



# University Bulletin

## Undergraduate Degree Programs

### Physics (PHYS)

**PHYS 212 (GN) General Physics: Electricity and Magnetism (4)** Calculus-based study of the basic concepts of electricity and magnetism.

**PHYS 212 General Physics: Electricity and Magnetism (4)  
(GN)**

**(BA) This course meets the Bachelor of Arts degree requirements.**

Calculus-based introduction to classical electricity and magnetism, including such topics as, electric charge and electric fields, Gauss's law, electric potential, capacitance, current, resistance, and circuits, magnetic fields, and fields due to currents, induction and inductance, magnetism of matter, Maxwell's equations, and electromagnetic oscillations.

This course is designed to provide students with a working knowledge of the elementary physics principles mentioned above, as well as their applications, and to enhance their conceptual understanding of physical laws. Students attend two lectures, one recitation session, and one two-hour lab/activity period per week. Use of a combination of computer-based and traditional lab exercises is expected and collaborative learning exercises will be used in both lab and recitation settings. The introduction of data acquisition and analysis methods (often making use of modern computer tools) will be stressed in the laboratory/activity period.

Course evaluation is based on a combination of regular homework sets and/or quizzes, reports from the lab/activity period, midterm and final exams and other evaluative tools.

The course is an important prerequisite for later work in many science and engineering disciplines. The course will be offered (at UP campus) during Fall, Winter, and Summer sessions.

General Education: GN

Diversity: None

Bachelor of Arts: Natural Sciences

Effective: Fall 1999

Prerequisite: **MATH**

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Concurrent: **MATH**

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**Note** : Class size, frequency of offering, and evaluation methods will vary by location and instructor. For these details check the specific course syllabus.

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