

I. Course Information

Course: PHYS 2360 - General Physics II/Lab

Semester Credit Hours: 4.0

Course CRN and Section: 22211 - D03, 22214 - D04

Semester and Year: Fall 2021

Course Start and End Dates: 08/23/2021 - 12/12/2021

Building and Room: Carl DeSantis Building - 2073

II. Instructor Information

Professor: Victor H Castro

Email: castvict@nova.edu

Phone: 9542628309

Office Hours:

Day	Time	Location
TR	10:30am - 12:00pm	Romm 120
W	10:00am - 12:00pm	Romm 120

Office Hours:

Wednesday 10:00 AM until 12:00 PM

Link: <https://nova.zoom.us/j/91826533463>

This course is administered by the Department of Chemistry and Physics. If the instructor cannot be reached, please contact the Department of Chemistry and Physics at 954-262-7930.

III. Class Schedule and Location

CRN	Day	Date	Time	Location	Building/Room
22211	M	08/23/2021 - 08/30/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313
22211	MWF	08/23/2021 - 09/03/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22211	MWF	09/08/2021 - 10/08/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22211	M	09/13/2021 - 10/04/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313
22211	M	10/11/2021 - 10/11/2021	8:00 AM - 10:00 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22211	M	10/18/2021 - 11/22/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313

22211	MWF	10/18/2021 - 11/24/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22211	M	11/29/2021 - 11/29/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313
22211	MWF	11/29/2021 - 12/03/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22211	R	12/09/2021 - 12/09/2021	1:00 PM - 3:00 PM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-3032
22214	MWF	08/23/2021 - 09/03/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22214	W	08/25/2021 - 10/06/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313
22214	MWF	09/08/2021 - 10/08/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22214	M	10/11/2021 - 10/11/2021	8:00 AM - 10:00 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22214	MWF	10/18/2021 - 11/24/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22214	W	10/20/2021 - 12/01/2021	9:00 AM - 11:45 AM	Ft Lauderdale/Davie Campus	Parker Building-313
22214	MWF	11/29/2021 - 12/03/2021	8:00 AM - 8:50 AM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-2073
22214	R	12/09/2021 - 12/09/2021	1:00 PM - 3:00 PM	Ft Lauderdale/Davie Campus	Carl DeSantis Building-3032

Please note: All courses scheduled on campus as lecture or lecture/lab must be attended in person.

For residential courses, students may not change seats throughout the semester for all regular class meetings. Please be aware that the seat you take on the first day of class will be your permanent seat.

IV. Course Description

Second of a two-part series covering electricity and magnetism, optics, and modern physics. Includes laboratory sessions. This course has been exempted from the requirements of the Writing Across the Curriculum policy. Prerequisites: PHYS 2350 and either MATH 1250 or MATH 2100 or MATH 2100H. Frequency: Every Fall and Winter.

V. Course Objectives / Learning Outcomes

- 1) Calculate electric and magnetic fields, forces, and potentials from a given set of charges or currents.
- 2) Use the basic properties of electromagnetic waves and how they relate to optics to solve related, simple problems.
- 3) Solve electric circuit problems for both AC and DC circuits containing batteries, inductors, capacitors, and resistors.

- 4) Use the basic ideas of geometrical and physical optics, such refraction and diffraction to solve simple optical problems.
- 5) Solve simple problems in special relativity involving energy, momentum, length contraction, time dilation, and velocity composition.
- 6) Apply elementary ideas from quantum mechanics to simple systems such as the hydrogen atom.

VI. Materials and Resources

Book Url: [NSU Book Store](#)

Section Required Texts and Material:

- *Physics: Principles with Applications Plus Mastering Physics with eText-Access Card Pkg*, 7th ed., by Douglas Giancoli, Pearson Prentice Hall Publishing. ISBN-13: 9780321625915.
- If you purchase the textbook only you will then need to purchase an online subscription to Mastering Physics at www.masteringphysics.com.
- A scientific calculator is required and may be used for all assignments and tests. The calculator should have scientific notation, trigonometric functions, exponential and logarithm capability. Smartphones, tablets or computers are not allowed in any test.

