

UNIVERSITY OF NEW HAMPSHIRE MANCHESTER

Course Syllabus Summer 2025

PHYS 401.M1 Introduction to Physics I

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Instructor Information:

- Name: David Jagodowski (a.k.a Prof. Jag)
- eMail: David.Jagodowski@unh.edu
- Cell: 603-497-7266 (please try email first)
- Office Hours: After lecture or private Zoom/Teams sessions (by appointment).

Course Information:

- Section **M1** (CRN 70360) meets live on **Tues. and Thurs. 6:10 PM – 8:30 PM** in Zoom/Teams.
- Credits: 4
- *Suggested Text* (Not required)
 - **College Physics: A Strategic Approach 2nd /3rd /4th Ed.**
by Knight, Jones, & Field
-or-
 - **Physics: Principles with Applications 6th or 7th Edition** by Douglas C. Giancoli.
- This course satisfies graduation requirements
 - Physical Sciences Gen Ed (GN3P)
 - Physical Science Discovery (PS)

Prerequisites/Requirements:

- You are expected to have some working knowledge of algebra, geometry, and trigonometry for this course. The instructor will re-introduce these mathematical principles the first time they are encountered. No previous physics knowledge/experience is required.
- You are required to have a scientific calculator or device capable of performing trig functions (sin, cos, tan, etc.) and exponential notation.
- You are *strongly encouraged* to have access to *some* recently published college-level algebra-based Physics textbooks or equivalent online resources. Please refer to the suggested texts above. If you're new to physics, I recommend the Giancoli book.

Course Objectives:

- This course is designed to present you with a broad overview of classical physics. It will introduce you to a variety of phenomena and terminology that will help prepare you for further studies in the sciences, field work, research, etc., or simply provide you with a general understanding of how things work in nature.
- The topics that we will cover in this course include motion in 1 and 2 dimensions including parabolic motion, forces and Newton's Laws, circular motion, gravitation, work and energy, linear and angular momentum, and other topics as time allows.
- This course strives to develop your knowledge of how the natural world is constructed and re-establish the idea of scientific truth and absolutes.
- To develop analytical thinking and problem-solving skills and learn how to analyze and break apart complex problems in terms of simpler physics principles.

Method of Instruction:

As much as is possible online, I prefer to have some interaction in the course versus just me talking AT you for an hour at a time. I request that you be actively engaged in the lecture, and feel free to interrupt me if you have a question or need clarification. To facilitate this, I request that your cameras be ON as much as possible during classtime (unless you have a convincing reason why you cannot do this). A typical class session will consist of one of more of the following parts:

- A quick recap of what was discussed in the previous lecture.
- Introduction of new material via lecture slides that incorporate videos and demonstrations.
- A Q&A period to discuss homework problems to make sure everything is making sense.

Lecture Notes:

- Lecture Notes (classroom presentation slides) will be available for you to download *before* class so you don't have to try to write down everything and can stay present and engaged in the online classroom discussion.

Class Time

- *The duration of any individual class will vary depending on the extent of the subject matter being covered.* Given the pace of this course, I expect we'll be using up most of the 2.33 hours we have scheduled.
- After the first hour (around 7:15) we'll take a 10-15 minute break. Go stretch, grab a beverage, etc.
- When I'm finished with my lecture for the evening, I will ask if there are any questions, dismiss the class, and "hang out" online if anyone wants to stay and talk about *anything*.

Methods of Testing & Evaluation:

Homework (HW):

Homework will be assigned weekly except during Exam weeks. Homework is an *essential part* of the course and the primary indicator as to how well you are comprehending the material. Homework consists of completing select problems assigned by the instructor. Students should plan to allocate a *minimum* of 3-4 hours per week for the completion of homework.

- Homework problems are selected by the instructor.
- Because of the pace of this course, sometimes there will be 2 HW assignments (1 per lecture).
- HW assignments must be completed on paper and then transcribed into a Canvas Quiz, which will serve as a digital answer sheet. You WILL need to digitize (scan/photograph/pdf) your homework and upload it into the Canvas quiz. If you do not upload it, I cannot assign partial-credit, and there will be a 25-point deduction. If you forget to attach it, I will remind you and you can just email it to me and get your points back.
- If you are unable to complete an entire assignment, just complete as much as you can and submit it. Mathematically speaking, even an "F" is MUCH better than a "0". Infinitely better! It's too easy to fall behind.
- Your lowest homework/quiz grade will be automatically dropped at the end of the semester.
- HW solutions will be made available for each assignment shortly after their due date. As much as possible, you must turn in your HW on time because Canvas will lock you out of that "Quiz" after the deadline.
- If you have a special situation and need more time for a HW assignment, contact the professor and he'll make arrangements for you to submit it. I'm okay with keeping an assignment open... just ask!

Labs:

- As time allows, we'll perform a few at-home and online lab experiments to reinforce certain topics of study.

