

University Physics II Lab

PHYS-2126

Fall 2020 Sections 52A CRN-17957, 52B CRN-17958 1 Credits 08/24/2020 to 12/10/2020 Modified 08/24/2020

Meeting Times

Lecture

Monday, Wednesday, 1:25 PM to 2:40 PM, SCHW 270 / Remote

All courses with a face-to-face component will be enhanced with simultaneous remote instruction in Fall 2020. For example, a course with 30 or fewer students that meets twice a week would on the first day have one group face-to-face one day with the other group watching live on Zoom remotely and then the face-to-face and remote groups would swap the second day. This limits face-to-face meetings to 15 or fewer students at a time.

This class breaks into two sections: 52A and 52B, where on Mondays: 52A is face-to-face and 52B is live-remote and then on Wednesdays: 52A is live-remote and 52B is face-to-face.

	Mondays	Wednesdays
Section 52A	Face-to-Face on Campus	Live Videoconference
Section 52B	Live Videoconference	Face-to-Face on Campus

In order to access your course remotely, you should follow the following procedure:

- 1) Log in to eCampus.
- 2) Access the course like you would normally to find the content and syllabus.
- 3) Click on "Zoom" in the blue horizontal bar near the top.
- 4) A time-sorted list of current and upcoming scheduled meetings should be displayed. Find the meeting that corresponds to your class and there should be a button to join that meeting. This should automatically connect you to the Zoom meeting.

It is quite possible, even likely, that some days face-to-face classes will need to be canceled and the class will be done only remotely. If anyone in a class gets sick, then that class, including me, is quarantined. Moreover, if anyone in any of my classes gets sick, then I am quarantined and the class will be held remotely. Check the News on the front page of the eCampus class page every day before coming to class.

It is also possible that if there may be a significant surge in infections causing the entire college to switch again, like last Spring, to all remote. If so we will proceed with a live-remote classroom and successfully complete the semester. Much is uncertain, but I am very confident we will have a successful semester.

Contact Information

Professor: Dr. Terrence Honan

Email: thonan@blinn.edu

Office: SCHW 430H

Phone: 979-209-7420

Office Hours

Monday, Tuesday, Wednesday, Thursday, 3:00 PM to 4:00 PM, by Zoom

<https://blinn-edu.zoom.us/j/6600538582> (<https://blinn-edu.zoom.us/j/6600538582>)

Description

3 laboratory hours per week; 48 total contact hours. Credit: 1 semester hour.

Laboratory experiments supporting theoretical principles presented in PHYS 2326 involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.

Requisites

Corequisite: PHYS 2326 University Physics II.

Core Curriculum Statement

This course is not a core curriculum course.

Outcomes

1. Prepare laboratory reports that clearly communicate experimental information in a logical and scientific manner.
2. Conduct basic laboratory experiments involving electricity and magnetism.
3. Relate physical observations and measurements involving electricity and magnetism to theoretical principles.
4. Evaluate the accuracy of physical measurements and the potential sources of error in the measurements.
5. Design fundamental experiments involving principles of electricity and magnetism.
6. Identify appropriate sources of information of conducting laboratory experiments involving electricity and magnetism.

Materials

- **Required Lab Manual:** The lab manual is a PDF document that can be found in eCampus.
- **Scientific Calculator:** Students must have a proper scientific calculator with them for every class and exam.
- **Online Course:** Computer with webcam and reliable internet access. **REQUIRED:**
 - a full computer (not a Chromebook, tablet, or smartphone),
 - a webcam and microphone (for simultaneous remote participation and test proctoring),
 - headphones (if using a computer on campus)
 - reliable internet access
- **photo ID** - students are required to show photo Identification (such as you Blinn ID or official photo ID) when taking online testing. Students are encouraged to cover confidential information such as ID number, address, etc.
- **Mathematica:** The first two labs and one other use Mathematica. Students will need a computer with a copy of Mathematica to perform these labs. Blinn now has an unlimited site license to Mathematica (and also to Wolfram Alpha Pro). Students must download their free copy of Mathematica for their personal computers. The Blinn download links can be found here: [Mathematica/AlphaPro Download](#)
- **Microsoft Office:** Through Blinn students may also download a copy of the Office 365 Suite.
- **CampusClear:** All students must download and install the phone app CampusClear. You must certify with that app every day before you come to campus. It is a very easy process.

