



## PHY 212: General Physics II

This is the second semester continuation of PHY 211. It serves primarily as a calculus-based introduction to electricity and magnetism. In particular this course covers Maxwell's equations and basic electric circuits, both DC and AC. Topics also include fluids, oscillations, and waves. Prerequisite: C or better in PHY 211. Concurrent registration in MTH 253 is recommended. Three lecture hours and three laboratory hours per week. Instructional Support Fee applies. Gen. Ed. Competencies Met: Scientific Reasoning and Discovery.

### Course Student Learning Outcomes

1. Apply knowledge of electricity, magnetism, circuits, and optics to solve both numerical and symbolic physics problems.
2. Utilize mathematical tools such as dimensional analysis, vectors, and concepts from multivariable calculus.
3. Model real world situations using physics tools and concepts.
4. Analyze laboratory data, including sources of error.
5. Recognize the power and proper usage of scientific thinking and methods.
6. Solve unfamiliar problem types using familiar techniques, a process which requires critical and abstract thinking.

**Credits:** 4

**Program:** Physics