

## **PHY 113 General Physics (I) Lab**

ASU Polytechnic campus      Attendance Options: **In-person / ASU Sync (via Zoom)**

### **Course and Faculty Information**

**Course Description:** Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both, PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.

**Credits:** 1.0

#### **Instructor:**

Abhijit Khare

Office: SANTAN 330 B

Email: [arkhare@asu.edu](mailto:arkhare@asu.edu)

Office Hours (Virtual): **Friday: All Day**

You can also reach me via Zoom at <https://asu.zoom.us/j/4656076528> upon request by email.

**College Contact:** This course is offered by the [College of Integrative Sciences and Arts](#) (CISA). For more information about the college, visit our website: <https://cisa.asu.edu>. If you have questions about this course, please speak with your instructor. If your instructor is unable to address your questions, please send your inquiry to [cisa@asu.edu](mailto:cisa@asu.edu).

### **Course Learning Outcomes**

You are expected to thoroughly understand each experiment. This includes (but is not limited to) all of the equipment and every aspect of the procedure. You must also know the corresponding theory, especially as described (but not limited to) in the lab.

In this course you should be able to:

- Collect data using various instruments.
- Collect data using data collection software.
- Analyze and interpret collected data.
- Use collected and analyzed data to determine if a hypothesis has been verified.

## **Course Objectives:**

### **Purpose:**

Experimentation and testing are the cardinal principle in research. The laboratory gives the student the opportunity to test the theories learned in lecture.

### **Methods:**

The laboratory consists of a series of experiments that allow the student to test the validities of theories learned in lecture. Students taking the class “in person” will perform the experiment by taking all the necessary COVID-19 safety precautions and the lab safety precautions and procedures. While students taking the class via Zoom will watch the lab experiment that is actively running while during the lab schedule and will record all the data in their lab script in the lab manual.

**All students (in person or remote) will be required to turn in their lab script electronically on canvas. The lab script will be submitted as a scanned pdf document. The lab script is due the SAME WEEK OF LAB SESSION ON FRIDAY by 11:59 pm on canvas. Any late submission after that time on canvas will be automatically rejected and student(s) will have to email the instructor about it with explaining the reason for being late in submitting. The instructor, if finding the reason genuine or sufficient, may allow the student to submit the lab. Late penalty might apply though.**

### **Lab Class Attendance Policies, Options and Plan:**

This course is originally scheduled as an in-person (face-to-face) class. To ensure in-person participation stays below 50% room occupancy during the COVID-19 pandemic, the class will be split into two groups: 1) In-person 2) Remote. If you opt to attend in person, please know that the maximum occupancy cannot exceed 50%. I will typically allow 8 students at a maximum inside the classroom. The remaining students will be attending the class via remote. If you cannot be physically be on campus due to travel restrictions or personal health concerns, you will be able to attend the class via Zoom. Contact me if you need to change your attendance options.

**Students attending in-person class will be required to do daily health checks and follow COVID-19 safety guidelines. Frequent COVID 19 testing may be required for students attending the class on campus.**

**Students attending the class via remote (ASU Sync) are required to be present in the Zoom session for the entire class period. STUDENT CAMERAS NEED TO BE TURNED ON FOR THE ENTIRE CLASS PERIOD. Speakers should be activated while listening and microphones to be UNMUTED ONLY WHEN ASKING A QUESTION. Please MUTE the microphone when the instructor is talking.**

- IPHONES, CELL PHONES, etc. NEED TO BE TURNED OFF DURING CLASS, WHETHER ATTENDING IN-PERSON OR ON ZOOM.
- Students (in-person) bringing their laptops, iPads, or notebook PC inside the lab must properly sanitize their equipment before and after use and wipe off their student workstation with Lysol wipes after lab before they leave the lab room. MUST be wearing face masks, shoes while inside the lab room. Students MUST sanitize their hands before they touch the lab equipment.
- Students (remote) on Zoom must be actively participating during the lab session by staying live on camera on Zoom session.
- The instructor will be performing the lab experimental procedure and with the camera and microphone and speaker turned on throughout the lab session. The instructor will ask students (remote) to note down the data taken and record it into their lab script. The data taken is in the following format:
  - (a) Quantitative data and calculations
  - (b) Graphs obtained
  - (c) Diagrams (if necessary) drawn
  - (d) Picture snaps (if required) of the lab equipment.

#### Cheating and Dishonesty in Lab course:

**Please note that any case of cheating or dishonesty in performance is not tolerated and could result in serious academic disciplinary actions taken. The examples of cheating or dishonesty as given below:**

- a) **Making a false attendance on Zoom session for the lab.**
- b) **Submitting the lab report in-spite of being absent from the lab session.**
- c) **Copying data from another student without attending the lab session.**
- d) **Submitting the lab report for another student.**

**For any or all of the above incidences if occurred, a score of “0” will be awarded for the lab experiment for the week. There is typically no first-time warning given in such cases. I always check the login and logout times and minutes for each student on Zoom session. If you are having any internet issues with your computer, please let me know as soon as possible.**

#### Face Coverings:

Everyone is required to wear a face cover while in ASU buildings and community spaces, regardless of distance. Face covers help prevent pre-symptomatic and asymptomatic individuals from inadvertently spreading COVID-19 to others. They are meant to protect others in case you are sick. Students will be required to wear a face cover in the classroom. For more information about face coverings, please visit the [FAQ page](#).

**SHOES ARE REQUIRED WHEN ATTENDING THE LAB SESSION IN PERSON AT ALL TIMES.** Students without shoes will not be allowed inside the lab.

