PHYS 1501 - Fundamentals of Physics 1

Fall 2026 Syllabus, Section 01, CRN 44023,

Credit hours: 4

Instructor

Cynthia Smotzer

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Public Instructor Information

Instructor Title: Professor
Instructor Professional Qualifications:

MS Physics Indiana University 1993

BS Physics University of Cincinnati 1991
Instructor Office Location: Ward Beecher 2012
Instructor Office Phone: 330-941-3616

Course Description

1501. Fundamentals of Physics 1. Topics include kinematics, forces, energy, momentum, rotational kinematics, torque, angular momentum, simple harmonic motion, and mechanical waves. Not recommended for mathematics, chemistry, physics, or engineering majors. Prereq.: C or better in both MATH 1510 and MATH 1511 or C or better in both MATH 1510C and MATH 1511C or C or better in MATH 1513 or at least level 70 on the Mathematics Placement Test. 4 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Physics Classroom		

https://www.physicsclassroom.com/

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Chapter 1: Fundamentals	Units and Measurement Graphing	
8/31	Chapter 2: 1D kinematics		
9/7	Chapter 2		
9/14	Chapter 3: Newton's Laws		
9/21	Chapter 4: Vectors and Projectiles		
9/28	Chapter 5: Forces in 2D		
10/5	Chapter 5		
10/12	Chapter 6: Momentum, Collisions and Explosions		
10/19	Chapter 7: Work and Energy		
10/26	Chapter 8: Circular and Satellite Motion		
11/2	Chapter 9: Rotation and Balance		
11/9	Chapter 9		

11/16	Chapter 10: Fluids
11/23	Chapter 16: Vibrations and Waves
11/30	Chapter 17: Sound Waves
12/7	Finals Week

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.