



SYLLABUS
COLLEGE OF SCIENCE AND MATHEMATICS
DEPARTMENT OF PHYSICS
PHY1112: PRINCIPLES OF PHYSICS II
FALL 2023

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Office hours - Tuesday 3:00pm – 4:00pm and by appointment.
Office – SC 533

Communication All communication will be via your student email address or D2L. Students are expected to check D2L for announcements regularly (i.e. at least once or twice a day.) When emailing me, include “PHYS 1112” in the subject line. Announcements and grades will be posted on D2L.

Course Overview This is an introductory algebra-based course on electricity and magnetism, circuits, electromagnetic induction, electromagnetic waves and optics. The student will learn:

- The concept of electric charge,
- The fundamental laws governing static electricity and magnetism and how to use them to solve problems,
- The concept of electric and magnetic fields and how to visualize them,
- The concept of electric current and circuits,
- The fundamental laws governing DC and AC circuits and how to apply them to solve problems,
- The notion of electromagnetic waves and their properties,
- The laws of geometric and physical optics.

Learning objectives Students completing this course should be able to:

- solve problems in introductory-level electromagnetic fields accurately
- accurately compare and contrast simple dc and ac circuits
- discuss the characteristics of electromagnetic waves at the elementary level
- solve problems in geometric optics
- solve problems in physical optics and quantum mechanics at the elementary level

Significant Learning Outcomes Students completing this course will:

- Develop physics intuition,
- Learn to translate word problems into mathematical equations,
- Learn problem solving techniques (e.g., unit analysis and equations resolution),
- Be able to solve problems using algebraic manipulation,
- Be able to understand present day technological applications using fundamental laws of physics.

Course material: *OpenStax College Physics*: it is available online for free at <https://openstax.org/details/books/college-physics> or in print for \$48.50. Access to **WebAssign** through D2L with Day One Access.

PHYS 1111/1112 is part of a textbook program called Day One Access. The week before classes begin, you will receive an e-mail from dayone@kennesaw.edu that will have the pricing of your Day One items and a personalized link to opt out (please check your junk folder if not in your inbox). The purpose of Day One Access is to make sure that you have access to the digital course materials on or before the first day of class at a highly competitive rate. Everyone enrolled in the course will automatically have access to the digital course materials through drop/add. The charge for this Day One item is on your Owl Express account, as long as you opt out before the deadline, you will be refunded, but will lose access to the book.

You have the ability to Opt-Out through August 18th, via the link in the email sent to you by University Stores. Once you opt out, you will immediately receive a confirmation email. If you do not receive this email, you did not successfully opt out. If, after multiple tries, you are unable to successfully opt out via the link, please email dayone@kennesaw.edu prior to the opt-out deadline and request to be manually opted out. You must include your name, student ID number, and the course info. Emails sent after the deadline will not be acknowledged.

If you would like to know more about Day One Access, please visit https://ksustore.kennesaw.edu/textbooks/day_one_access.php

Prerequisite A grade of "C" or better in PHYS 1111, PHYS 2221, or PHYS 1211K

Course modality This is an in-person introductory Physics II course. There will be 15 weeks of classes (2.5hr/week) and breakout sessions (50min/week). There will be three (3) Midterm exams and one (1) Final exam. Homework assignments and Quizzes will be assigned on a weekly basis, except during the exam week.

Exams

This course will have three (3) Midterm exams and one (1) Final exam. All the exams will be completed in person during class time. The final exam will be cumulative and held on Tuesday, Dec 5th, 2023, from 6:00 -8:00 pm. If the Final exam grade is higher than one of the Midterm exams grades, then the Final exam grade will replace the lowest Midterm exam grade.

Midterm exams make-up will be provided within one week of the exam date only for valid excuses. Valid excuses include family emergencies, illness, court appearances, religious and ethnic holidays, and similar matters. Final exam make-up will only be available in accordance with KSU policy, so please plan to be present the day of the Final.

Homework

Homework problems will be assigned on a weekly basis, except during the exam week. Homework problems will be assigned after the last class of the week and before Friday at 11:59 pm. Homework is due via WebAssign by Sunday of the following week at 11:59 pm (9 days). The submission of the assignments will be happening online using WebAssign.net (there will be a link in D2L).

I recommend solving all HW problems in an HW notebook. This allows you to show your work and can be used to earn credit even when WebAssign marks you incorrect. Directly copying others' work is not permitted, but working together is a great way to learn. For any problem, you have worked but did not receive credit from WebAssign, please take a picture of your work and email it to me before the deadline and I will give you feedback and/or credit if appropriate. Deadline extensions can be provided for valid excuses and will be graded at reduced credit.

