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Mathematics and Science Division

Avanté Center Y, Room Y103
847.925.6370

Physical Sciences Department

[Physical Sciences Department Home Page](#)

College Mission: Harper College enriches its diverse communities by providing quality, affordable, and accessible education. Harper College, in collaboration with its partners, inspires the transformation of individual lives, the workforce, and society.

PHY122-002 Introductory Physics II Spring 2017 Course Syllabus

General Course Information

Credit Hours: 5 (3 lecture hours; 2 lab hours)

Class Dates: January 25th – May 10th, 2017

Meeting Times: Lecture: Mon 6:00pm – 9:35pm, Lab: Wed 6:00pm – 8:45pm

Meeting Location(s): Z-126

Modality: Face-to-Face, supplemented with Blackboard resources

Online Expectations: This class will utilize the [Blackboard website](#) and [McGraw-Hill Connect](#) to accommodate class discussion, post class material, and post class related announcements. Students should logon to Blackboard within the first week of class and check the class site for announcements.

Withdrawal Dates: The last day to withdraw from this course is Sunday, April 23. If you decide to withdraw, you must officially drop the class with the Registrar's office. A grade of W will go on your transcript but will not adversely affect the GPA. Failure to do so will result in a grade of F.

Start Here

This model syllabus illustrates the use of the Harper College Syllabus Template. Items **highlighted in blue** are required syllabus elements as outlined in the [Harper College Syllabus Checklist](#). Side notations in purple boxes provide notes on how the syllabus was completed.

Look for the credit hours in the current [course catalog](#) credit hours breakdown if you are unsure.

If your course is blended, indicate what will be online and what on-ground. Whether online, blended, or face-to-face, use this space to provide links to your course Blackboard shell or online publisher content.

Locate the current semester's withdrawal dates on the [Refund, Withdrawal, and Financial Aid Dates page](#).

Instructor Information

Name: Dr. Randolph Claus

Prefer to be Addressed As: Professor Claus

Phone: 847.925.X000

Email: rclaus@harpercollege.edu

Office Location: D281

Office Hours: Mondays 2:00pm-4:00pm, and by appointment

Preferred Method of Communication: Email is the best way to reach

Versioning by month or specific date can help you track any changes you make to your syllabus over time. You will need to enter the version number/date on both the first and second page of the syllabus before it auto-fills the remaining pages.

me. I check email daily, and will try to respond to student messages within 24 hours during the week, and on Monday morning for messages received Friday night through Sunday.

Course Description

Course Description: Continues PHY121. Topics in electricity, magnetism, light and modern physics. Prerequisite: PHY 121 with a grade of C or better.

Look for the course description, including prerequisites and IAI designation (if applicable), in the current [course catalog](#).

Course Outcomes: Upon successful completion of the course, students should be able to:

To locate your course outcomes, contact your Division office. Or, you can access the outcomes in [CurricuNet](#).

1. Use appropriate forms of mathematical reasoning to analyze scientific problems.
2. Exhibit greater knowledge of the physical world.
3. Collect, analyze, and classify scientific information.
4. Apply basic scientific principles learned to everyday life.

Expected Technical Skills: Students are required to perform basic computer processes, such as creating and saving documents, and accessing Blackboard via the internet. In addition, students are expected to submit homework online using the [McGraw-Hill Connect](#) website.

Instructional and Technological Information

Required Materials

Readings:

Title: Harper College PHY122 Lab Manual (Available in the [Harper College Bookstore](#))

Technology:

- Access to [McGraw-Hill Connect website](#).

Other Materials:

- USB flash drive
- Calculator (scientific or graphing)

Recommended Materials

Readings:

Title: *College Physics* - Volume 2

Authors: Giambattista, Richardson, and Richardson
 ISBN: ISBN 978-0-07-743786-2 OR ISBN 978-0-07-351214-3
 Publisher: McGraw-Hill Higher Education
 Publish Date/Edition: 4th Ed.

Course Assessments

Assessment Overview

Grading Criteria:

Grading Categories	Percentage
1. Homework	10%
2. Labs (Must have a >70% grade in lab, or the final course grade will be an "F".)	20%
3. Quizzes	10%
4. Exams (3 total)	45%
5. Final Exam – Monday, May 15	15%
Total Points	100%

Final Exam Date is a required element.

