

Course Syllabus

Summer 2024 Physics 2 PHY2049 - Course Syllabus

Instructor	TBD
E-mail	<i>Note that homework help is given during your discussion section and during office hours, not through e-mail.</i>
Class Lecture	To encourage participation, the lecture meetings are not recorded by the instructor.
Discussion Sections	See Discussion Sections page for details about meeting times and contact information for your instructor.
Textbook and Course Materials	<ul style="list-style-type: none">• <i>Fundamentals of Physics (Halliday & Resnick & Walker), with WileyPLUS</i>. Print ISBN-13:978-1-119-50952-3.• The course requires students to purchase access to the online homework system, WileyPLUS <p>Access to the required course materials above may be obtained from the UF All Access program. Here is the link to have these charges direct billed to your student account: https://www.bsd.ufl.edu/G1CO/IPay1f/start.aspx?TASK=INCLUDEDLinks to an external site. See this handout Download See this handout for instructions for obtaining course materials with UF All-Access.</p>
iClicker	An iClicker account and mobile device/clicker to participate in lecture. iClicker Cloud access is already included in your student fees. See details below in the iClicker Registration and Support section of this syllabus.

Technology	This course requires a stable internet connection and a laptop or desktop computer at a minimum for any online course work. Although, many of the resources are accessible using other mobile devices, if exams transition to online due to extraneous circumstances, you will need to use a desktop device and not a mobile one.
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About the Course

PHY2049 - Physics 2 with Calculus, is the second semester of Physics, covering electrostatics, electric current, electric circuits and their components, magnetism, induction, electromagnetic waves, optics, optical devices, interference and diffraction.

Course Description

Credits: 3;

Prereq: [PHY 2048 Links to an external site.](#) and [MAC 2312 Links to an external site.](#);

Coreq: [MAC 2313 Links to an external site.](#).

The second of a two-semester sequence of physics for scientists and engineers. Content includes Coulomb's law, electric fields and potentials, capacitance, currents and circuits, Ampere's law, Faraday's law, inductance, Maxwell's equations, electromagnetic waves, ray optics, interference and diffraction. (P)

Student Expectations

To achieve the learning outcomes, students are expected to:

- Read the assigned chapters in the textbook.
- **Attend and participate in scheduled lectures and discussion sections.**
- Work through the examples presented in the text in order to learn the physics concepts, principles, and problem-solving techniques of introductory physics.
- Complete homework assignments to self-assess your understanding of the module's concepts and problem solving strategies on a weekly basis.
- Attend synchronous discussion section meetings for group problem solving and small group instruction moderated by recitation section TAs.
- Complete weekly quizzes assessing your ability to solve a similar problem to those asked from homework assignments, evaluated by recitation section TAs.
- To seek help from your instructors and other students when specific content does not make sense, and to seek out additional practice when needed to gain mastery

before moving on to future modules. The additional practice is included as optional assignments in the course.

- To seek help from university resources to support student success, which include use of peer tutoring (UF Teaching Center and Knack), peer mentoring, and wellness resources found at <http://studentsuccess.ufl.edu> [Links to an external site.](#)

This course requires an extensive amount of time to do all of the above, and students should plan accordingly to spend 12 hours per week on course preparation and practice.

Expectations of Instructors

Your instructors' role is to develop a course where you can achieve these objectives through your participation and interaction. Further, we pledge to:

- Be accessible via email and respond to communication sent to the contact addresses listed in the contact info table located on this page.
- Design lectures and discussion section meetings which facilitate active learning through the use of examples and polling questions.
- Design assessments which evaluate your progress towards achieving the outcomes of the course.
- Provide weekly communication through announcements to frame the week's course activities.
- Treat everyone with respect.
- Recognize and celebrate everyone's unique identity and background and create an environment where **everyone** belongs!
- Affirm your ability to succeed in this course and provide assistance for everyone to access resources which enable each student achieve success.
- Adhere to course policies equitably and with fairness.

Expectations of the Learning Community

Each semester we join together to form a unique and diverse learning community. This community is enriched by our own unique backgrounds, identities, experiences, challenges, and opportunities for personal growth. It takes the participation and efforts of all to ensure this community is inclusive of everyone, regardless of our differences. Please remain respectful when there is disagreement between you and someone else. Join us in continuing the work to create learning spaces that are safe for all to participate equitably. Provide room for concerns to be voiced, which takes courage and should receive the acknowledgment and empathy they rightly deserve. We are united

by a common goal: to learn physics by demonstrating the course outcomes AND to assist this attainment by others in the course, through actions consistent with UF's core values and the student code of conduct.