VII. Course Schedule and Topic Outline

Course Schedule:

Lectures

Week of	Topic	Week of	Topic
AUG 23	Chap. 16	OCT 18	HW-4 due Monday Chap 23/25
AUG 30	Chap 17	OCT 25	Chap 24
SEP 06	HW-1 due Monday Labor Day Chap 18-19	NOV 01	HW-5 due Monday Chap 24
SEP 13	Chap 19	NOV 08	HW-6 due Monday Chap 26 Exam 3 (Chaps 23-25, 24)
SEP 20	HW-2 due Monday Chap 20 Exam 1 (Chaps 16, 17, 18, 19)	NOV 15	Chap 26-27
SEP 27	Chap 21	NOV 22	HW-7 due Monday Chap 28
OCT 04	HW-3 due Monday Chap 22	NOV 29	Review Exam 4 (Chaps 26, 27, 28)
OCT 11	Midterms Week Exam 2 (Chaps 20, 21)	Dec 06	HW-8 due Monday Finals Week Final Exam (All Chapters)

Labs

Week of	Exp	Topic	Week of	Exp	Topic
AUG 30	2.01	Coulomb's Law	OCT 18	2.06	Series RC DC-Circuit

SEP 13	2.02	Electric and Potential Fields		OCT 25	2.07	Magnetic Field of the Earth
SEP 20	2.03	Ohm's Law		NOV 01	2.08	Series LR AC-Circuit
SEP 27	2.04	Kirchhoff's Laws		NOV 08	2.09	Reflection and Refraction
OCT 04	2.05	Wheatstone Bridge		NOV 15	2.10	Thin lenses

VIII. Assessments

Quizzes	Fridays, except when an exam is scheduled.
Exam 1:	09/24-25
Exam 2:	10/15-16
Exam 3:	11/12-13
Exam 4:	12/03-04
Final exam:	Week of 12/06. Please check https://coursewizard.nova.edu/search/undergraduate

Warning: Class schedule is subject to modification, but not without prior notification. Most current information can be found at: <https://coursewizard.nova.edu/search/undergraduate>

IX. Grading Criteria

Final Grade:

Grading will be based on homework assignments, lab experiments, 4 exams, and a final exam. These are subject to the following weighting distribution and grading scale:

Homework	10 %
Laboratory	20 %
Quizzes	10%
Exam 1	10 %
Exam 2	10 %
Exam 3	10 %
Exam 4	10 %
Final	20 %

Grading Scale:

100 – 92	A		74.9 – 70	C+
91.9 – 90	A–		69.9 – 65	C
89.9 – 85	B+		64.9 – 60	C–
84.9 – 80	B		59.9 – 58	D+
79.9 – 75	B–		57.9 – 50	D
			Less than 50	F

X. Course Policies

General Policy:

Lectures

- Classes are offered on campus in a face-to-face format.
- Only under special circumstances, and after being approved by the Office of Student Disability Services, you can access the lecture simultaneously via **Zoom**.
- Please note that there could be restrictions on the number of people who may be in the classroom due to physical distancing requirements; therefore, you may not be able to be in the classroom for every class session.
- The main way to communicate with me is through Canvas or email.
- The method of communication for **office hours** is **Zoom**. For more information use this link: <https://cnso.nova.edu/zoom-support.html>. Zoom is available on the navigation side bar on Canvas.
- Your webcam must be always active during our Zoom meetings. As such, I ask everyone to handle our meetings in a mature and professional manner.
- All **course material** will be available via Canvas.
- Prepare for class. The first place to look for help is in your textbook. Reading the topics before the class will make it easier for you to follow the lectures. Write any questions down and ask them during the lecture. I also encourage you to use my office hours.
- You are responsible for lecture notes, or any material missed.
- Appropriate classroom and online behavior is required. Please, do not be disrespectful, disruptive, or distractive.
- It is very important that the work you turn in is yours, and yours alone. If you copy from any other student or source and submit it as your own work for a grade, you risk receiving an F in the course. Plagiarism in any form is absolutely not tolerated. Intellectual discussion among students, such as study groups, is acceptable and encouraged. But no matter what the assignment is, all and every work must be done, and presented individually.
- This course is designed to include both lecture and lab components; therefore, a student who misses three or more laboratory experiments does not learn the required hands-on skills and will receive a failing grade for the entire course.