Grading Scale:

Final Grade	Percentage
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	0 – 59%

Category Descriptions

- Homework:** Each week approximately 10-15 homework problems will be assigned. Homework assignments must be completed online (see below) unless instructed otherwise. Students will be notified in advance when homework will be collected in class. Solutions to the homework problems will be made available. The lowest homework score will be dropped when determining final course grades.

Students must submit homework online using the McGraw-Hill Connect website (connect.mcgraw-hill.com). Access to this site is included with new copies of the book or may be purchased directly through the website.

Website: <http://connect.mheducation.com>

Course: PHY 122 – Introductory Physics II

Section: Section 002 (Spring 2017)

Instructor: Dr. Randolph Claus

- 2. Labs:** Experiments will be a group effort. All students must participate and will be asked to leave lab with no credit if they do not participate. Each student must submit her/his own report, graph, calculations, and/or quiz consisting of her/his own work. Copying is not permitted. Students are required to read the appropriate experiment before coming to lab and there may be a pre-lab quiz in the first 5 minutes of lab. Late or missed labs will receive a score of "0" (see policy on "Late and Make-Ups" work). The lowest lab score will be dropped in calculating a student's final grade. Students must receive a passing grade (70%) in lab to pass this class.

Group members who do not fully participate in group activities may receive a lower score than the rest of the group. Groups will be organized at the discretion of the instructor and are subject to change during the semester.

Food and drinks will NOT be allowed in the lab. Students are expected to leave their work areas clean and will lose points for dirty work areas.

- 3. Quizzes:** Upon the completion of each chapter, a short, in-class quiz will be given that includes both conceptual questions and problem solving. These quizzes will be based on in-class problems and homework problems. Quizzes will be closed-book and closed notes, with some exceptions at times. Formulas will be provided as needed.
- 4. Exams:** There will be 3 exams and a final exam during the semester. Each exam will cover approximately 3 to 4 chapters worth of material and students will be allowed 120 minutes for each exam. Students may use a calculator (no cell phones, tablets, etc.) and an equation sheet of their own creation. This equation sheet may include any information (e.g. formulae, notes, diagrams, etc.) with the exception of example problems/solutions. Exam questions will come from homework assignments, labs, lectures, and readings. The exam schedule with tentative topics is listed in the class schedule on the syllabus. Cell phones, tablets, etc. may not be used on exams and will result in a '0' for the exam. Only calculators may be used on exams.
- 5. Final Exam:** The final exam will be held on Monday, May 15. The exam will consist of new and cumulative content and students will be allowed 180 minutes for the final exam. Students will be allowed to replace their lowest exam score (by percentage), including a missed exam, with their final exam grade, in which case the final exam will count twice. Students may use a calculator (no cell phones, tablets, etc.) and an equation sheet of their own creation.

Assessment Policies

Grading and Feedback: All material turned in for a grade must be your own work. All work must be neat and legible. Illegible or sloppy work will receive no credit. All work must be complete; calculations must include all steps and correct units. All submitted work must contain your full

name, the date, and the class (including section number). Partial credit may be assigned depending on the nature of the work.

Late/Missed Work Policy: Acceptance of late material and make-up is at the discretion of the instructor with the following guidelines:

- If the student knows in advance of a date for which they will not be able to attend an exam, complete a homework assignment, exercise, or lab (or other class period) they must make arrangements before the missed session.
- If the student misses an exam, homework, exercise, or lab (or other class period) due to an unforeseen emergency, accommodations can be made only if the student contacts the instructor prior to the next class meeting and provides documentation of the emergency.
- Documentation for a missed assignment (including labs and exams) must be provided to the instructor within one week (or earlier) of the missed assignment.
- If these conditions are not met, there will be no make-ups or late work accepted receiving a grade of "0".

Valid excuses are at the discretion of the instructor and requests may be rejected even if the above conditions are met. Any late work accepted may incur a point penalty at the discretion of the instructor. Students will be allowed no more than one late, make-up, or excused assignment per semester. Due to space and equipment restrictions laboratory experiments may not be made-up

Course Surveys (Student Opinionnaires of Instruction): Near the end of this course you will receive an email from your Harper Gmail account (subject line: **Harper College – Course Survey**) inviting you to participate in a survey for this course. The feedback you provide is valuable to me, as your instructor, as well as Harper College. The comments you share are completely anonymous and the compiled confidential results will not be released until after final grades have been posted for the entire semester. You may access the survey by:

- Going to your Harper College Gmail account
- Locate the email with the subject line **HARPER COLLEGE – COURSE SURVEY**
- Open the email and select the survey link located in the body of the email
- Take the survey
- Upon completion, hit SUBMIT

You will immediately receive another email confirming participation. Direct all survey questions to soi@harpercollege.edu.

