PHYS 1110 Section 02: General Physics I, 4 credits
University of Wyoming, Fall semester 2025

What You Really Need to Know (but please read the syllabus)

Class Times and locations

Lecture: MWF 10:00–10:50, Classroom Building Room 133

Laboratory (All labs are in STEM 175): Sec 10: T 11:00 AM–12:50 PM; Sec 11: T 1:10–3:00 PM; Sec 12: T 3:10–5:00 PM; Sec 13: T 9:00–10:50; Sec 14: W 11:00 AM–12:50 PM; Sec 15: W 1:10–3:00 PM; Sec 16: W 3:10–5:00 PM.

Discussion (All discussions are in EN 2105): Sec 20: T 11:00–11:50 AM; Sec 21: T 3:10–4:00 PM; Sec 22: T 4:10–5:00 PM; Sec 23: W 12:00– 12:50 PM; Sec 24: W 2:10–3:00 PM; Sec 25: W 3:10–4:00 PM; Sec 26: R 11:00–11:50 AM.

Instructor

Richard Barrans, Ph.D., M.Ed., Assistant Lecturer, Physics and Astronomy
Physical Science Building room 116, no phone in office, rbarrans@uwyo.edu.
Office Hours: PS 116: M 3:10–4:10 PM, T 10–11 AM; F 11:00 AM–noon;
PS 234: T 7:00–8:00 PM

Teaching Assistants

Name	Office hour	Section(s)
Sami Alheeh		24
Sam Barber	M 10:30 AM–12:30 PM in PS 202	15, 16, 22
Mauricio Corona	R 10 AM–noon in PS 202	14
Palash Dhali	F 10 AM–noon, PS 202	10, 11, 21
Megan Frank	M noon–1 PM in STEM 180; T 9–9:50 in PS 103	20
Taylor Juchau-Peraza	M 3–4 PM, PS 103	25
Jeremy LaFollette	T 10 AM–noon, PS 202	12, 23
Adekunle Ojelabi	M 10–11 AM, PS 132	26
Josh Wanninger	W 3–4 PM; book a time	13

Grading Scale and Grading Policy

Grading will be on a standard scale (90's = A, 80's = B, 70's = C, 60's = D, < 60% = F). Standards comprise 75% of the course grade, and labs comprise 25%.

Standards: The list of standards can be viewed on the course website at barransclass.com. If you don't satisfy a standard on the first assessment, you automatically qualify for the next scheduled retest without penalty. If you don't satisfy the standard at the retest, you may continue to retest, but you must meet with me or a designee to review the standard before each retest.

Labs: You must average **at least 60% on the labs** to pass the course. If your lab average is less than 60%, you will receive an F for the course regardless of your scores on the standards.

A note about grades: Your grade in this course reflects your performance over a 15-week period on a limited set of contrived evaluations. It does not reflect your worth as a person or what I think of you. Because of the scope of this course, and because it comprises only a small fraction of your college career, your grade is not a prediction of your future success nor an evaluation of your career potential. In short, please do not suffer by making more of your grade than it really is.

General Requirements and Expectations

Attendance Policy

Attendance in lab is required to receive credit for the lab. If you can't attend your scheduled section, you may attend another lab session in the same week. Otherwise, contact your instructor to arrange a make-up lab or to pro-rate an excused lab.

Lab

The lab activities are to be completed entirely in lab. Scoring is all-or-nothing: either you get full credit for a lab, or you don't. If your lab instructor tells you that something is incorrect or missing, fix it before you leave. Most labs include a pre-lab exercise: complete it before the lab and bring it to lab with you. It must be approved by your instructor before you begin the lab work.

Homework

"Inclusive access" to the textbook and WebAssign is available with StartRight+. You should be able to access WebAssign assignments directly through Assignments in WyoCourses. Notify me immediately if you can't, so that I can find a fix or a work-around.

