S21 50:750:204 - General Physics II

Instructor	Dr. Julie Griepenburg	**E-mail**	j.griepenburg@rutgers.edu
Phone	856-225-6293	**Office Hours**	Virtual via web conferencing TBA
Office	CNS 216E	**Final Exam**	University scheduled final exam period

Class meeting time:

- **T & TH, 2:00 p.m. - 3:20 p.m via BigBlueButton on Canvas during remote learning phases, as determined by the University**
- **T & TH, 2:00 p.m. - 3:20 p.m in CNS-201 during in-person learning phases, as determined by the University**

Description:

This course is the first part of the General Physics tandem, which are algebra-based physics courses taught mostly to Biology and Pre-Health majors. You will be expected to competently use algebra, geometry, and trigonometry in order to solve problems.

During the course of this semester you will become familiar with the principles of physics that rule the motion of objects e.g. Newton's laws of motion. You will also be introduced to the concept of using mathematics to describe physical phenomena. The overall goal of this course is to gain a better understanding of the laws of physics which govern our universe.

Co-requisite: 50:750:134 Laboratory. The grade for the laboratory is assigned by the laboratory instructor and is separate from the lecture grade. If you are not co-enrolled in a laboratory section, you will be automatically dropped from the lecture.

Specific Student Learning Outcomes (SLOs) Objectives:

1. Understand the problem-solving process and develop critical thinking skills
2. Describe magnetic fields and electromagnetic induction
3. Understand electric circuits and the relationship between voltage, current and resistance.
4. Gain an introduction to the nature of electromagnetic waves
5. Describe optics and phenomena such as polarization, refraction, and reflection

Class Resources:
Our course website can be found on Canvas. All course materials, announcements, grades, and assignments will be posted here.

Textbook:

Great news: your textbook for this class is available for **free** online!
College Physics from OpenStax, ISBN 1-947172-01-8

You have several options to obtain this book:

- View online (Links to an external site.)
- Download a PDF (Links to an external site.)
- Order a print copy (Links to an external site.)
- Download on iBooks: Part One, Part Two (Links to an external site.)

You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device.

For additional reading, you are welcome to purchase the following textbook, but it is not required. I will supply problems and solutions from this book:

"**Physics**," Cutnell & Johnson – **10th** Edition.

ISBN : 978-1-118-48689-4, *Hardcover*, contains both Vol. 1 & 2

ISBN : 978-1-118-89917-5, *E-Text*, contains both Vol. 1 & 2

Student Response Device:

We will be using an app based student response device for this class for attendance, active-learning, as well as in-class quizzes. You can use this app on any device you wish to bring to class (phone, tablet, or laptop).

You will be required to purchase an iClicker Reef subscription for either the semester or the entire year, depending on whether or not you will be taking General Physics II. You will receive a free 14-day trial when you sign up for the account.

Online Practice Problems:

We will be using OpenStax Tutor for homework and practice problems. You can sign up for an OpenStax Tutor account and access assignments from within our Canvas course site. There will be a $10 per semester fee.

Total cost of course supplies:

	1 semester only	**Both semesters**
OpenStax Textbook	FREE	FREE
iClicker Reef	$15.99	$24.99
OpenStax Tutor	$10.00	$20.00
Total	**$26.99**	**$44.99**

Attendance Policy:

This class will only be offered in person, and thus your attendance is expected at every class meeting. 10% of your final grade will be based on attendance and participation. I understand that with COVID-19, many emergencies and scheduling difficulties may arise. Thus, I will give everyone **four** excused, no-questions-asked, absences for the semester. After these three absences, excused absences will be at my discretion. Please note, that "no-questions-asked" absences cannot be used on an exam day. Documentation must be provided and confirmed by the Dean of Students Office to be excused from an exam.

Grading:

4 in-class examinations (3 semester + 1 final	60% of final grade (15% each x 4)
Electronic responses and attendance	10% of final grade
OpenStax Tutor assignments	15% of final grade
Quizzes	15% of final grade

- Specific questions regarding exam points are permitted, however, all disputes must be presented within one week of receiving your exam grade. I.e., I will not consider any exam grade changes at the end of the semester.

- A curve may or may not be implemented depending on the class average. Do not count on a curve as it is not guaranteed. If a curve is not applied, letter grades will be assigned based on the following ranges:

A	89.50 - 100%	C	66.50 - 75.49%
B+	86.50 - 89.49%	D	55.50 - 66.49%
B	79.50 - 86.49%	F	<55.49%
C+	75.50 - 79.49%		

  *Please note, these numbers already reflect rounding and no additional rounding will be implemented. Emails requesting additional grade rounding will not be responded to.

- Attending the lecture is not enough. Take notes in class and read the relevant sections in the textbook. In addition, make sure to review all example problems and attempt all the homework problems.

Exams and Quizzes:

- There will be four exams throughout the semester. Exams will be given in person during our regularly scheduled class period.
- Exams will not officially be cumulative, however, many topics build upon previous chapters.
- I will be available via a web conference during the exam for quick answers to questions during the exam period.
- Exam dates are set in the syllabus (see schedule below).
- There will be a minimum of four quizzes throughout the semester. Quizzes may be either announced or unannounced.