Quizzes, Exams, and Final Exam

- All **assignments** will be submitted via Canvas.
- It is your responsibility to take all the exams and quizzes and complete your homework on time. Failure to do so will result in a zero. Make ups are only allowed in exceptional circumstances.
- To successfully complete the assignments, you are required to have access to a webcam, microphone, a compatible computer or tablet, and a stable internet connection.
- All exams and quizzes are to be taken using **Lockdown browser** and **Respondus**.
- Please follow the guidelines in this link. <https://www.nova.edu/help/respondus/lockdown-browser.html>. You are expected to have a webcam, microphone and a compatible computer or tablet.
- **Exams:**
 - Exams will be available on Canvas and are scheduled from Friday at 8:00 am until Saturday at 11:59 pm.
 - There will be 4 exams.
 - You will have 90 min to complete each exam.
 - The average of these exams represent 40% of your final grade.
- **Quizzes:**
 - Quizzes will be available on Canvas and are scheduled on Fridays from 8:00 to 11:59 pm.
 - You will have 45 min to complete each exam.
 - The average of these quizzes will represent 10% of your final grade.
- **Final Exam:**
 - The final exam will be comprehensive.
 - It will be held on according to the schedule on Course Wizard. Please check <https://coursewizard.nova.edu/search/undergraduate> for any changes.
 - The final will be 2-hour long.
 - The final exam represents 20% of your final grade.

Homework Assignments

- During this semester, you will be using **Mastering Physics**. You will need to purchase a subscription to Mastering Physics, which can be done in combination with your textbook in a number of ways. Please check by accessing the website: www.masteringphysics.com. Your Mastering Physics subscription is valid for 24 months from activation and can be used for both PHYS 2350 and PHYS 2360, since both courses use the same textbook.
- Once you have purchased a subscription, you will need to go to www.masteringphysics.com and register using your access code. When you register, please use your official name as used by the university; otherwise it is possible that I won't be able to match your online work scores to your overall grade, and you may not receive credit for work done.
- Once you have registered you will need to join this course at the site. The course code is:
castro44202
- It is important that you complete your online registration AS SOON AS POSSIBLE. Assignments will be posted and available immediately. If you wait too long to subscribe and join the course, you may miss one or more entire assignments, and receive a zero score.
- It is also very important that you let me know IMMEDIATELY if you have any difficulty in subscribing and/or joining our course. The longer you wait to notify me, the less time you will have to complete initial assignments.
- Homework assignments will be due on Mondays at 11:59 pm, on the weeks given in Lecture schedule above. Please make sure you make a note of the due dates.

Laboratories

- Laboratories will be held in person.
- On time attendance is required at all labs. Failing to attend will adversely affect your grade. You are responsible for lecture notes, or any material missed.
- Lab information is provided on Canvas.
- Calculations and plots must be done with Microsoft Excel or a similar program.
- The lab report will be a single document (as a pdf file). You can create one using MS Word. Please copy and paste any plots or tables created in Excel that you might need. A sample lab report can be found on Canvas.
- The instructions to complete the lab report can be found within the lab's worksheet.
- Lab reports are to be uploaded to Canvas and are due before the next lab session. **No exceptions.**
- Each lab will have two 10 min. long lab quizzes, available on the assignments page on Canvas. A pre-lab quiz must be taken at the beginning of the lab session, while the post-lab quiz is to be taken after the lab is over.
- Your lab grade for each experiment consists of the lab report (80 %), pre-lab quiz (10%), and post-lab quiz (10%).

XI. University Policies

Last Day to Withdraw: To withdraw from a course, it is not sufficient simply to stop attending class or to inform the instructor of your intention to withdraw. In accordance with college policy, contact your academic advisor to begin the withdrawal process. **The last day to withdraw from this course** may be viewed at www.fcas.nova.edu/calendars.

Students must visit www.fcas.nova.edu/about/policies.cfm to access additional required college-wide policies. It is your responsibility to access and carefully read these policies to ensure you are fully informed. As a student in this class, you are obligated to follow these college-wide policies in addition to the policies established by your instructor.

The following policies are described on this website:

- Academic Misconduct
- Writing Across the Curriculum
- Last Day to Withdraw
- Email Policy
- Student Course Evaluations
- Student Responsibility to Register
- Student Responsibility for Course Prerequisites

Students should visit <http://www.nova.edu/academic-affairs/nsu-syllabus-policy.html> to access additional

required college-wide policies. It is your responsibility to access and carefully read these policies to ensure you are fully informed. As a student in this class, you are obligated to follow these college-wide policies in addition to the policies established by your instructor.