Internet

Course information and lecture slides will be accessible through WyoCourses. Materials such as lecture slide shows, worksheets, and labs, are at my website, www.barransclass.com, in case the links in WyoCourses are missing or incorrect.

Tentative Schedule

Date	Topic (Standard)	Textbook Reading
08/25	Working with units (1, 2)	1.1–1.7
08/27	Describing motion (3–5)	1.11–2.3
08/29	Free fall	2.4
	Lab 1: Measurement	
09/01	**Labor Day—No class**	
09/03	Trigonometry, vectors (6, 7)	1.8–1.10
09/05	Kinematics in two and three dimensions	3.1

Date	Topic (Standard)	Textbook Reading
	Lab 2: Motion graphs	
09/08	Ballistic trajectories (8, 9)	3.2–3.3
09/10	Kinematics practice	
09/11	**Quiz 1 5:10–6:00 PM, CR 133**	
09/12	Newton's laws (10–13)	4.1–4.2
	Lab 3: Vectors	
09/15	Forces (14–16)	4.3–4.5
09/17	Newton's first and second law problems (12, 17)	4.6
09/19	Inclined coordinates, two-body problems (18, 19)	4.7
	Lab 4: Projectile launcher	
09/22	Uniform circular motion (20, 21)	7.3.2–7.4
09/24		
09/25	**Exam 1 5:10–7:00 PM, CR 133**	
09/26	Simple machines, work, and power (22, 23)	5.1, 5.7
	Lab 5: Atwood machine	
09/29	Kinetic energy, potential energy (24, 25)	5.2–5.5
10/01	Conservation of mechanical energy (26)	5.6
10/03	Conservation of energy practice	
	Lab 6: Conservation of mechanical energy	
10/06	Impulse and momentum (27–29)	6.1–6.7
10/08	Elastic collisions	6.3
10/09	**Retesting 5:10–7:00 PM, CR 133**	
10/10	Collisions in two dimensions (30)	6.4
	Lab 7: Pendulum challenge	
10/13	**Semester Break—No class**	
10/15	Angular kinematics (31)	7.1–7.2
10/17	Torque, statics, center of mass (22, 33)	8.1–8.3
	Lab 8: Collisions	
10/20	Newton's 2nd for rotation, moment of inertia (34, 35)	8.4
10/22		
10/23	**Exam 2 5:10–7:00 PM, CR 133**	
10/24	Rotational work and energy (36)	8.5

Date	Topic (Standard)	Textbook Reading
	Lab 9: Torque and angular acceleration	
10/27	Angular momentum (37, 38)	8.6
10/29	Gravity, orbits, Kepler's laws (39, 40)	7.5
10/31	Simple harmonic motion (41)	13.3–13.4
	Lab 10: Hooke's law springs	
11/03	Pendulums (42)	13.5
11/05	Mechanical waves (43)	13.7–13.9
11/06	**Retesting 5:10–7:00 PM, CR 133**	
11/07	Wave interference; standing waves (44)	13.10–13.11
	Lab 11: Standing waves	
11/10	Sound waves, intensity, decibel scale (45)	14.1–14.4
11/12	Doppler effect (46)	14.5–14.6
11/14	Sound interference, beats, harmonics (44)	14.8–14.13
	Lab 12: Entropy	
11/17	Heat and temperature, thermal expansion (47, 48)	10.1–10.3
11/19	Internal energy, specific heat, latent heat	11.1–11.5
11/20	**Exam 3 5:10–7:00 PM, CR 133**	
11/21	First law of thermodynamics, pV work (49)	12.1–12.3
	Lab 13: Heat	
11/24	Entropy (50)	12.5
11/26	**Thanksgiving Break—No class**	
11/28	**Thanksgiving Break—No class**	
	Thanksgiving Break—No lab	
12/01	Heat engines, efficiency (51)	12.4
12/03	Practice	
12/04	**Retesting 5:10–7:00 PM, CR 133**	
12/05	Exam review	
	Lab make-up week	
12/08	**Final exam 7:00–9:00 PM**	