

Phys 161 Fall 2025 Schedule

This schedule may change. Students will be notified of changes as quickly as is reasonable.

Wk #	Monday's Date	Lecture Topics & Links	Lab Topics & Links
1	08/18	Ch 1 & 3 from workbook Sig figs, units, vectors, etc • Sci Notation Tut(w/ vids) • Orders of mag • Uncertainty in Measurement Tut • How physicists usually do dimensional analysis here • Robust Error Propagation (could be a lab assignment) • Vector Phet • http://physics.bu.edu/~duffy/HTML5/vector_spin.html Try 10, 8, 0.32, 0.64, 1, 2800	Code Vector Addition in Python Check Canvas page for an online quiz
2	08/25 08/29 = Last Drop with refund 09/01 = Last Drop no W	Ch 2 from workbook • 1D kinematics tutorial from The Physics Classroom • Moving Man • Projectile Tut • Projectile Phet • My cop and speeder sim • Vid: Full bowling-ball feather drop • Vid: slo-mo just the drop Duffy simulations (entire list): • Graph Matching • Landing a rocket • Ranking acceleration (move mouse slowly) • Galileo's ramp	1D Motion with Tracker (collect data, start ppt draft) Coding fools might like to watch this vid & how to get data from glowsript into Excel This playlist shows tricks for using Excel, PPT, etc More Phys 161 lab links
3	09/01 Holiday Mon 09/01 Labor Day	Ch 4 from workbook Use glowsript files in phys161 solns • 2D.constant.accel.with.arrows.n.plot • Above but in component form • Visualization of workbook problem 4.19 • My relative velocity visualization • Boat crossing river Duffy Simulations • Race on moving walkway • Monkey hunter	Prepare presentation in lab; come in with draft ready. More Phys 161 lab links This playlist shows tricks for using Excel, PPT, etc
4	09/08	Ch 4 & 5 • Some tricky FBDs (scroll down to see them) • Slo mo vid of broomstick on wine glasses • Short N3 Law Quiz with answers	Present to class
5	09/15	Ch 5 • My Atwood's sim • Block and Tackle • More N3 Law quiz with answers • Force Basics Phet Duffy: • Ranking forces (move mouse slowly)	Old Exams & Sol'ns Perform better on real exams by practicing like real exams. Do NOT use solutions. Time yourself (2 hrs). Then grade yourself.

6	09/22 Exam 1 Mon 09/22 Ch 1-4	Ch 5-6 • My mass on stiff rod sim • Frames of reference vid • My sim: angled applied force on block on flat surface Duffy: • Car on Banked turn	Data Aq Oral Presentation 2 Coding fools might read these two documents: One-block Prep for two block Two block starter code How to get data from glowscript into Excel
7	09/29	Ch 6-7 • Tre's Multi-Path Sim	Prep presentations Playlist for Excel, PPT, etc More Phys 161 lab links
8	10/06	Ch 7-8 • Hooke's Law Phet • Skate park Phet • Masses & springs Phet • Pendulum Phet • Lennard-Jones Phet Duffy: • Plot energy vs time for block down ramp hitting spring	Present to class
9	10/13	Ch 8-9 • Collisions Phet Duffy: • Motion of center of mass	Old Exams & Sol'ns
10	10/20 Exam 2 Mon 10/20 Ch 5-8	Finish Ch 9 & start Ch 10	Inelastic Collisions • XL template Turn in handwritten report on Canvas (Guidelines)
11	10/27	Ch 10 • Crazy rolling motion visualizer • Rolling with slipping visualization	Code Center of mass COM coding vids
12	11/03 11/07 = Last Drop with W	Ch 11 • My sim: angular momentum for straight line motion • Vid: CD players in space as gyroscope • Full treatment of gyros (beyond the scope of our course) • Veritasium bullet-block off-axis • Bullet into blocks (on- vs off-axis)	Torque & rotational energy group activity • Vid for task 1 • Vid for task 2 Turn in handwritten report on Canvas (Guidelines)

13	11/10 Holiday 11/11 Veterans Day	Ch 12 – Statics Duffy: • Hinged rod	No lab due to the holiday!
14	11/17	Ch 13 – Universal Gravitation • Gravity Orbits Phet • My sim: escape velocity • Black holes 1 • Black holes 2 • Black hole simulated visuals	Old Exams & Sol'ns
15	11/24 Holiday 11/27-29 Thanksgiving	Exam 3 Mon 11/24 Ch 9-12	Gravitational Coding Lab Turn in on Canvas Brief training vid
16	12/01	Ch 14 – Fluids & Pressure • Decent Bernoulli versus Coanda video • NASA Airfoil Simulator • NASA Lift Lie #1 • NASA Lift Lie #2 • NASA Lift Lie #3 • NASA's explains lift (force from turning a moving fluid) • Weird Russian video on Tea Leaves (@ 3:30 is demo) • Hardcore airfoils page • Slow Mo Guys Droplet Collisions • Collection of conceptual physics questions Wed 12/03 last day of instruction	Catch-up Lecture Fluid Demos Wed 12/03 last day of instruction
17	12/08	Cumulative Final Exam Mon. Dec 8, 4:15 to 6:15 p.m., M310	