Quizzes

Quizzes will be assigned on a weekly basis, except during the exam week. Quizzes will be assigned after the last class of the week and before Friday at 12:00 pm. They will be due via D2L by the following Monday at 12:00 pm (3 days). The quiz is designed to be a quick 15-minute check of your understanding. They will be available via D2L. The best way to prepare for quizzes will be to actively engage in class and to be able to solve the previous week's breakout problems by yourself.

Grading policy The student's final grade will be determined by adding the points obtained by solving Homework, Quizzes, Midterm exams and Final exam.

Assessment	Points	Notes
Homework (10)	15 (1.5 per homework)	Due Weekly Sunday at 11.59pm
Quizzes (10)	5 (0.5 per quiz)	Due Weekly Monday at 12.00pm
Midterms (3)	60 (20 per midterm)	In class
Final Exam (1)	30	Comprehensive Final

The portion of your grade obtained by solving Homework problems and quizzes is designed to motivate you to learn by providing incentives for good habits. *You should feel low pressure for any single quiz question or Homework problem. However, by having excellent habits, you can earn up to 10 points of extra credit.* Note that the maximum cumulative grade is capped to 100.

Grading Scale	
Letter Grade	Numerical Score
A	90-100
B	80-89
C	70-79
D	60-69
F	less than 60

First Class for each Section:

CRN 86869 PHYS 1112/08	Tuesday, Aug 15, 2023, 5:00PM-6:15PM	Prillaman Health Sciences- 1002
CRN 86870 PHYS 1112/09	Tuesday, Aug 15, 2023, 5:00PM-6:15PM	Prillaman Health Sciences- 1002

First Breakout Session for each Section:

CRN 86869 PHYS 1112/08	Tuesday, Aug 15, 2023, 6:30PM-7:20PM	Prillaman Health Sciences- 1002
CRN 86870 PHYS 1112/09	Thursday, Aug 17, 2023, 6:30PM-7:20PM	Prillaman Health Sciences- 1002

FALL 2023 - PHYS1112 - SCHEDULE

Week #	Dates	Chapter #	Title
Math pretest	Aug 15, 2023	-	Scientific notation, vector operations, basic algebra and geometry, trigonometry, basic functions
Week 1	Aug 14-Aug 18, 2023	18	Electric Charge and Electric Field
Week 2	Aug 21-Aug 25, 2023	18	Electric Charge and Electric Field
Week 3	Aug 28-Sep 1, 2023	19	Electric Potential and Electric Field
Week 4	Sep 4-Sep 8, 2023	19/20	Electric Current, Resistance, and Ohm's Law
Exam 1	Sep 12, 2023	18-19	
Week 5	Sep 11-Sep 15, 2023	20	Electric Current, Resistance, and Ohm's Law
Week 6	Sep 18-Sep 22, 2023	21	Circuits and DC Instruments
Week 7	Sep 25-Sep 29, 2023	21	Circuits and DC Instruments
Week 8	Oct 2-Oct 6, 2023	22	Magnetism
Exam 2	Oct 10, 2023	20-21	
Week 9	Oct 9-Oct 13, 2023	22	Magnetism
Week 10	Oct 16-Oct 20, 2023	23	Electromagnetic Induction and AC Circuits
Week 11	Oct 23-Oct 27, 2023	23	Electromagnetic Induction and AC Circuits
Week 12	Oct 30- Nov 3, 2023	24	Electromagnetic Waves
Exam 3	Nov 7, 2023	22-23	
Week 13	Nov 6-Nov 10, 2023	25	Geometric Optics
Week 14	Nov 13-Nov 17, 2023	26	Vision and Optical Instruments
Week 15	Nov 20-Nov 24, 2023	NO CLASSES	
Week 16	Nov 27-Dec 1, 2023	27 and 29	Wave Optics and basics QM
Final Exam	Dec 5, 2023	18-29	

Face Covering Based on guidance from the University System of Georgia (USG), masks are encouraged based on individual preference and assessment of personal risk. Disposable face coverings can be picked up at the Office of Emergency Management at Chastain Pointe on the Kennesaw campus and Norton Hall Police Precinct on the Marietta campus. Please email oem@kennesaw.edu if you have questions.