Course Requirements

Grades will be based on laboratory reports, in-class quizzes and a comprehensive final.

- **Laboratory Reports:** 60% of the final grade is from lab reports. Lab reports will be graded out of 30 points. After two grades are

dropped for the semester, the total will be rescaled to 100 points. There will be no make-up labs for any reason; any missed lab will count as one of the drops. A student must attend the lab to get credit for that lab. Lab reports will be due the class following the completion of that lab.

- **Quizzes:** There will be unannounced quizzes periodically. They will count 30 points each. 20% (rounding up) of the quizzes will be dropped. After the drops, the quiz grade will be rescaled to 100 points. There will be no make-up quizzes for any reason; any missed quiz will count as one of the drops. Quizzes are unproctored and open book / open note. Students may discuss quizzes amongst themselves. After dropping one, all the remaining quiz grades will be added and rescaled to 100 points.
- **Quiz and Lab Submission:** Students will submit the labs and quizzes in the eCampus Dropbox shown in the submodule for that specific or lab quiz. The submission must be submitted as a properly-scanned single PDF document. To create the single PDF file, students must use a scanner or a phone app like Adobe Scan, Google Drive (has a built in feature), Clear Scan, Office Lens or Cam Scanner. It is the burden of the student to guarantee the PDF file is readable. It is certainly fine to use a tablet with stylus to do the entire quiz without printing or scanning but the final product must be a single PDF file. Any submission other than a single, readable, PDF file will not be graded. The due date is rigid.
- **Final:** There is a comprehensive final at the end of the semester. The time is listed in the schedule below.

✓ Evaluation

Criteria for Grading

Category	Percentage
Lab reports	60%
Quizzes	20%
Final Exam	20%

The grading system of Blinn College is as follows*:

A	90 - 100	Superior
B	80 - 89	Above Average
C	70 - 79	Average
D	60 - 69	Passing
F	< 60	Failing

*from Board Policy Manual
EGA(LOCAL)

Blinn College Policies

All policies, guidelines, and procedures in the [Blinn College Catalog \(http://catalog.blinn.edu/\)](http://catalog.blinn.edu/), [Blinn College Board Policies \(http://pol.tasb.org/Home/Index/1204\)](http://pol.tasb.org/Home/Index/1204), and the [Blinn College Administrative Regulations \(https://www.blinn.edu/administrative-regulations/\)](https://www.blinn.edu/administrative-regulations/) are applicable to this course.

[Specific information on civility, attendance, add/drop, scholastic integrity, students with disabilities, final grade appeal, alternative retailers, campus carry and proctoring arrangements and cost. \(http://www.blinn.edu/syllabus-policies/\)](http://www.blinn.edu/syllabus-policies/)

Notice of any action taken under these protocol and procedures, by Blinn College or its employees, may be delivered by hand, through the U.S. Postal Service, or electronically to the student's Blinn Buc e-mail account. Notice shall be deemed received upon actual receipt, on deposit in the U.S. Mail, or upon entering the information processing system used by Blinn College for Blinn Buc e-mail accounts, whichever first occurs.

Information about the changes Blinn has made to the Fall semester: [Back with Blinn \(https://www.blinn.edu/back-with-blinn/index.html\)](https://www.blinn.edu/back-with-blinn/index.html).

* Course Policies

[Please read: Fall 2020 General Course Policies. \(http://www.blinn.edu/back-with-blinn/course-policies.html\)](http://www.blinn.edu/back-with-blinn/course-policies.html)

Attendance policy: You must attend class each class period either live or remotely via zoom as scheduled. If, on some day, you wish to take class remotely instead of live, please contact me via email. Each class day, I will take attendance for live students, zoom will record students who attend remotely and I will transfer this to my attendance roster at a later date.

