

NorthWest Arkansas Community College
Standard Course Outline

PHYS 2034 College Physics II

Math/Physics Division

Catalog Description:

Continuation of PHYS 2014. Topics include intermediate level principles of mechanics, heat, sound, electricity, light, relativity, quantum mechanics and atomic and nuclear structure. Lecture and Laboratory.

Prerequisite:

PHYS 2014 or MATH 1213 with a grade of "C" or better.

Credit hours/ Contact hours/ Load hours:

4/6/5

Target Audience & Transferability:

This course is the second of a two semester physics series. It targets those students working toward a BS degree that would require a full year of a non-calculus based physics. This course will transfer to most 4-year colleges

Common or Essential Student Outcomes:

- To understand how the scientific method can be used to increase our knowledge of how the physical world and universe work.
- To describe basic physical processes and relationships
- To learn and develop problem solving strategies
- To be able to communicate this information to others

Required Text:

Wilson & Buffa; COLLEGE PHYSICS; Fifth Edition, 2003

Topics:

- I. Electrostatics (Chapters 15 & 16)
- II. DC Electric Circuits (Chapters 17 & 18)
- III. Magnetism (Chapter 19)
- IV. Induction & Electromagnetic Waves (Chapter 20)
- V. Geometric Optics (Chapters 22 & 23)
- VI. Physical Optics (Chapter 24)
- VII. Optical Instruments (Chapter 25)
- VIII. Relativity (Chapter 26)

Required activities:

Students will participate in 2-3 hours of lab per week