Discussion Sections

Discussion sections are scheduled class meetings where you will get small group instruction on how to answer physics problems, both numerical and conceptual. A highly skilled TA will guide you through the problem-solving process that will be helpful for you as you practice the homework problems on your own outside of class. You will also receive formative assessment feedback on your learning through low-stakes weekly quizzes. The content of these quizzes are based on the problems assigned in homework and serve to assess not only the correct answer to quantitative problems, but also critique and provide feedback on how you justify your answer with an in-depth solution.

Practicing physics is the best way to learn it, and the apprenticeship model works quite well as you see how experts identify which physics principles are needed to obtain a correct solution. Review the [Discussion Sections](#) page for listing of meeting times. Discussion section meetings are **not recorded** to encourage your participation.

Class Attendance and Missed Work

Attendance to lectures and discussion sections is required. If you are unable to attend a scheduled class meeting due to university approved and sponsored activities, documented illness under care of physician (see medical excuse policy [here Links to an external site.](#)), or family emergency, please notify your instructor. Absences due to circumstances listed above during scheduled quizzes or exams will necessitate you to request a makeup quiz or makeup exam following the procedures below. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at [this link Links to an external site.](#)

Discussion Section Quizzes: Students must request a makeup quiz from the discussion section instructor, and if approved, make arrangements with the discussion section instructor. Students have one week from the day of the missed quiz to make mutually agreeable arrangements and complete the quiz. Due to the end of the semester, an exception is made for quiz 10, which must be completed by the Wednesday before the last day of class.

Missed Exams: Students missing an exam must notify the instructor **BEFORE** the beginning of the exam and provide documented evidence for a request for a makeup.

Arrangements will be made to take a makeup exam as soon as possible. The makeup exam will consist of material similar to that which was tested on the missed exam.

Missed iClicker points: Students are not permitted to earn iClicker points if they are not successfully submitting responses during the open polling times. Instead of offering makeup clicker sessions for absences, we drop a few iClicker sessions for everyone. Please join the class meeting with a charged mobile device.

Missed Homework: Students have ample opportunity to complete available homework assignments prior to the due date. There are no extensions or makeups for homework assignments. Please plan accordingly.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> Links to an external site.

Office Hours

Visit your instructors for free help! We're the ones writing your exams and quizzes and have a good idea about how to help you succeed in this course. You may visit any of the TAs, not just the one teaching your discussion section. Please find someone you can go to for help. Here's our Weekly Schedule (subject to changes):

Contact Information/Office Hour Locations for Instructional Team

Instructor	Phone	Email	Office Hours
TBD		Use Canvas Mail	
TBD		Use Canvas Mail	

Grades

Grades are based on total points accumulated from exams, discussion section quizzes, homework and extra credit quizzes.

Your final score is the sum of the following:

Assessment	Max Points	Calculation
Exam 1	18	18*(earned points/max points)
Exam 2	18	18*(earned points/max points)
Exam 3	18	18*(earned points/max points)
Exam 4 (Final)	21	21*(earned points/max points)
Discussion Section Quizzes	20	20*(your earned points/max quiz points) Drop 1 lowest/missing quiz score
Homework	5	5*(your earned points/max hw points) Drop 1 lowest/missing homework score
Total	100	Sum this column
iClicker Bonus	5	5*(your total points/max points) Drop 2 lowest/missing clicker scores

Use Canvas Grades to track your scores and report any discrepancies in your scores to your TA. Notification of discrepancies are due to your TA by August 5th. Letter grades will be reported to the Registrar at the end of the term corresponding to the total score and the minimum values to an accuracy of 0.01, following this grading scheme:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
≥85.00	80.00	75.00	70.00	65.00	60.00	55.00	50.00	45.00	40.00	35.00	<35.00

Exams

There is a total of three during term exams, with the fourth exam at the end of semester serving as a cumulative final. Please place these exam dates and times in your calendar today.

The exam format is multiple choice and completed in person. Your exam may be in a different building/classroom for in person exams. You are responsible for checking your exam room assignment on the exams page. This is typically available ~1 week before the exam. If the Exam modality shifts to online for any reason, an announcement will be made in the course.

Unless superseded by a valid excuse a missed exam will result in a zero. Valid excuses are officially sanctioned UF events, medical excuses or family emergencies. Acceptable excuses require a coach's, doctor's or instructor sanctioned note with a verifiable contact phone number. The documentation must be provided to your instructor within 24 hours of the exam. A valid excuse will allow you to take a make-up exam.