Extra Help:

- I will holding two hours of office hours per week. Office hours will be virtual, via BigBlueButton.
- If you are unable to attend scheduled office hours, I will do my best to accommodate alternate scheduling, but please keep in mind that there are many of you and one of me!
- Please come to office hours prepared with specific questions. In other words, office hours are not a substitute for independent studying or tutoring.
- Types of questions that are acceptable in office hours:
  - “Can you explain why you plugged in this value here?”
  - “Can you explain why you used this equation?”
  - “I got up to this part but don’t know where to go next. Can you help me figure out the next step?”
- Types of questions that are not acceptable during office hours:
  - “I haven’t been attending lectures and don’t have time to watch them. Can you review everything you’ve done in class for the past week?”
  - “I don’t understand any of the homework problems or the OpenStax problems. Can we go through them all together?”
  - “I am confused about chapters 1, 2, and 3. Can you help me?”
- I will be adding a question thread on Canvas where you can post questions and help each other. This will not be mandatory, but highly encouraged. Helping someone else is the best way to gauge your own understanding!
- Tutoring is available through The Learning Center. Please see the Student Resource section on Canvas for details. Tutoring appointments for Physics book up very quickly so I advise that you book sessions early.

Additional details:

- Please note that it is necessary to explain all steps that you take on exams – make an effort to ***clearly*** show your work. Full or partial credit will only be granted for answers that can be clearly followed. Answers without justification will not be accepted (even if the final answer is correct)!

- Do not excessively use cell phones in class or disrupt class in any way. If you do so, you will be asked to leave and will not be welcomed back for the rest of the class period.

- You are not permitted to record class.

- Attendance is strongly suggested at all class meetings. Your class participation grade (10%) will be based on your electronic responses in class. Excused participation points may be granted on a case-by-case basis at the instructor's discretion, however, must be requested in a timely fashion. Please note: Responding to iClicker questions for an absent friend will be considered an academic integrity violation and will be reported.

- ***There are no make-up exams***. If you must miss an exam, you must provide acceptable documentation to the Dean of Students Office. They will verify your excuse and contact me. In addition to providing documentation, you should make every effort to inform me ahead of time if you will be missing an exam. Failure to contact me in a timely fashion may result in a zero for that exam. If proper procedures are adhered to for an exam absence, that exam will be excluded from your exam average. Missing an exam without proper documentation will result in a zero that cannot be dropped.

- Homework will be assigned for each chapter, both on paper, and through OpenStax Tutor. The homework through OpenStax Tutor will be graded, but the paper problem solving will not be collected nor graded. Both are equally important and you will not pass this class if you do not do problem solving. Exams will be based on these problems, OpenStax Tutor questions, iClicker questions, and lecture notes.

- In addition to exams, I reserve the right to administer quizzes that will count towards your final grade. There will be no make-up quizzes. Students missing a lecture quiz will receive a zero for that quiz. The lecture quizzes are intended to assess your study habits and help you stay on track.

Academic Integrity Policy:

I take academic integrity **very** seriously and will report and follow through with all violations. As a student at Rutgers University-Camden, you have agreed to adhere to the Academic Integrity Policy which you were provided with upon enrollment. In addition to the written University policy, some additional guidelines apply specifically to our class:

- You are not permitted to give or receive help on a graded assignment unless otherwise advised.
- You will be asked to show work for some graded assignments (for example, problem solving on exams). Answer only responses may be considered a violation of academic integrity.
- All material in this course is my property, and posting it online outside of our Canvas site is strictly prohibited and will be considered an academic integrity violation. This includes, but is not limited to, websites like Chegg or Reddit.
- Group chats which take place during graded assignments will be considered a violation of academic integrity. If you are in a group chat, you could be held accountable, even if you do not contribute.
- Responding to iClicker questions for a friend who does not come to class is considered an academic integrity violation.
- If you wish to report an academic integrity violation in our class, I will keep your identity anonymous.
- If you are unsure if something is a violation, please do not hesitate to ask. I will not hold it against you!

COVID-19 Statement:

S22 General Physics II will begin online until Jan 31, as directed by the University. As of now, the University plans to resume in-person learning thereafter. Once in-person learning resumes, there

is no remote/hybrid option for this class. Please visit the Rutgers Universitywide COVID-19 Information Page for all official Rutgers announcements regarding the pandemic.

To ensure everyone's safety, the following guidelines must be adhered to in class:

- Per University policy, an appropriate face covering must be worn correctly at all times. There will be a zero-tolerance policy for students who do not follow this guideline. Students who do not wish to follow this policy will be asked to leave. More than one offense will result in students being asked to leave and not welcomed back for the remainder of the semester.
- The University is not requiring 6 ft social distancing within classroom settings. We do, however, have enough space to spread out in our lecture hall. I will be requesting social distancing for all one-on-one interactions and ask that everyone is respectful for all of those who wish to maintain distanced.
- Before coming to campus and attending class, please use the My Campus Pass symptom checker app. Should you answer "YES" to any of the self-screening questions, the University is advising that you stay home and contact your healthcare provider.
- Due to the uncertainty of the current semester, I will be allowing four, no-questions-asked, absences where you will be exempt from participation/attendance. Please note, the no-questions-asked absences do not apply to exam days.
- Should you have a situation where you anticipate a long-term absence, please contact me to discuss.
- If there are any changes to policies or scheduling, I will post an announcement on Canvas. Please check the Canvas page frequently.

Tentative Class Outline and Tentative Exam Dates:

Chapter 18 - Electric Charge and Electric Fields
Chapter 19 – Electric Potential and Electric Field
Exam 1 – February 8

Chapter 20 - Electric Current, Resistance, and Ohm's Law
Chapter 21 – Circuits and DC Instruments
Chapter 22 - Magnetism
Exam 2 – March 10

Chapter 23 - Electromagnetic Induction, Alternating Current Circuits, and Electrical Technologies
Chapter 24 - Electromagnetic Waves
Exam 3 – April 12

Chapter 25 – Geometric Optics
Chapter 26 – Vision and Optical Instruments
Chapter 27 – Wave Optics
Exam 4 – University scheduled final exam period (May 5 – 11)

***Note: Exam 4 will not be cumulative, but will be administered during the University scheduled final exam period**