



PHYS 2212 - Principles of Physics II

Course Syllabus - Fall 2021

The instructor reserves the right to make minor changes to the syllabus during the term. The instructor will notify students, via email or course announcement, when changes are made in the requirements and/or grading of the course.

Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator, 255 Edgewater Hall, 678-466-5445, disabilityservices@clayton.edu.

Course Description:

Number and Title:

PHYS 2212 (CRN 83839)

Principles of Physics II

Credit Hours:

3.0 semester credit hours

Catalog Description:

An introductory course which will include electrostatics, electric current and circuits, and electromagnetism, and may also include optics and modern physics. Elementary calculus will be used.

Course Prerequisites and Co-requisites:

Prerequisites: PHYS 2211, Principles of Physics I and
PHYS 2211L, Principles of Physics Laboratory I

Co-requisite: PHYS 2212L, Principles of Physics Laboratory II

Note: Due to the co-requisite nature of PHYS 2212 and PHYS 2212L, students dropping one of the two courses must also drop the other.

Notebook Computer Requirement:

Each CCSU student is required to have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student's academic program. Students will sign a statement attesting to such access. For further information on CCSU's Official Notebook Computer Policy, please go to <http://www.clayton.edu/hub/itpchoice/notebookcomputerpolicy>

Computer Skill Prerequisites:

Able to use the Windows™ operating system.

Able to use a the Microsoft Word™ word processing program.

Able to send and receive e-mail using the Outlook™ or Outlook Express™ program

Only use your CSU e-mail account or the e-mail system included in D2L to communicate academic information to your instructor.

Able to attach and retrieve attached files via email.

Able to use a Web browser.

Able to use Microsoft Teams.

In-class Use of Student Notebook Computers:

Student notebook computers will be used in every class meeting this semester. Computers will be required to access course materials, participate in the class meetings, and to communicate with your instructor.

Brightspace Desire2Learn (Online Classroom):

On-line activity will take place in Brightspace Desire2Learn (D2L), the virtual classroom for the course, and in Microsoft Teams. Posting of your work in D2L is a course requirement.

You can gain access to D2L, by signing on to the SWAN portal. New students, or those who would like a refresh on Brightspace (D2L) features, can review the [D2L Video Tutorials - For Students](#)

For instructions on joining a Microsoft Teams meeting, see [this brief introduction](#).

If you experience any difficulties in Desire2Learn or Microsoft Teams, please email or call The HUB at TheHub@clayton.edu or (678) 466-HELP. You will need to provide the date and time of the problem, your SWAN username, the name of the course that you are attempting to access or Teams meeting, and your instructor's name.

Major Student Activities:

- Reading and studying from the course textbook.
- Working assigned homework problems.
- Taking notes.
- Answering and asking questions during class in person or in Teams.
- Taking quizzes and examinations.
- Watching and participating in demonstrations of physical principles.

Program Learning Outcomes:
General education outcomes.

The Clayton State University Core Curriculum outcomes (see Area D) are located in the Graduation Requirements section of the [Academic Catalog and Student Handbook](#).

Chemistry outcomes:

PHYS 2212 is a required course in the B.S. degree program in Chemistry. PHYS 2212 supports

4. apply knowledge of physics and mathematics to solve chemical problems.
5. communicate scientific information in a clear and concise manner both orally and in writing.
6. collect, evaluate and interpret scientific data, and employ critical thinking to solve problems in chemistry and supporting fields.
7. collaborate effectively on team-oriented projects

Course Learning Outcomes:

Course Outcome 1: Be able to identify and describe the basic laws of electromagnetism, optics and special relativity.

Course Outcome 2: Be able to apply the basic laws of physics to the solution of conceptual and quantitative problems.

Term:
Fall Semester 2021

Class Meetings:

Classroom: Lakeview Discovery and Science Center, Room 210

Class Times:

3:00 p.m. – 4:20 p.m., Tuesday and Thursday

This class will be taught using materials and activities in D2L along with in person and Microsoft Teams sessions and office hours.

Directions for Installing Teams:

1. Go to swan.clayton.edu and click on the Microsoft Teams link.
2. Download the Microsoft Teams application to your computer by click on the small computer icon on the bottom left side of the screen. If you don't see the icon, you already have the program installed on your computer.
3. You will need to log in using your CSU username and password along with Multifactor Authentication.

Textbook Information:

OpenStax University Physics, Volumes 2 and 3:

<https://openstax.org/details/books/university-physics-volume-2>

Text Coverage: Chapters 5-16 of Volume 2

Or

Text: University Physics with Modern Physics (15th Edition) by Hugh D. Young, Roger A. Freedman, Lewis Ford; Pearson (2019)

Text Coverage:

Chapters 21-34

Evaluation:

Mid-term examinations: 2 exams @ 150 points 300

Quizzes*: 10 quizzes @ 15 points 150

Critical thinking exercises: 4 @ 25 points 100

Final examination**: 200

TOTAL 750

*Quizzes covering fundamentals of study assignments will be administered. Quizzes will be announced in advance. More than ten quizzes may be given; the highest ten quiz scores will count towards the course grade.

**The final examination will be comprehensive.

Grading:

A	90 - 100%
B	80 - 89%
C	70 - 79%
D	60 - 69%
F	below 60%

Mid-term Progress Report

The mid-term grade in this course, which will be issued by September 27, reflects approximately 30% of the entire course grade. Based on this grade, students may choose to withdraw from the course and receive a grade of "W." Students pursuing this option must fill out an official withdrawal form, available in the Office of the Registrar, by midpoint, which occurs on October 1, 2021. [Instructions for withdrawing are provided at this link.](#)

The last day to withdraw without academic accountability is Friday, October 1, 2021.