Students who need accommodations due to a disability must carry out the DRC procedures described below.

Quizzes

A **quiz** in your discussion section is typically based on (though not identical to) a homework problem from the homework turned in Monday of that week. The problem given in each discussion section is chosen at random and thus its difficulty will vary throughout the semester. Quiz numbering corresponds to HW numbering. Quizzes are given only on Wednesday, Thursday, or Friday. Quizzes will not be assigned during exam weeks, and the Quiz time will be used by your TA to help you review for the exam.

Approved make-ups for missed quizzes will take place according to the absence and makeup policy stated above. The documentation must be provided to your TA within 1 week of the missed quiz or a rational reason for the delay in providing documentation must be e-mailed along with the projected receipt date of the documentation to your TA within that period. All quizzes must be made up within two weeks of the missed quiz, except for the makeup of the final quiz, which must be completed before the first scheduled reading day.

Students who cannot make the fixed Makeup Quiz date, must provide valid excusable absence to their TA within 3 days of the missed date. The TA will check the validity and then make available another time for sitting this makeup. We expect very few students to fall in this category.

Your **quiz grade** = $20 * (\text{total quiz points} / \text{max points})$. The lowest quiz score (evaluated as a percentage of points earned) will be dropped. Only one quiz will be dropped from the calculation.

Homework

Homework is based on the WileyPLUS online homework system and assignments are due Mondays at noon, 12PM. Each student gets a unique set of numbers for each problem. Because of the length of time each homework set is available, there are **no extensions** on the homework. You are strongly encouraged to start entering your answers well ahead of the deadline to avoid possible technical problems that might occur on the day the homework is due. If an unforeseen technical difficulty like a down internet connection or computer virus causes you to miss the deadline, you will not receive credit for the unfinished work.

Your **homework grade** = $5 * (\text{total homework points} / \text{max points})$. The lowest homework score is dropped from the calculation.

Homework and academic honesty: While we encourage students to discuss homework problems with one another, we regard it as a breach of academic honesty to get homework solutions or algorithms external sources, including websites or companies that give away or sell such solutions or algorithms (this is stated explicitly in our course Academic Honesty policy found below).

iClicker extra credit

Answering questions during lectures is optional using the iClicker response system but can earn up to a maximum of 5 extra credit points on your grade.

For each iClicker question, you receive 2 points for a correct answer and 1 point for a wrong answer. Two iclicker session scores are dropped to allow for absences, broken devices, late answers, etc. *However, to receive credit for your responses, your iClicker account must be linked to your Canvas course.* Please see the [iClicker page](#).

You are responsible for maintaining the functioning of your device, including its connection to the internet during the polling session. No credit will be given for questions if you forget your mobile device or your mobile device battery is dead, or you do not respond to the question in the allotted time.

Canvas

The lectures notes and this semester's exam solutions will be linked from the [Schedule](#) and [Exam Information](#) pages. Scores on homework, exams, and quizzes will be posted in the [Grades](#) section.

WileyPLUS

Homework is delivered and scored using WileyPLUS, which is already integrated in Canvas. Access to WileyPLUS is granted through the AllAccess program, offering billing directly to your student account with the benefit of access to both the e-text and homework system on the first day of the semester.

You can access Wiley content (textbook, hw assignments) by clicking on a homework assignment listed on the Assignments page, from the ToDo list, from the Course Calendar, or by clicking on any specific topic listed on the course home page.

Details about Homework Assignments, Grading, and Late Policy

- Most problems come from the textbook, though the values for masses, charges, angles, etc. for each problem are different for each student. We expect to have some problems which might not come from the textbook.
- You have **five** attempts to get the correct answer. To get credit your answer **must be correct within 2%** and you must enter at least three significant digits.
- Multiple choice and True/False question types. The points you can earn for correct submissions decreases by a constant amount for each attempt. The decrease per step is $100\% / (N_{\text{options}} - 1)$. Thus, for a 5 part multiple choice question, the decrease in value is 25% per attempt.
- For all other question types, there is a 5% deduction in the number of points you can earn for each wrong submission. There is also a small (1%) deduction for every hint or feedback you request.
- There are no extensions on homework assignments.

iClicker Polling

You are required to participate with the iClicker Cloud app on a smartphone, tablet or laptop. It is your responsibility to follow the steps below to properly register your iClicker account in a timely fashion. It is also your responsibility to regularly check your iClicker records for any discrepancies.