Since attendance can occur remotely, excused absences will generally not be given. Exceptions are rare and at the discretion of the instructor. If you have an unusual situation that may prevent your attendance please contact the instructor. Exceptions may be rare, but I am much more willing to work with you to find solutions if I'm contacted early. Proof may be required.

Any student who accumulates more than 4 absences will be dropped from the class. Exceptions are rare and at the discretion of the instructor.

Conflict Resolution: If a conflict arises with your instructor, you must follow proper procedure. First attempt to resolve the issue directly with your instructor. If the issue is not resolved, then you may proceed to make an appointment with the Department Head (Ms. Rachel Sanchez rachel.sanchez@blinn.edu). The three of us will have a meeting where we will try to resolve the issue. If your issue is still not resolved, please consult the Blinn College website Student Rights and Responsibilities, <https://www.blinn.edu/complaint/index.html> and submit a written complaint via the Student Complaint Portal. You can also find this site by doing a web search for "Blinn college Student Complaints." In the portal you will find names and contact information for Blinn College employees who can assist you with your complaint. Do not go directly to the Dean with complaints.

COVID-19 Precautions: When on campus, all students and Blinn faculty and staff must wear a face mask. I will enforce this in the classroom without exception; students not in compliance will be asked to leave class. Everyone must have a proper mask covering both the mouth and nose at all times. Masks with valves that allow you to exhale freely are not allowed in class. Clear plastic face protection may be worn IN ADDITION to the face mask but not as a substitute. If there is some medical reason why you cannot wear a proper mask, then you must document that with the Office of Disability Services and obtain the appropriate paperwork from them.

Eating and Drinking: Eating and drinking are not allowed in classrooms. This will be rigidly enforced because of the COVID-19 precautions.

Electronic Devices: It is never acceptable to leave a class to answer a cell phone. Texting during class is totally unacceptable.

Testing Procedure for the Final Exam: The final is closed book, closed note.

Taking Exams online

- You will be monitored with the Honorlock system for each exam. This is a webcam-based system that monitors you with an AI proctor and on occasion a live proctor might jump in. The entire session is recorded and I review these videos, paying most attention to the flags from the AI system.
- You must have a full computer (not a Chromebook, tablet, or smartphone) with a working webcam and microphone. You cannot use your phone for a camera.
- Make sure your broadband connection is sufficiently robust. You will have a time window to take the exam and make sure you choose a time when no one else who sharing your broadband connection dominates the bandwidth (i.e. streaming video or lengthy downloads) during your exam.
- You must have a cleared work zone in which no one else will enter for the duration of the test. The work zone must be a cleared

desk or a table; you cannot take the exam sitting on a bed or on the floor.

- You must remain in-front of the camera for the duration of the test. **NO bathroom breaks.** *Please* use the restroom beforehand.
- You are allowed to have a scientific calculator. Clear the memory before the test. (Remember to check settings: radians or degrees.)
- You may have a printed copy of the equation sheet (2 sheets, single-sided or one sheet two-sided). No handwritten annotations are allowed on these sheets. The formula list must be printed; I will not link it.
- You will be allowed 2 blank sheets of scratch paper.
- You will have to do a room scan and show your ID before the test starts. The room scan must clearly show your cleared desktop/work space. Your ID can have ID numbers & birth-dates covered up. You will also need to show your equation sheets, blank work sheets and calculator. Test time does not start until after this process is over.
- Your eyes must remain on the monitor, or the work pages in front of you. Looking off to the side or up to the side for extended times, or reaching out of the region in front of you can result in a failed test, with a grade of zero.
- Please ensure your camera is panned back to show your face and part of your front. Having the camera too close can result in “face-not-clearly-visible” alerts by the AI system. This could trigger a pop-in visit from a moderator. Your test time does NOT stop during a live pop-in visit.
- It’s advisable not to wear shirts with faces on them, or sit in front of pictures or posters with faces showing, as this may cause an “other-person-in-the-room” alert by the AI.
- No phone, headset, or second computer can be anywhere near you.
- No other person should enter the camera area or converse with you.
- No books, or notes (other than you annotated equation sheet.) are allowed.
- Turn-off any other programs running on your computer. Turn-off/disable any alerts, email, social or communications programs. These are not allowed to be running. You may not have any other websites open. Only one monitor can be connected. These programs may delay the start of your test, or may cause you to fail the test if the alerts go off during the exam.
- If you are having any issues with Honorlock during the exam, click the Honorlock Help button on the screen.