Course Culture

In Our Course

What to Expect from Your Instructor: You can expect to receive grades and feedback on your submitted work no later than 1 week after the due date. I welcome open discussions or questions in class or via email or our Blackboard site. I will respond to your communications within 48 hours.

Attendance/Participation: Students are expected to approach this class in a serious, professional manner. Students are responsible for all lecture material, classroom assignments, and announcements.

Please be prepared to begin class at the designated class times. If you are late you may not be allowed to participate in that class session, receiving a "0" for any in-class quizzes or labs.

Students should expect to spend at least 10 hours per week outside of class preparing for this class.

An attendance policy is a required element. This is an example of an attendance policy and should be modified to fit your course.

Behavioral Expectations: You have the opportunity to participate in and benefit from this academic course so long as your behavior is aligned with the expectations described below. You can expect to have your academic performance evaluated fairly based on the standards communicated in this syllabus and any relevant program guidelines, and to utilize the [Academic Complaint process](#) if you have concerns with a decision made about your academic progress in the course. In exchange for this opportunity, you are expected to uphold the following:

- Behave in accordance with the [Student Code of Conduct](#) and other applicable College policies
- Refrain from disrupting the ability of fellow students to learn or the instructor's ability to teach. Examples of disruption include:
 - Cell phone, pager, or computer use that significantly, or repeatedly, distracts others
 - Coming to class late, leaving early, or excessively, physically relocating oneself in the classroom
 - Interrupting, discussing unrelated issues in class, or speaking frequently without being called on
 - Yelling, cursing, or engaging in other aggressive behavior
- When interacting online, communicate in a respectful fashion. This includes, but is not limited to:
 - Refraining from name calling, using profanity, posting inappropriate material, and typing in all capital letters
 - Sending multiple emails with one sentence
 - Avoiding rants or discussing non-relevant topics

These are suggested examples of behavioral expectations. They may be modified to fit your course.

Open discussion and disagreement are encouraged when done respectfully and in the spirit of academic discourse. There are a variety of behaviors that, while not against a specific College rule, may create disruption in this course. Students whose behavior is disruptive or who fail to comply with the instructor may be dismissed from the class for the remainder of the class period and may be required to meet with the instructor or Dean prior to returning to the next class period. If necessary, referrals may also be made to the Student Conduct process for violations of the Student Code of Conduct.

At Our College

Academic Dishonesty: Students are expected to uphold college policies related to academic dishonesty towards pursuit of their educational objectives as outlined in the [Academic Honesty Policy](#), in the Student Handbook. The College reserves the right to set and communicate reasonable standards of behavior as needed. The following behaviors related to academic dishonesty are

prohibited. Examples are provided to illustrate the specific prohibition and are not intended to be all-inclusive.

- Cheating (accessing or using unauthorized materials or information)
- Plagiarism (reproducing someone else's words or ideas without accurate acknowledgment)
- Falsifying information (providing untrue information)
- Unauthorized collaboration (getting assistance or sharing work without permission)
- Facilitating academic dishonesty (participating in an act that creates an unearned advantage for someone)

Student Code of Conduct: Harper College encourages the intellectual and personal growth of its students as scholars and as citizens. The College has both the authority and responsibility to maintain a campus community where the educational programs can flourish for all students and where individual rights, personal and collective safety, and College operations are appropriately protected. It is a choice to attend Harper College and by doing so, students assume the obligations (including standards for behavior) imposed by the College.

Harper College students and student organizations are expected to act in accordance with the policies, rules, regulations, laws, and requirements of Harper College, municipalities and counties, the State of Illinois, and the United States. The [Student Code of Conduct](#) and related information at the [Harper Student Conduct resource page](#) outlines these expectations and provides resources for students.

Equal Opportunity Statement: Harper College does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, marital status, sexual orientation, disability or unfavorable discharge from military service. If you believe you have experienced discrimination or harassment (whether on or off campus) that affects your ability to participate in class or any of Harper College's programs, please seek assistance from any of the following resources:

- For gender-based or sexual misconduct (including sexual assault and sexual harassment) by any person, visit the [Harper College Title IX resource page](#) to learn more about your support and reporting options.
- For any other harassment/discrimination by an employee, contact the College's Chief Human Resources Officer at 847-925-6216.