In order to participate in iClicker activities and ensure that your grades are properly reflected in the gradebook, follow the steps below:

In order to participate in iClicker activities and ensure that your grades are properly reflected in the gradebook, follow the steps below:

1. If you have an existing iClicker student account that uses an official university email address and/or Student ID, you will automatically get added to the iClicker course.

If the iClicker system does not find a matching iClicker student account, you will receive an email from iClicker Support with instructions to [create a new account \(Links to an](#)

[external site.](#)) or [update your existing account's profile \(Links to an external site.\)](#). Please note that this email may appear in your Spam or Junk folders.

If you receive an email prompting you to update your iClicker account, you will need to sign in to iClicker and modify your profile information. If you already have an iClicker account, do **not** create a new account. Instead, [edit your existing account's profile \(Links to an external site.\)](#) to avoid confusion and potential loss of points due to multiple accounts.

If you do not already have an iClicker student account, click "Sign Up" and create an account

If you have never used the iClicker student app, click **Sign Up!** and follow the steps to [create an iClicker student account \(Links to an external site.\)](#), making certain to use a university email address and UFID.

When you have finished creating your account, sign in to the iClicker student app to establish the connection with your Canvas or Blackboard account.

2. Set up the device(s) you'll use to participate in our synchronous lectures.

- You can download the iClicker cloud app via the App Store or Google Play, or you can use iClicker on your laptop.
- If you have multiple devices, I recommend accessing our virtual class using your computer and participating in the iClicker questions using your mobile device.
- If you only have one device, you can open up a new tab in your web browser for iClicker cloud, or switch back and forth between our virtual class and the iClicker cloud app.

3. Now the fun part! Participate in iClicker class activities.

- When it's time for class, make sure you have selected this course from the main screen of your iClicker cloud account.
 - When the instructor starts a class session in iClicker, select the **Join** button that appears on your screen, then answer each question asked in iClicker cloud.
 - For short answer, numeric, and target questions, make sure you select **Send**.

4. Review your work in iClicker cloud.

- You can review your grades, performance, and participation in iClicker cloud.
- Grades will be synced from iClicker cloud to Canvas on a regular basis. Please allow a week after lecture for the sync to occur. If you do not see scores in Canvas, you have not successfully completed step 1 above. The deadline for completing step 1 above is the last day of class for this semester (prior to reading days), but you are strongly advised to complete step 1 in the first two weeks of the semester.

Academic Integrity Information

iClicker activities fall under the provisions of our campus academic honesty policy. Students must not engage in academic dishonesty while participating in iClicker activities. This includes but is not limited to:

- Having another student participate for you
- Using more than one iClicker account at a time
- Sending your answer to other students in any way.

Any student found to be in violation of these rules will lose their iClicker points for the entire term and may be reported to the Dean of Student Discipline.

Need help with iClicker cloud?

- - If you are having issues connecting to iClicker cloud, check out these [iClicker cloud connectivity tips \(Links to an external site.\)](#)
 - If you are having issues seeing your iClicker cloud points, use this [troubleshooting guide \(Links to an external site.\)](#) .
 - Find answers to many of your questions and contact the iClicker Tech Support Team by visiting [com/support \(Links to an external site.\)](#) at any time.

Schedule

Information about the exams (chapters covered, times, allowed materials, etc.) can be found on the [Exams](#) page. **All dates are tentative at time of posting.**

Week	Monday	T	Wednesday	Thursday	Friday
1	5/13 CH 21.1, Introduction, Vectors, Observations from Static Electricity, Coulomb's Law	5/14	5/15 CH 21.2-3 Coulomb's Law Charge Transfer PREVIEW	5/16	5/17 CH 22.1-22.3 Electric Fields, Fields from Pt. Charges, Superposition PREVIEW

2	5/20 CH 22.4-22.7 Fields due to Extended Objects HW 1	5/21	5/22 CH 23.1-23.3 Gauss' Law Quiz 1	5/23 Quiz 1	5/24 CH 23.4-23.6 Applications Quiz 1
3	5/27 Memorial Day HW 2	5/28	5/29 CH 24.1-4 Electric Potential Quiz 2	5/30 Quiz 2	5/31 CH 24.5-8 Electric Potential Quiz 2
4	6/3 CH 25.1-6 Capacitance HW 3	6/4	6/5 EXAM 1: CH 21-24	6/6	6/7 CH 26.1-5 Current, Resistance, Power
5	6/10 CH 27.1-4 Circuits HW 4	6/11	6/12 CH 27.5 RC Circuits Quiz 4	6/13 Quiz 4	6/14 CH 28.1-4 B Fields and Forces on Charge Quiz 4
6	6/17 CH 28.5-8 B Fields and Forces HW 5	6/18	6/19 CH 29.1-3 B Fields and Forces Quiz 5	6/20 Quiz 5	6/21 CH 29.4-5 Ampere's Law and Applications Quiz 5
7	6/24 - 6/28:: Summer Break				