Academic integrity Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate catalogs. The Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to university materials, misrepresentation/falsification of university records or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Copying sections of someone else's lab report, even your lab partner, is plagiarism. Incidents of alleged academic misconduct will be handled through the established procedures of the Student Conduct and Academic Integrity department, which includes either an "Informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement. See also <https://web.kennesaw.edu/scai/content/ksu-student-code-conduct>.

Students with disabilities Any student with a documented disability or medical condition needing academic accommodations of class-related activities or schedules must contact the instructor as early in the semester as possible. Written verification from the KSU Student Disability Services (<https://sds.kennesaw.edu/>) is required. No requirements exist that accommodations be made prior to completion of this approved University documentation. All discussions will remain confidential.

COVID 19 If you are feeling ill, please stay home and contact your health professional. In that case, please email the instructor to say you are missing class due to illness. Signs of illness include, but are not limited to, the following:

- Cough
- Fever of 100.4° F (38° C) or higher
- Runny nose or new sinus congestion
- Shortness of breath or difficulty breathing
- Chills
- Sore Throat
- New loss of taste and/or smell

COVID-19 vaccines are a critical tool in "Protecting the Nest." If you have not already, you are strongly encouraged to get vaccinated immediately to advance the health and safety of our campus community. As an enrolled KSU student, you are eligible to receive the vaccine on campus. Please call (470) 578-6644 to schedule your vaccination appointment. Information on COVID-19 and university policies related to COVID-19 can be found here: <https://coronavirus.kennesaw.edu/> . If you have tested positive for COVID-19, or have been exposed to someone who has tested positive for COVID-19, or had a diagnosis from a doctor of COVID-19, you should stay at home and self-isolate AND contact the KSU COVID-19 Health Helpline at 470-578-6644 and choose Option 1.

Withdrawal Policy	<p>Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal. The last day to withdraw without academic penalty is Tuesday, October 10, 2023. Additional information can be found at: http://catalog.kennesaw.edu/content.php?catoid=24&navoid=2171#withdrawalfromclasses. This and other important dates can be found on the Academic Calendar, Fall 2023 Academic Calendar - Office of the Registrar (kennesaw.edu).</p>
Shifting Modalities	<p>Please note that the university reserves the right to shift teaching modalities at any time during the semester, if health and safety guidelines require it to do so. Some teaching modalities that may be used are face to face (F2F), Hyflex, Hybrid, or online, both synchronous and asynchronous instruction.</p>
Campus Sexual Misconduct Policy	<p>In accordance with federal and state law including, Title IX of the Education Amendments of 1972 ("Title IX") and Title VII of the Civil Rights Act of 1964 (Title VII), the University System of Georgia (USG), including Kennesaw State University, prohibits discrimination on the basis of sex in any of its education programs or activities or in employment. The USG is committed to ensuring the highest ethical conduct of the members of its community by promoting a safe learning and working environment. To that end, Kennesaw State University follows USG Board of Regents Policy Manual, Section 6.7. See https://equity.kennesaw.edu/titleix/title-ix.php. For help see: https://tellksu.kennesaw.edu/</p>
KSU Codes of Conduct	<p>All students are responsible for knowing the information, policies and procedures outlined in the Kennesaw State University Codes of Conduct. Student Conduct and Academic Integrity (SCAI) includes: the general Student Code of Conduct, the Residential Code of Conduct, and the Code of Academic Integrity.</p>
Copyright Law	<p>It is the responsibility of KSU faculty and students to respect the rights of copyright holders and comply with copyright law. The University System of Georgia recognizes that the exclusive rights of copyright holders are balanced by limitations on those rights under federal copyright law, including the right to make a fair use of copyrighted materials and the right to perform or display works during face-to-face teaching activities. The University System of Georgia facilitates compliance with copyright law and, where appropriate, the exercise in good faith of full fair use rights by faculty and staff in teaching, research, and service activities. The University System of Georgia ensure compliance with copyright law in the following ways.</p> <ol style="list-style-type: none"> A. The USG informs and educates students, faculty, and staff about copyright law, including the limited exclusive rights of copyright holders as set forth in 17 U.S.C. § 106, the application of the four fair use factors in 17 U.S.C. § 107, and other copyright exceptions. B. The USG develops and makes available tools and resources for faculty and staff to assist in determining copyright status and ownership and determining whether use of a work in a specific situation would be a fair use and, therefore, not an infringement under copyright law; C. The USG facilitates use of materials currently licensed by the University System of Georgia and provides information on licensing of third-party materials by the University System; and

D. The USG identifies individuals at the University System and member institutions who can counsel faculty and staff regarding application of copyright law.

