



## GENERAL PHYSICS I PHY 201

### Professor Info

- Dr. Dylan McNamara
- Office Hrs: M/W 3:30-4:30pm / SI: T/R 4-5 DL 101 and ULC Stem Lab 4-5 Mon
- CE 1110/DL 203
- [people.uncw.edu/mcnamarad/](http://people.uncw.edu/mcnamarad/)
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### Course Info

- Coreq: MAT 161
- M/W/F
- 12:30/2:00-1:45/3:15 & 12:30/2:00-1:20/2:50(F)
- DL 212

### Lab Info

- W/R
- 10:00/12:00/2:00 or 1:00/3:00
- DL 204

### Overview

Broadly, physics endeavours to study everything in existence, from the smallest subatomic particles to the entire universe. In this course you will begin a journey through physics topics that constitute what is called "mechanics". That is to say, the study of the relation between forces, matter, and motion. More specifically, we will study "Classical Mechanics", which means mechanics at speeds less than the speed of light and for matter with sizes larger than that where quantum effects are important. I won't say much else, because I doubt anyone is reading this and it probably doesn't make much sense anyway just yet, not until you dive into the course. So let's do it.

### Material

#### Required Texts

Halliday, Resnick, & Walker. *Fundamentals of Physics*. 12th Edition. Wiley. You are also required to have a scientific calculator.

#### Required Online Access

Wiley Plus Course ID C93381.

### Grading Scheme

- 23% Exam 1: 2/4 (Ch. 1-4)
- 23% Exam 2: 3/11 (Ch. 5-8)
- 23% Exam 3: 4/15 (Ch. 9-13)
- 31% Final Exam: 5/4 (Cumulative)

Grades will follow the standard scale: A = 89.5-100; B = 79.5-89.4; C = 69.5-79.4; D = 60-69.4; F <60. Curving is at the discretion of the professor.

### Homework Policy

Homework will be assigned through the Wiley Plus portal. There will be due dates stipulated and I hope and expect everyone will do the homework. That said, I will not factor your homework grade into your final course grade. However, I will look at each person's homework grade at the end of the semester and adjust final course grades upward for those that have done well on the homework. The maximum upward adjustment will be 5% points. You can effectively view homework as extra credit. That aside, you should absolutely view doing homework as a critical part of this course. Doing homework will help you learn the material, it will help you do well on the exams, and it will lead to an extra bump at the end of the semester.

### Lab Policy

You must complete all Labs Satisfactorily; otherwise, each Missed or Unsatisfactory Lab Grade will result in a 5 % point reduction in your Final Course Grade for the Class. This policy is harsh because these Labs are so straightforward that anyone should be able to satisfactorily complete them. If you make an error that results in an Unsatisfactory Grade, then you will be given the opportunity to correct the error for a Satisfactory Grade. There are NO make-up Labs.

### Make-up Policy

Make-up exams will only be allowed for students who have a substantiated excuse approved by the instructor *before the due date*. Leaving a phone message or sending an e-mail without confirmation is not acceptable. Labs are mandatory.

# FAQs

**?** Is attendance required for the course?

**!** Yes! But I won't take attendance. Your grade will closely match your commitment to this course, including whether you attend.

**?** What if I miss class?

**!** This class is face to face. It is not online. Your only recourse for missing class is to teach yourself physics from the textbook. That doesn't sound very fun (or simple).

**?** Is this course difficult?

**!** Yes it can be. We move fast through the material and the course requires focus, hard work, and commitment.

**?** Is this course fun?

**!** Totally. There is no course where you will learn more about how the world works.

## University Studies Stuff

Faculty who teach courses relating to "Scientific Approaches to the Natural World" are required by the University to have the following SLOs (Student Learning Outcomes) listed in their Syllab:

- SAN 1. Demonstrate an understanding of basic scientific principles, theories, and laws as well as an awareness of the changing nature of science. [Foundational Knowledge, Inquiry, Critical Thinking].
- SAN 2. Analyze, and evaluate scientific hypotheses and theories using rigorous methodologies and approaches from the sciences (including statistical and mathematical techniques). [Foundational Knowledge, Inquiry, Information Literacy, Critical Thinking]
- SAN 3. Demonstrate the ability to write and speak critically about the essential questions addressed by the natural sciences, expressing such thinking by using the conventions and language of one of those disciplines. [Critical Thinking, Thoughtful Expression]

## UNCW Discrimination Policy

In this classroom, we respect and understand that all people are welcome here. We have a no tolerance policy for discrimination of any kind. Everyone has a right to be here without regard to race, color, religion, language, pregnancy, ancestry, age, gender, national origin, sexual orientation, gender identity, gender expression, mental or physical disability, genetic information, marital or veteran status.

Discrimination constitutes any unlawful distinction, preference, or detriment to an individual as compared to others that is based on one of the characteristics protected by federal law, state law or university policy, as listed in Policy 02.230 Equal Opportunity and Affirmative Action.

## Seahawk Respect Compact

In the pursuit of excellence, UNC Wilmington actively fosters, encourages, and promotes inclusiveness, mutual respect, acceptance, and open-mindedness among students, faculty, staff and the broader community. We affirm the dignity of all persons. We promote the right of every person to participate in the free exchange of thoughts and opinions within a climate of civility and mutual respect. We strive for openness and mutual understanding to learn from differences in people, ideas and opinions. We foster an environment of respect for each individual, even where differences exist, by eliminating prejudice and discrimination through education and interaction with others.