The following policies are described on this website:

- Academic misconduct
- Last day to withdraw
- Email policy
- Student course evaluations
- Student responsibility to register
- Student responsibility for course prerequisites

Academic Resources

Nova Southeastern University offers a variety of resources that may aid in student success. Among these resources are:

Accommodations for students with documented disabilities: For more information about ADA policy, services, and procedures, students may call the Office of Student Disability Services at 954-262-7189 or visit <http://www.nova.edu/disabilityservices>.

Tutoring and testing center:

Students are encouraged to use the free, individualized tutoring services offered by the Tutoring and Testing Center (TTC) early and often throughout the academic year. TTC provides supplemental learning assistance, as well as an array of testing services, in a supportive and professional environment that enhances the ability of all students to meet educational goals, achieve academic excellence, and enhance personal growth. Subject-based tutoring and academic coaching sessions are individualized, 45-minute sessions that encourage developing strong creative thinking and reasoning skills. See here for the latest listing of NSU courses tutored: <http://www.nova.edu/tutoring-testing/tutoring-services/general-information.html>. TTC also offers Supplemental Instruction in historically difficult courses. SI sessions are facilitated by SI Leaders who have been endorsed by faculty for their leadership ability and content mastery. For further information please call (954) 262-8350 or visit our website at <http://www.nova.edu/tutoring-testing/>.

Health and Safety Resources for NSU Students

Covid Exposure or Infection

If a student experiences COVID exposure or infection, they do not report to the Office of Disability Services. Instead, the student reports via email: 1. to the COVID-19 office (covidcase@nova.edu), 2. to our college COVID coordinator, Vanessa Mezquia at mezquia@nova.edu, and 3. to the course instructor.

Formerly known as Henderson Student Counseling, the **NSU Center for Student Counseling and Well-Being** offers a wide array of services and programs to support various aspects of students' well-being including: same day triage appointments, individual, couple and family therapy, support & personal growth groups, psychoeducational programming, resilience programs, and educational outreach. Additionally, to make service more accessible to students, NSU's Center for Student Counseling and Well-Being is now centrally located in the Student Affairs Building, 3rd floor. To make an appointment or to learn more go to nova.edu/studentcounseling, call (954) 262-7050 or (954) 424-6911.

The **Office of Suicide and Violence Prevention** is devoted to creating a safety net at NSU, helping to prevent suicide and violence. For more information, visit nova.edu/suicideprevention. If you are struggling, call a Suicide Prevention hotline for 24/7 assistance: 1-800-SUICIDE (784-2433) or 1-800-273-TALK (8255).

You can Contact the **Office of Public Safety** (NOVALERT - Hotline) 24 hours/7 days a week for emergency or non-emergency situations at (954) 262-8999. For more information about services and safety tips, visit nova.edu/publicsafety.

The NSU "Write from the Start" Writing and Communication Center

The NSU “Write from the Start” Writing and Communication Center is an innovative workspace where students, consultants, and faculty come together, in person and online, to talk about writing and communication. Staffed by trained professional and peer consultants, the WCC offers individualized assistance to all NSU students. Students can work with consultants on all types of academic writing and communication projects at any stage of the process. For more information or to make an appointment, visit the WCC website, nova.edu/wcc, or call 954-262-4644.

Classroom Recording Policy

Class content throughout this course may be recorded in accordance with the NSU Class Recording Policy. If class content is recorded, these recordings will be made available to students registered for this course as a supplement to the classroom experience. Recordings will be made available to all students who were registered to attend the live offering of the class, regardless of a students’ section or discipline, or whether the student is participating in the course online. If recordings are intended to be accessible to students or third parties who were not registered for the live offering of the class, students’ personally identifiable information will be removed or redacted from the recording, unless (1) their written consent to such disclosure was previously provided, or (2) the disclosure is permissible in accordance with the Family Educational Rights and Privacy Act (“FERPA”).

Students are prohibited from recording audio or video, or taking photographs in classrooms (including online classes) without prior permission from the instructor or pursuant to an approved disability accommodation, and from reproducing, sharing, or disseminating classroom recordings to individuals outside of this course. Students found engaging in such conduct will be in breach of the Student Code of Conduct and subject to disciplinary action.