Please be advised that faculty members are required to report to the College if they learn that a crime may have occurred or that harassment or discrimination may have occurred. If you are not sure if you want to formally report to the College, but you want confidential support or assistance, contact Psychological Services at 847-925-6268.

Student E-mail Notifications & Privacy: All notifications related to student registration or other business activities are sent to students via their Harper College email account ([XXXX@mail.harpercollege.edu](#)) that is assigned to students upon registration. Students access this account via an icon in the student portal (where you registered for classes). Please check this e-mail

frequently. To forward e-mails from this account to a personal email account please follow [these instructions for forwarding](#) Harper e-mail.

Please be advised that your education records are subject to a federal privacy law called the Family Education Rights and Privacy Act (FERPA). As a result, please be aware that you (not your parent(s), spouse, or other such person) will generally need to be the one to ask questions, file complaints, or otherwise interact with the College and faculty about your academic performance in this class.

Blackboard Privacy and Accessibility Statements: Blackboard is the learning management system used at Harper College. It provides a secure Web space for delivery of instructional course materials. Blackboard's [privacy statement](#) and [accessibility statement](#) are available for review.

Copyright Statement: The materials on this course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated. For more information, please visit the [Harper College Copyright/Fair Use resource page](#).

Student Support Resources

Student Success

Access and Disability Services: Harper College strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let Access and Disability Services (ADS) know immediately at 847.925.6266. ADS will privately discuss the options you have, including the accommodations they offer. You are welcome to register with Access and Disability Service by going to [Access and Disability Services](#) and filling out the application for ADS services. Once you have your accommodations approved by ADS, please make arrangements with the instructor as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

- Location: Building I, Room 103
- Phone: 847.925.6266
- Email: ads@harpercollege.edu
- To learn more visit: [Access and Disability Services](#)

Military and Veteran Students: I recognize the complexities of being a member of the military community and also a student. If you are a member of the military community, please inform me if you are in need of accommodations. Drill schedules, calls to active duty, complications with GI Bill disbursement, and other unforeseen military and veteran related developments can complicate your academic life. If you make me aware of a complication, I will do everything I can to assist you or put you in contact with college staff who are trained to assist you.

Library: The library provides students access to resources through searchable databases and catalogs. Students can utilize the interlibrary loan service, laptop check-out, group study areas, computer workstations, and quiet study space.

- Location: Building D, Room D102 and Building H, Room H130
- Phone: 847.925.6184
- Email: library@harpercollege.edu
- To learn more visit: [Harper College Library](#)

Student Service Desk (Computer Help): The Student Service Desk assists all students by providing information and support for Harper Student E-mail Accounts, MyHarper Student Portal, and Blackboard.

- Location: Building D, Room D116
- Phone: 847.925.6866
- Email: studentsd@harpercollege.edu

Computer Labs: Campus labs are staffed to assist students with logging on and off, accessing specific applications and printing their work. Labs are open to all currently enrolled Harper students.

- Locations: Building I, Room I223 & Avanté Center, Room Y203
- Phones: 847.925.6000 ext. 2372 and ext. 2870 (Building I) & 847.925.6966 (Avanté Center)
- To learn more visit: [Harper College Computer Labs](#)

Writing Center: The Writing Center tutors offer free walk-in writing assistance and appointments. Students are welcome to bring in their writing assignments in any stage. They also have a computer lab where you can work on your writing assignments with the tutors.

- Location: Building D, Room D202
- Phone: 847.925.6796
- To learn more visit: [Harper College Writing Center](#)

Tutoring Center: Tutoring services are free for Harper College students in more than 100 courses. The Tutoring Center offers the following services: walk-in tutoring, tutoring by appointment, and reviews.

- Location: Building D, Room D202
- Phone: 847.925.6539
- To learn more visit: [Harper College Tutoring Center](#)

Success Services: Success Services offers free, one-hour sessions to work with you on areas such as reducing stress, dealing with anxiety, building time management skills, becoming a more effective test taker, and more.

- Location: Building D, Room D202
- Phone: 847.925.6715
- To learn more visit: [Harper College Success Services](#)

Student Safety and Wellness

Wellness Center: The Wellness Center offers resources for your health and wellness needs, including confidential health counseling, birth control, first aid, immunizations, STI testing, pregnancy testing, wellness screening and more.