Course Schedule:

Week	Date	Topic	Text Chapter, Young and Freedman	Text Chapter, OpenStax
1	Aug 10, 12	Electric Forces and Fields	21.1-21.6	5.1 – 5.7
2	Aug 17, 19	Gauss's Law	22.1 – 22.5	6.1 – 6.4
3	Aug 24, 26	Electrical Energy and Electric Potential	23.1-23.4	7.1 - 7.6
4	Aug 31, Sep 2	Capacitance and Dielectrics	24.1-24.2	8.1 – 8.4
5	Sep 7, 9	Current and Resistance	25.1-25.5	9.1 – 9.6
6	Sep 14, 16	Exam 1 Review and Exam	21-25	5 - 9
7	Sep 21, 23	DC Circuits	26.1-26.6	10.1 – 10.6
8	Sep 28, 30	Magnetic Forces and Fields	27.1-27.4	11.1 – 11.5
	Oct 1	Midpoint: the last day to withdraw without academic accountability		
9	Oct 5, 7	Sources of Magnetic Field	28.1-28.5	12.1 – 12.6

10	Oct 12, 14	Faraday's Law	29.1-29.4	13.1 – 13.7
11	Oct 19, 21	Inductance	30.1-30.2	14.1 – 14.3
12	Oct 26, 28	Problem Solving		
13	Nov 2, 4	AC Circuits	31.1-31.4	15.1 – 15.6
14	Nov 9, 11	Exam 2 Review and Exam	26 - 31	10 - 15
15	Nov 16, 18	Electromagnetic Waves	32.1 – 32.6	16.1 – 16.5
16	TBD	Final Exam	21 – 32	5 - 16

Course Policies:

Students must abide by policies in the Clayton State University Student Handbook, and the Basic

Undergraduate Student Responsibilities. The Student Handbook is part of the [Academic Catalog and Student Handbook](#).

University Attendance Policy

Students are expected to attend and participate in every class meeting. Instructors establish specific policies relating to absences in their courses and communicate these policies to the students through the course syllabi. Individual instructors, based upon the nature of the course, determine what effect excused and unexcused absences have in determining grades and upon students' ability to remain enrolled in their courses. The university reserves the right to determine that excessive absences, whether justified or not, are sufficient cause for institutional withdrawals or failing grades.

Course Attendance Policy

Attendance is expected for all class periods.

No Show Policy

It is imperative that students have a successful start of each semester by attending class during the first week and no later than the second week of the semester. A registered student who does not attend at least one class session by **5:00 p.m. August 19** will be reported a "no show." The consequences of being reported as a no show are significant: the student will be dropped from the class and may suffer significant financial hardship.

In order for students enrolled in this course to avoid being a "no show," the completion of an assignment will be required before the no show reporting period has ended. Simply logging into this course in D2L will **NOT** be considered online attendance. Your instructor will provide details on the online attendance assignment.

Missed Work

Without excuse, a grade of zero points will be assigned for the missed work. If a valid excuse is provided:

Make-up quizzes will be given only if they are taken before quiz solutions are posted. If the make-up quiz cannot be taken before the solutions are posted, the missed quiz will be counted as one of approximately two quizzes which can be dropped (approximately twelve quizzes will be given in the course. The highest ten quiz scores will be used to calculate the course grade).

Make-up examinations will be given only if they are taken before graded examinations are returned to students (next class period). In the event that a make-up examination cannot be taken before exams are returned to students, the missed examination will not count in calculating the course grade. This means that other graded work will be responsible for a greater weight in determining the course final grade.

The final examination must be taken. Students missing the final examination should contact their instructor concerning the applicability of an [Incomplete grade](#).

Late bonus problems will not be accepted. Late materials will not be accepted after the final course meeting (November 18, 2021).

Academic Dishonesty

Any type of activity that is considered dishonest by reasonable standards may constitute academic misconduct. The most common forms of academic misconduct are cheating and plagiarism. All instances of academic dishonesty will result in a grade of zero for the work involved. All instances of academic dishonesty will be reported to the [Office of Community Standards](#). Judicial procedures are described in the section of the [Academic Catalog and Student Handbook](#) titled, Procedures for Adjudicating Alleged Academic Conduct Infractions.

Disruption of the Learning Environment

Behavior which disrupts the teaching-learning process during class activities will not be tolerated. While a variety of behaviors can be disruptive in a classroom setting, more serious examples include belligerent, abusive, profane, and/or threatening behavior. A student who fails to respond to reasonable faculty direction regarding classroom behavior and/or behavior while participating in classroom activities may be dismissed from class. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of WF. More detailed descriptions of examples of disruptive behavior are provided in the Code of Conduct and Disciplinary Procedures sections of the Clayton State University [Academic Catalog and Student Handbook](#).

Other Policies

All assignments shall be turned in through D2L. No e-mail assignments will be considered unless specifically discussed.

The use of simple calculators is allowed for all quizzes and examinations. All examinations are closed book. No student-produced "memory sheets" or note cards are allowed. An instructor-produced reference data pamphlet will be provided for all quizzes and examinations. Use of cell phones during quizzes and examinations is strictly prohibited.

Important dates:

Quizzes: weekly, on Tuesdays and Thursdays.

Tentative schedule for examinations:

Exam #1: Sep 16, 2021

Exam #2: Nov 11, 2021

Final examination: TBD

Last day to drop without academic accountability:

Friday, October 1, 2021

Copyright © 2021 Tatiana Krivosheev