Current	Lecture (5)
Electric Circuits & Magnetic Fields	Lecture (5)
Total	45