

PHYS 1501 - Fundamentals of Physics 1

Summer 2026 Syllabus, Section 01, CRN 30034,

Credit hours: 4

Instructor

Snjezana Balaz

Professional Qualifications:

Ph.D. Chemical and Materials Engineering, University of Nebraska-Lincoln, Lincoln, NE (2007);

M.S. Physics, University of Nebraska-Lincoln, Lincoln, NE (2005);

B.S. Physics, Northland College, Ashland, WI (2001)

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Communication Expectations:

In person , or by email. I expect polite emails.

How to Refer to me:

Dr. Balaz or Dr. Snow

Course Description

1501. Fundamentals 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 MATH 1507 or MATH 1510 and MATH 1511, or readiness for MATH 1571 or equivalent, or at least level 40 on the Mathematics Placement Test. 4 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Physics, Edition: 5	Alan Giambattista	978-1-260-48691-9

The e-book can be accessed on BlackBoard. See SmartBook assignments on BlackBoard. See the dates on BlackBoard.

Online Homework Site: CONNECT (linked from the Blackboard page). There is an electronic version of the textbook available with CONNECT. To enhance your learning experience and provide discounted access to the right course material, this course is part of an inclusive access model called First Day®. You can easily access the digital materials for your course right from Blackboard. YSU will bill you at the discounted price as a course charge for this course.

You have the option to opt-out of this program in Blackboard. However, please be advised it is **NOT** recommended that you opt out, as these materials are required to complete the course. If you choose to opt out, you will be responsible for purchasing your course materials at the normal retail.

Calculator: You will also need a scientific calculator (not your phone).

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

MATERIAL COVERED AND TENTATIVE SCHEDULE

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
5/11	Chapter 1 Chapter 2	Introduction, Measurement, Estimating Describing Motion: Kinematics in One Dimension	
5/18	Chapter 3	Kinematics in Two Dimensions: Vectors	Due 5/17 at 7pm: Exam 1 (1-3), Wednesday, May 20
5/20			Due 5/19 at 10:59pm: Chapter 1: Introduction, Measurement , Estimating Chapter 1 Homework Chapter 2: Describing Motion: Kinematics in One Dimension Chapter 2 Homework Chapter 3: Kinematics in Two Dimensions: Vectors Chapter 3 Homework
5/25	Chapter 4 Chapter 5	Dynamics: Newton's Laws of Motion Circular Motion; Gravitation	
6/1	Chapter 6 Chapter 7 Chapter 8	Work and Energy Linear Momentum Rotational Motion, Static Equilibrium	Due 5/31 at 7pm: Exam 2 (4-6), Friday, June 6
6/5			Due 6/4 at 10:59pm: Chapter 4: Dynamics: Newton;s Laws of Motion Chapter 4 Homework Chapter 5: Circular Motion; Gravitation Chapter 5 Homework Chapter 6: Work and Energy Chapter 6 Homework Chapter 7: Linear Momentum
6/8	Chapter 9	Fluids	Due 6/7 at 7pm: Exam 3 (7-9), Friday, June 12
6/12			Due 6/11 at 10:59pm: Chapter 7 Homework Chapter 8: Rotational Motion Chapter 8 Homework Chapter 9: Fluids Chapter 9 Homework
6/15	Chapter 10 Chapter 11 Chapter 12	Oscillation Waves Sound	
6/22			Due 6/21 at 7pm: Exam 4 (10-12) Monday, June 22 Due 6/22 at 6:30am: Chapter 10: Oscillations Due 6/22 at 6am: Chapter 10 Homework Chapter 11: Waves Chapter 11 Homework Chapter 12: Sound Chapter 12 Homework

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.