Exams:

Proposed exam dates appear on the course schedule. There are two exams, a midterm and a final. All exams will be primarily multiple choice and completed online as a Canvas “Quiz”.

Attitude:

Students may be assessed on their “attitude” including participation, interest, effort, quality & neatness of work, integrity, behavior, punctuality, maturity, and whatever positive (or negative) contributions they bring to the Zoom session. The above 4 components are weighted to determine a student’s final grade as so:

45% Homework & Labs | 45% Exams | 10% Attitude

Note: Homework is extremely important. Skipping homework and “making up the points” on the exams is NOT a viable strategy if you want to do well in the course!

Homework Grading Rubric:

This rubric provides a foundation for how your performance will be evaluated on homework assignments. Your actual grade will be numeric, but this shows the expectations.

100	Perfection. You completed the entire assignment correctly, neatly, and used proper notation throughout. You began with a valid physics equation and calculations/derivations were easy to follow, and you accounted for significant figures.
A	Indicates that you completed every problem successfully, but the methodology or notation was not always complete, consistent, or easy to follow.
B	Indicates that you completed most of the assignment successfully and attempted to solve all of the problems.
C	Indicates that you tried to solve most problems with varying degrees of success.
D	Indicates that you only attempted about half the problems and did not spend adequate time on the assignment, or it was too messy/disorderly to be comprehended.
F	Indicates that you attempted less than half the problems and/or did little of academic value in the problems attempted.
0	The only way to get a zero is to not turn in an assignment. As such, it is always in your best interest to turn in <i>something</i> so you can receive an F (50 points) instead of a zero.

UNH Grading System:

At the end of the semester, your final grade will be based on this scale:

Letter	Numeric	Letter	Numeric	Letter	Numeric
A	93.33-100	B-	80.00-83.32	D+	66.67-69.99
A-	90.00-93.32	C+	76.67-79.99	D	63.33-66.66
B+	86.67-89.99	C	73.33-76.66	D-	60.00-63.32
B	83.33-86.66	C-	70.00-73.32	F	Below 60

Professor's Expectations

If you need help:

I am always willing to help you... but you have to let me know. The best way to reach me outside of class is by email. I check email several times per day and am generally able to reply promptly. If necessary, we can schedule a Zoom meeting or Teams meeting before or after lecture. If you have non-physics-related issues, please refer to the resources at the end of this syllabus.

Attendance:

Please try to log into the class on time (6:10 pm) and I will do the same. I will try to open the Zoom meeting by 6:00. If you cannot attend a lecture, please email or message me in advance, when possible. Else, please check in with me afterwards so I can let you know what you missed. See the [Attendance policy](#) in the Student Rights, rules and Responsibilities handbook ([SRRR](#)).

Exceptional Circumstances:

Stuff happens... I get it. There may be events that keep you from attending class for an extended period (i.e., a medical or family crisis, alien abduction, vacation, rapture, etc.). If you find yourself in such a situation, please contact me as soon as possible so we can work around it and keep you on track. Given the opportunity, I tend to be very supportive and accommodating — just let me in.

Also... it's going to be summertime! People go on vacation and do fun things. To accommodate that, I will be posting videos of each online session as quickly as possible after the class ends, usually 1-2 hours. If you can't make it to class, make sure you review the lecture notes, and if you need to, watch the class videos. There will be a few days when I won't be able to make class myself (like 5/9, 7/10, 7/15, 7/17). On those days, I will record a video in advance and post it in that week's module, so you can use the class time to watch the video. Or not.

Academic Honesty:

Student collaboration on assignments is encouraged, but you are responsible for submitting your own, original, work.

Copying on any assignment or exam will not be tolerated. All parties involved or suspected may receive a significant grade deduction or a zero on that assignment at the professor's discretion. For more info, please refer to the [University's policy on Academic Honesty](#).

Zoom-room/Teams Behavior Policy:

This is a college-level course and students are expected to act maturely and professionally. While class participation and discussion is encouraged, disruptive behavior, foul language, and/or disrespect towards others will NOT be tolerated. The professor reserves the right to dismiss any student from the classroom or drop a student from the course for repeated misconduct and/or poor behavior.

Canvas:

Canvas is the University's online course management system and the portal for student and faculty electronic services. You will find your grades and all lecture notes, assignments, solutions, quizzes, etc., posted here. You MUST be able to access this course through your Canvas portal.

- Please get in the habit of checking your UNH email or Canvas 1-2 hours before class. In the event that your instructor is unable to hold class due to illness, a power outage, etc. this announcement will be posted on Canvas and pushed to your UNHM email accounts.

- The Canvas portal is great for students but can be tricky for professors. If you are unable to find something that you think *should* be posted, please email the instructor to inquire. Periodically I upload something but forget to make it publicly available. I'm old. Cut me some slack. :-/

Special Accommodations:

- The University is committed to providing students with documented disabilities equal access to all university programs and facilities. If you think you have a disability requiring accommodations, please visit [Student Accessibility Services](#).