Therefore, we expect members of the campus community to honor these principles as fundamental to our ongoing efforts to increase access to and inclusion in a community that nurtures learning and growth for all.

## Statement Regarding Violence and Harassment

UNCW practices a zero tolerance policy for any kind of violent or harassing behavior. Students who experience an emergency of this type should contact the police at 911 or UNCW CARE at (910) 962-2273. Resources for students concerned with a violent or harassing situation can be located at the UNCW Crisis Resources page.

Students should be aware that all university employees, including instructors, are obligated to communicate any report of alleged sexual misconduct, on or off-campus, to the Dean of Students. Three university entities are confidential resources exempt from this obligation. They are CARE, the Counseling Center, and the Abrons Student Health Center.

## Statement Regarding Cheating

*Any person caught cheating on an exam will fail the course.* Exams will simply be an exercise in problem solving using pencil and paper with the help of no other tools aside from a scientific calculator. There will be no phone use allowed during exams. There will also be no bathroom breaks during an exam. Please make sure to have relieved yourself of nature's bathroom needs before all exams.

## Statement Regarding Classroom Recording

To maintain a respectful and distraction-free learning environment, as well as protect faculty copyright and intellectual property, audio or video recording of class sessions is strictly prohibited unless prior written permission is obtained from the instructor or required as part of an approved accommodation through the Office of Disability Services. Unauthorized recording may violate university policy and applicable law.

**COPYRIGHT AND INTELLECTUAL PROPERTY POLICY:** Any dissemination of class notes, lecture slides, recordings, handouts, copies of exams, or any other course materials without permission of the instructor is prohibited by UNCW policy. UNCW Copyright Use and Ownership Policy (<http://www.uncw.edu/policies/documents/01210.copyright>) specifies that class notes and related materials are considered derivative of original intellectual property of the course instructor. Therefore, the instructor (not the student) owns the copyright and must provide specific permission to distribute and/or reuse those materials for anything other than personal use and scholarship by the student. Commercial use, display, or dissemination of such notes, copies, or recordings—as well as posting to websites—will generally constitute an infringement of copyright and the Honor Code. Materials that qualify as student-owned are listed in the policy.

## Statement Regarding Disabilities

The University of North Carolina Wilmington is committed to providing accessible learning environments and equal opportunity to individuals with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Individuals needing reasonable accommodations should contact the Disability Resource Center (910-962-7555, [DRC@uncw.edu](mailto:DRC@uncw.edu), [www.uncw.edu/disability](http://www.uncw.edu/disability)). Once established, responsibility for disability-related accommodations and access is shared by DRC, faculty and the student.

## Class Schedule

### MODULE 1: Motion

Week 1: 1/12, 1/14, 1/16	Ch.1 Ch.2	
Week 2: 1/21, 1/23	Ch.2 Ch. 3	
Week 3: 1/26, 1/28, 1/30	Ch.3 Ch.4	Ch.2 HW due 1/26 - Ch.3 HW due 1/30
Week 4: 2/2, 2/4, 2/6	Ch.4 Ch.5	Ch.4 HW due 2/6

### MODULE 2: Forces and Energy

Week 5: 2/9, 2/11, 2/13	Ch.5 Ch.6	Ch.5 HW due 2/13
Week 6: 2/16, 2/18, 2/20	Ch.6 Ch.7	Ch.6 HW due 2/20
Week 7: 2/23, 2/25, 2/27	Ch.7 Ch.8	Ch.7 HW due 2/27
Week 8: 3/9, 3/11 3/13	Ch.8 Ch.9	Ch.8 HW due 3/11

### MODULE 3: Momentum, Rotation, Equilibrium, Gravitation

Week 9: 3/16, 3/18, 3/20	Ch.9	
Week 10: 3/23, 3/25, 3/27	Ch.10	Ch.9 HW due 3/27
Week 11: 3/30, 4/1	Ch.11	Ch.10 HW due 4/1
Week 12: 4/6, 4/8, 4/10	Ch.12 Ch.13	Ch.11 HW due 4/10
Week 13: 4/13, 4/15, 4/17	Ch.13	Ch.12 & 13 HW due 4/15

### MODULE 4: Fluids, Oscillations, and Waves

Week 14: 4/20, 4/22, 4/24	Ch.14 Ch.15	
Week 15: 4/27, 4/29	Ch.16	Ch.15 HW due 4/29
Week 16: 5/4	FINAL EXAM	11:30-2:30 (12:30 Class) 3:00-6:00 (2:00 Class)

## Lab Schedule

Week 1	1/14 1/15	No Lab
Week 2	1/21 1/22	Methods for Experimental Physics: Measurement
Week 3	1/28 1/29	1D Kinematics
Week 4	2/4 2/5	No Lab
Week 5	2/11 2/12	Equilibrium of a Particle - Vector Addition
Week 6	2/18 2/19	Friction
Week 7	2/25 2/26	Uniform Circular Motion
Week 8	3/11 3/12	No Lab
Week 9	3/18 3/19	Conservation of Energy on Airtrack
Week 10	3/25 3/26	Center of Mass
Week 11	4/1 4/2	No Lab
Week 12	4/8 4/9	Torque & Equilibrium
Week 13	4/15 4/16	No Lab
Week 14	4/22 4/23	Simple Harmonic Motion: The Pendulum
Week 15	4/29 4/30	Standing Waves in Strings