Academic Feedback

Institutional Chief Academic Officers will encourage faculty to clarify for students, at the beginning of each course, the basis on which grades will be determined and to provide timely academic feedback as the course progresses ([BOR Academic and Student handbook policy 2.18](#)).

Communication Courtesy

All members of the class are expected to follow [rules of common courtesy in all email messages](#), threaded discussions and chats.

Inclement Weather Policy

During the course of the year, Kennesaw State University may decide to close campus or operate on a delayed schedule in cases of inclement weather. The University will announce campus closures and delayed schedules in several ways. The cell phone number on file with the university will automatically receive KSU Alerts, so make sure your information in OwlExpress is always accurate. An email will also be sent to your university account. In addition, announcements will be made by a notice on the [Kennesaw State University home page](#).

Protecting Students' Privacy (FERPA)

Students have certain rights to privacy. These rights are mandated by federal policy. Leaving their work in an unsecured area such as outside your office door (unless agreed upon with each student) means that the students' names and grades and possibly social security numbers are accessible to everyone. Additionally, research papers can be taken and used by other individuals. It is recommended that you permit students to retrieve their work from your office if you don't return it to them in class. Information should not be made public in any way in which a student's grades, social security number, or other personal information may be identified. Grade information may be shared with members of the KSU community who also have a legitimate educational interest in student success (e.g. academic advisors or members of the Behavioral Response Team). Faculty may be asked to provide early alert information if there is a concern that a student is at risk, academically or otherwise.

As a member of the Kennesaw State University community of scholars, I understand that my actions are not only a reflection on myself, but also a reflection on the University and the larger body of scholars of which it is a part. Acting unethically, no matter how minor the offense, will be detrimental to my academic progress and self-image. It will also adversely affect all students, faculty, staff, the reputation of this University, and the value of the degrees it awards. Whether on campus or online, I understand that it is not only my personal responsibility, but also a duty to the entire KSU community that I act in a manner consistent with the highest level of academic integrity. Therefore, I promise that as a member of the Kennesaw State University community, I will not participate in any form of academic misconduct. The [Student Handbook](#) contains information regarding Rights Pertaining to Student Records, and FERPA specific details are available on the [Registrar's website](#). [Privacy in the Education Process](#). A key requirement of the formal evaluation process is the protection of individual privacy rights concerning educational grading. The University's online learning system and email system is designed to prevent unauthorized individuals from gaining access to sensitive information or information protected by federal or state law. Consequently, faculty and students are strongly encouraged to only communicate regarding course matters through the University's designated technology learning system.

**KSU Web
Accessibility
Policy
Statement**

Federal law Section 508 Subsection 1194.22 of the Rehabilitation Act and the Board of Regents (BOR) of the University System of Georgia (USG) Web Accessibility Guidelines require that all web content meet the federal government’s accessibility guidelines. As such, KSU complies with USG guidelines.

University accessibility assistance is provided by several offices as noted below. Staff in these offices work to accommodate requests for access or assistance with access as soon as possible in order to either accommodate the request or identify an effective alternative for the requester.

REQUEST FOR	OFFICE	CONTACT NUMBER	CONTACT EMAIL
Student Support Services	Student Disability Services	470-578-2666	studentdisability@kennesaw.edu
Student Technology Assistance	University Information Technology Services	470-578-3555	studenthelpdesk@kennesaw.edu
Third Party Technology Assistance	University Information Technology Services	470-578-6999	service@kennesaw.edu

Students with qualifying disabilities under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act who require “reasonable accommodation” to complete the course may request those from Office of Student Disability Services. Students requiring such accommodation are required to work with the University’s Office of Student Disability Services rather than engaging in this discussion with individual faculty members or academic departments. If, after reviewing the course syllabus, a student anticipates or should have anticipated a need for accommodation, he or she must submit documentation requesting an accommodation and permitting time for a determination prior to submitting assignments or taking course quizzes or exams. Students may not request retroactive accommodation for needs that were or should have been foreseeable. Students should contact the office as soon as possible in the term for which they are seeking accommodation. Student Disability Services is located in the Carmichael Student Center in Suite 267 on the Kennesaw campus or Building A in Suite 160G on the Marietta campus. Please visit the [Student Disability Services \(SDS\) website](#) for more information or call the office at 470-578-2666 (Kennesaw campus) or 470-578-9111 (Marietta campus).

The Federal, BOR and KSU Student Policies can be accessed through the link <https://cia.kennesaw.edu/instructionalresources/syllabus-policy.php>

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