Teaching Philosophy:

"My job is to teach you some very fundamental things about the physical world we live in. If you're failing as a student, then it's possible I'm failing you as a teacher. Meet me half way and we'll all be successful in the end."

-Dave Jagodowski

Syllabus in Non-Binding

This syllabus is a guideline, not a contract. The instructor reserves the right to make changes to the syllabus during the course of the semester. Students will always be made aware of any such changes by the instructor.

The rest of this is just for your reference, should you need additional UNH resources.

University Policies and Other Resources

COVID Protocols

Unfortunately, COVID is still a part of our community. It is your responsibility to pay attention to messaging from the University (RAVE and Canvas and Email) in the event that any COVID protocols change. You can always access current COVID protocols and requirements through the Health and Wellness Website: <https://www.unh.edu/health/health-alert-covid-19>

We all value the health and safety of our Wildcat Community and respect everyone's unique health and risk tolerance. You are welcome to wear a mask in this classroom if you choose. (or substitute your mask policy). It is your responsibility to obtain a mask before coming to class.

If you required to be in isolation or quarantine, the Dean of Students will send a letter to all of your instructors. See extended absense policies below for temporary academic resources to support your continued learning in this course if you must miss significant class time.

Manchester only: A valid Wildcat Pass is required to be on campus and in this classroom. Your Wildcat Pass will be invalid if you are supposed to be in isolation or quarantine.

Confidentiality and Mandatory Reporting of Sexual Violence or Harassment

The University of New Hampshire at Manchester and its community are committed to assuring a safe and productive educational environment for all students and for the university as a whole. Title IX makes it clear that violence,

harassment, and discrimination based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, and ability.

If you or someone you know has experienced sexual or relationship violence, and/or stalking and harassment, you can find the appropriate resources below:

Reporting On Campus:

- Title IX Deputy Intake Coordinator: Lisa Enright 603-641-4336. Lisa's office is located on the fourth floor in Room 439.
- UNH Manchester Security: 603-541-4101 or located in the second floor foyer

Reporting Off Campus:

- Manchester Police Department - 603-668-8711, 405 Valley St. Manchester, NH
- Contact your local police department

For emergencies dial 911.

Confidential Support Resources:

- YWCA, NH – 603-668-2299(24hour), 72 Concord St. Manchester, NH
- Sexual Harassment and Rape Prevention Program (SHARPP): 603-862-7233(24hour), 8 Ballard Street, Wolff House, Durham NH 03824
- The Mental Health Center of Greater Manchester: See contact information and hours above
- 24 Hour NH Sexual Violence Hotline: 1-800-277-5570
- 24 Hour NH Domestic Violence Hotline: 1-866-644-3574

CFAR: Center for Academic Resources

CFAR is where students go to improve their study skills, time management, and understanding of UNH's academic culture. Our professional educational counselors and peer academic mentors work within students' course materials to demonstrate best practices for learning concepts and preparing for exams. Find an appointment with an academic mentor of your choice on the CFAR calendar at <https://unh.mywconline.com>. To talk with a professional educational counselor, email us at unh.cfar@unh.edu; use Chat Live on our website at <https://www.unh.edu/cfar>. The [CFAR website](https://www.unh.edu/cfar) also has a large selection of study tips and tools and STEM videos.

Early Alerts Report

The University is invested in your academic success. If a faculty member is concerned about your academic behavior or performance, they may submit an academic alert. Academic alerts are not punitive. The goal is to provide you with support and resources to support your success. They act as an important check-in point and, if you receive an academic alert, you will receive an email to your UNH email address. It is strongly recommended that you meet with a professional advisor and connect with your instructor to discuss the reason for the alert.

Emotional or mental health distress

In partnership with The Mental Health Center of Greater Manchester, UNH Manchester offers consultation visits on a walk-in basis and through telehealth appointments. Services include:

- Free confidential screening & consultation with a licensed mental health therapist.
- Referrals to mental health or substance misuse treatment. And assistance in understanding how to afford additional treatment (with or without insurance!) or find free services.

You may email: unhm.wellness@unh.edu to make an appointment to meet with a counselor by clicking here or by using the QR codes below.

For in person appointments please scan this code: →



For remote appointments please scan this code: →

If you would like to connect to counseling services directly, you may do so by contacting The Greater Manchester Mental Health Center at (603) 668 - 4111.

The National Suicide Prevention Lifeline provides 24/7, free and confidential support via phone or chat for people in distress, resources for you or your loved ones, and best practices for professionals. Call (800) 273-TALK (8255).

Sexual Harassment and Rape Prevention Program (SHARPP)

Provides free and confidential advocacy and direct services to survivors. (<https://www.unh.edu/sharpp>.)

Contact Prof. Jag

Can't find what you're looking for? Need to talk about something? Please reach out and I'll try to help you, or at least help you find the resources you need. David.Jagodowski@unh.edu or (603)497-7266.