- Location: Building A, Room A364
- Phone: 847.925.6268
- To learn more visit: [Harper College Health Services](#)

Harper Early Alert Team (HEAT): HEAT is a multidisciplinary campus threat assessment and behavioral intervention team that guides the campus community in effectively assessing and addressing threatening and/or concerning behaviors. HEAT strives to assist the campus in intervening with someone before their behaviors reach a critical level.

- To learn more or to report a threat: [Harper College HEAT](#)

Harper College Police: Contact the Harper College Police for emergency assistance or to report a crime.

- Phone: 847.925.6330

PHY122-002 Introductory Physics II Spring 2017 Course Schedule

A weekly schedule of readings and assignments is a required element.

The example below is a partial schedule; it does not cover the full course.

Week	Topics/Outcomes	Class Activities	Due Dates/Assignments
Week 1 1/16-1/22	<ul style="list-style-type: none"> Course Intro Chapter 16 - Vector review, inductors/Conductors, Coulomb's Law 	<ul style="list-style-type: none"> MLK Jr. Day – no class 	<ul style="list-style-type: none"> Due: NA
Week 2 1/23-1/29	<ul style="list-style-type: none"> Ch. 16 - Electric Fields Ch. 17 - Electric Potential and Potential Energy, Relationship between V and E, Capacitors and Stored Energy, Dielectrics 	<ul style="list-style-type: none"> Lab 1 – Graphing Exercise 	<ul style="list-style-type: none"> Due 1/25: HW 1 (Ch. 16)
Week 3 1/30-2/5	<ul style="list-style-type: none"> Ch. 18 – Ohm's Law, Series and Parallel Resistor Networks, RC Circuits 	<ul style="list-style-type: none"> Ch. 16 Quiz Lab 2 – Resistance and Ohm's Law 	<ul style="list-style-type: none"> Due 2/1: HW 2 Due (Ch.17)
Week 4 2/6-2/12	<ul style="list-style-type: none"> Ch. 19 – Magnetic Fields, Magnetic Force on a Point Chare/Wire, Motion in a Uniform Field 	<ul style="list-style-type: none"> Ch. 17 Quiz Lab 3 – Series and Parallel 	<ul style="list-style-type: none"> Due 2/8: HW 3 Due (Ch.18)
Week 5 2/13-2/19	<ul style="list-style-type: none"> Review Ch. 16-18 	<ul style="list-style-type: none"> Finish Topics and Review for Exam 1 Exam 1 (Ch. 16-18) 	
Week 6 2/20-2/26	<ul style="list-style-type: none"> Ch. 20 – Electromagnetic Induction, Faraday's/Lenz's Law, Transformers 	<ul style="list-style-type: none"> Lincoln's Birthday – No Class 	<ul style="list-style-type: none"> Due 2/22: HW 4 Due (Ch.19)
Week 7 2/27-3/5	<ul style="list-style-type: none"> Ch. 20 Finish Topics on Electromagnetic Induction 	<ul style="list-style-type: none"> Ch. 19 Quiz Lab 4 – RC Time Constant 	

When completing your own course schedule, delete any unused weeks.

**PHY122-002 Introductory Physics II
Spring 2017
Statement of Understanding**

While not required, utilizing a Statement of Understanding is a best practice at Harper College.

Documentation of Understanding

Syllabus Receipt

_____ I acknowledge that I have received and reviewed the course syllabus for PHY122-002, Introductory Physics II, Spring 2017.

- My course meets on _____ (days) at _____ (time) in room _____.
- My course is online, and can be accessed at [Harper's Blackboard site](#)

Syllabus Acknowledgement

_____ I have read the syllabus (either in paper or online), and I understand the classroom policies, instructors expectations, and rules as stated in the syllabus for this course.

_____ I understand that I am responsible to complete all homework assignments, in-class activities, and class assessments by the due dates as outlined in the syllabus.

_____ I understand that attendance and participation in all course activities is essential for my success in this course.

_____ If I have any questions or concerns, I will contact the instructor for further explanation.

Student Signature

Print/Type Name: _____

Signed: _____ **Date:** _____

(If submitted electronically, the typed name plus submission of this statement in Blackboard or to the instructor via email constitutes student signature).