How to Succeed in this Course: Science courses may be challenging and difficult. Most successful students spend two to four hours studying per week for each credit hour of the course.

Key Points

- Have access to all the materials and technology required for this course (webcam, microphone, computer, reliable internet, etc).
- Attend all classes. Each lecture builds on the previous lecture. Stay ahead of the material.
- Come to class prepared by reading the textbook and/or lab manual beforehand and taking notes before class to improve success.
- If you have a question during lecture, go ahead and ask it. Chances are that at least three other students have this same question.
- Know your deadlines and course policies by looking at the syllabus, instructor announcements, and eCampus dates, schedules, and news items.
- Work through lots of practice problems in addition to your homework.
- Form study groups with your peers.
- Ask your professors for help, visit office hours, and, if needed, request an appointment to see your instructor one-on-one.
 - Be prepared when you visit with your instructor and have questions related to content ready.
- Seek help from Blinn College’s tutoring services, if needed.
- Be responsible for your own learning by actively engaging in the course.

Schedule

This schedule is subject to small changes. As a special note, all course meetings after Thanksgiving will be entirely remote however will still occur during the normally scheduled meeting times. In the event that the course transitions to an entirely online environment all course meetings will still take place at the scheduled time.

Please note that the labs will be completed in a different order from what is in the lab manual.

Week	Day	Date	Course Material	Weekly Contact Hours
1	Mon	24-Aug	Syllabus and Install Mathematica	3
	Wed	26-Aug	Electric Fields and/or quiz	

2	Mon	31-Aug	Electric Fields and/or quiz	3
	Wed	2-Sep	Electric Potential and/or quiz	
3	Mon	7-Sep	No Class - Labor Day	3
	Wed	9-Sep	Electric Potential and/or quiz	
4	Mon	14-Sep	Ohm's Law and/or quiz	3
	Wed	16-Sep	Ohm's Law and/or quiz	
5	Mon	21-Sep	EM Fields and/or quiz	3
	Wed	23-Sep	EM Fields and/or quiz	
6	Mon	28-Sep	Induction and/or quiz	3
	Wed	30-Sep	Induction and/or quiz	
7	Mon	5-Oct	Series and Parallel and/or quiz	3
	Wed	7-Oct	Series and Parallel and/or quiz	
8	Mon	12-Oct	Kirchhoff's Rules and/or quiz	3
	Wed	14-Oct	Kirchhoff's Rules and/or quiz	
9	Mon	19-Oct	Kirchhoff's Rules and/or quiz	3
	Wed	21-Oct	Internal Resistance of Batt and/or quiz	
10	Mon	26-Oct	Internal Resistance of Batt and/or quiz	3
	Wed	28-Oct	RC and RL Circuits and/or quiz	
11	Mon	2-Nov	RC and RL Circuits and/or quiz	3
	Wed	4-Nov	RLC Impedance and/or quiz	
12	Mon	9-Nov	RLC Impedance and/or quiz	3
	Wed	11-Nov	RLC Resonance and/or quiz	
13	Mon	16-Nov	RLC Resonance and/or quiz	3
	Wed	18-Nov	Optics and/or quiz	
14	Mon	23-Nov	Optics and/or quiz	3
	Wed	25-Nov	No Class - Thanksgiving	
15	Mon	30-Nov	(Remote Only) Int and Diff and/or quiz	3
	Wed	2-Dec	(Remote Only) Int and Diff and/or quiz	
16	?	?	Final Exam	3

Total contact hours = 48. Note that in the Carnegie Mellon system, 50 minutes counts as 1 contact hour.