8	7/1 CH 25-29.5 Review HW 6	7/2	7/3 EXAM 2: CH 25-29.5	7/4	7/5 CH 30.1-30.3 Faraday's Law
9	7/8 HW 7	7/9	7/10 CH 30.4-30.9 Inductance and Inductors Quiz 7	7/11 Quiz 7	7/12 CH 31 AC Circuits Quiz 7
10	7/15 Maxwell's Eqns. HW 8	7/16 CH 32	7/17 CH 33.1-33.4 EM Waves and Polarization Quiz 8	7/18 Quiz 8	7/19 CH 33.5-7 Reflection and Refraction Quiz 8
11	7/22 CH 34 Image Formation HW 9	7/23	7/24 CH 35.1-3 Wave Interference Quiz 9	7/25 Quiz 9	7/26 CH 35.4-5 Thin Films Quiz 9
12	7/29 EXAM 3 CH 30-34 HW 10	7/30	7/31 CH 36.1-3 Diffraction Quiz 10	8/1 Quiz 10	8/2 CH 36.4-7 Gratings Quiz 10
13	8/5 Review HW 11	8/6	8/7 Review	8/8	8/9 Final Exam CH 21-36

Background

We go to great lengths to ensure that our Physics course is administered fairly, by setting clear goals (what is needed to attain each grade) at the outset, by providing materials (lectures, applets, homework, office hours, reviews) to help you reach those goals, and by assessing progress towards those goals using easily understood procedures (exams, quizzes, H-ITT, online homework). We pledge to do the best job we can to make the material understandable and to bring out the best in every student.

Course Policy

Maintaining the integrity of the grading process demands fairness and compassion on our part and honor on your part. Accordingly, we take a very hard line on cheating in any form, including

1. Providing or copying answers on exams or quizzes
2. Taking an exam or quiz for another student
3. Entering online homework answers for another student
4. Distributing or copying exam or quiz questions
5. Obtaining course homework solutions or software algorithms from external sources, including websites or companies that give away or sell such solutions or algorithms.

Any person caught cheating in any form will fail the entire course automatically and will be subject to Honor Court penalties. Furthermore, we expect students to not tolerate cheating of any kind and to report incidents to your instructors.

Honor Code

The Dean of Students Office [website Links to an external site.](#) has a detailed discussion about academic honesty and the University of Florida Honor Code, which was adopted by the Student Council. The Honor Code says

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Disability Services

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting our [Get Started page Links to an external site.](#) It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Requesting an accommodation letter to be sent to instructors is sufficient for receiving accommodations, as long as the letter is received at least three days prior to the deadline for assessments. Letters received less than three days before the assignment deadline will have the accommodations applied for the next and subsequent assessments.

Accommodations are not retroactive; therefore, students should contact the DRC office as soon as possible in the term for which they are seeking accommodations.

Failure to send a current accommodation letter before the three-day deadline is not a permitted excuse for taking a makeup exam.

Online Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at [gatorevals.aa.ufl.edu/students/ Links to an external site.](http://gatorevals.aa.ufl.edu/students/) Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [ufl.bluera.com/ufl/ Links to an external site.](http://ufl.bluera.com/ufl/) Summaries of course evaluation results are available to students at [gatorevals.aa.ufl.edu/public-results/Links to an external site.](http://gatorevals.aa.ufl.edu/public-results/)

Campus Resources

Health and Wellness

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392- 1575 so that a team member can reach out to the student.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/Links to an external site.>

UF Student Success : For improving study skills to connecting with a peer tutor, peer mentor, success coach, academic advisor, and wellness resources, go to <http://studentsuccess.ufl.eduLinks to an external site.>

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <http://www.crc.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Student Complaints: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf

Required work

- This web site serves as the syllabus for the course. Each page on the web site has a link on the menu at left. You are required to read each of these pages. The web site is detailed, and chances are any policy questions you may have are answered here.
- You are responsible for ongoing course work, which is described on the web site: reading the text for the assigned material, attending lecture, doing the weekly homework, attending discussion section and taking the quizzes, and taking the exams.