### **Textbooks, Required Readings and Materials:**

Required: PHY 113 Lab Manual (Digital copy).

Reference (recommended): College Physics (3<sup>rd</sup> ed.) by Knight, Jones, and Field.

### **Course Access:**

Your ASU courses can be accessed by both [my.asu.edu](https://my.asu.edu) and [asu.instructure.com](https://asu.instructure.com); bookmark both in the event that one site is down.

### **Computer Access Requirements:**

ASU Sync classes can be live streamed anywhere with the proper technology. We encourage you to use a PC or Apple laptop or desktop equipped with a built-in or standalone webcam. You will need an internet connection that can effectively stream live broadcasts. It is recommended that your internet download speed is at least 5.0 mbps. You can use this [tool to test your current connection](#).

We do not recommend the use of iPads or Chromebooks for ASU Sync because these devices do not work for class exams that may be proctored remotely.

If you are not able to personally finance the equipment that you need to attend class via ASU Sync, ASU has a laptop and WiFi hotspot checkout program available through [ASU Library](#).

### **Who is eligible?**

Any currently enrolled ASU student is eligible to checkout a laptop or WiFi hotspot. The current availability of laptops can be found [here](#).

### **Borrowing and returning laptop rules:**

- Laptops are lent on a first-come, first-serve basis, and cannot be reserved in advance. They can be returned at any time but will be due at the conclusion of the fall 2020 semester.
- Rentals are limited to one laptop per student.
- Laptops are available for checkout at the following libraries on all four campuses: ([Please check online for current library hours](#))
  - Downtown Phoenix campus Library
  - Polytechnic campus Library
  - Tempe: Hayden and Noble Libraries
  - West campus: Fletcher Library
- Return laptops to any ASU Library Information Desk (not at the drop box or other location)
- [Refer to ASU Library Computer Use Policy and ASU Computer, Internet, and Electronic Communications Policy](#).

- Borrowers are responsible for loss, damage, and theft of the laptop while in their possession. Borrowers should verify the condition of the laptop at the time of check-out and upon check-in.

### **Additional Requirements:**

This course requires the following technologies:

- Web browsers ([Chrome](#), [Mozilla Firefox](#), or [Safari](#))
- [Adobe Acrobat Reader](#) (free)
- [Adobe Flash Player](#) (free)
- Webcam, microphone, headset/earbuds, and speaker
- Microsoft Office ([Microsoft 365 is free](#) for all currently-enrolled ASU students)
- Reliable broadband internet connection (DSL or cable) to stream videos.

*Note:* A smartphone, iPad, Chromebook, etc. will not be sufficient for completing your work in an online environment. Although you will be able to access course content with mobile devices, you must use a computer for all assignments, quizzes, and virtual labs completed in Canvas.

### **LAB POLICY:**

**For students doing the in-person lab experiment, the Student Safety Agreement should be signed in and submitted (electronically) on canvas during their first in-person class. Lab Safety protocol MUST be strictly followed. You must keep a distance of at least 6 to 8 feet from your lab partner(s) in your lab session.**

**Students need to wash their hands with soap and water after they enter the lab and before they leave the lab after doing their experiment.**

In order to work in the lab, **you must wear shoes that cover your entire foot.** Anyone not meeting this requirement will be asked to leave the lab.

**Absolutely, NO FOOD or DRINK allowed inside lab. Water bottles are allowed and must be placed INSIDE your bags or backpacks and should be kept safely on the side rack.**

**The lab printer is NOT to be used at all. Students need to save their graphs on their flash drives and attach (copy and paste) those to the lab script before submitting the lab electronically on canvas.**

**All the student personal belongings (books, iPhones, etc. need to be placed inside their bags and kept away from the table surface, either to be kept on the side rack or under the table distanced from each other. iPhones need to be turned off while inside the lab.**

The instructor would demonstrate the initial set up of lab. All in-person students are required to observe the demonstration as this will be counted towards class participation points. Students are responsible for doing the lab and taking the data and obtaining out any necessary graphs from the data. **Students are required to get the data and the graph (if required) checked from the instructor before they leave. NO CREDIT WILL BE GIVEN IF IT IS FOUND THAT THE DATA HAS BEEN COPIED FROM ANOTHER GROUP WITHOUT SHOWING ACTUAL CLASS PARTICIPATION WHETHER IN PERSON OR VIA ZOOM.**

### **Lab Grade:**

Lab Experiments (Total 14): **1400 points** (Each lab is at 100 points.)

**(The lab exercise will be graded based on completion, correctness, and accurate results and attached graphs (if required). Pre-Lab questions will be graded for correctness.)**

### **Attendance (in-person or via Zoom) and Participation (Required):**

I will be taking the attendance on canvas for both, in person students and the online students at the same time. Students attending the lab in person will be observed for participation inside the lab room, whereas those taking it on Zoom will be observed through their attendance on Zoom throughout the session. **Students on Zoom MUST TURN ON THEIR CAMERA while during the live session.** You can use the microphone while asking any question.

**If a student is absent for 3 or more lab sessions in a semester, it is automatically a failure grade. (For specific circumstances, please speak with the instructor.)**

**Lab Script Due Date:** *All labs are to be completed and submitted on canvas by 11:59 pm on Friday of each week of the lab session. The due date and time will be specified on canvas. A late submission will be automatically rejected by canvas and credit will not be given for any missed submission. If you have any specific reason for late submission, do reach out to me by email, and I must find that sufficient to support your late submission. Late penalty would probably apply for any late submission.*

*Internet connectivity problems or lack of internet connection in your residence are not an excuse for submitting an assignment late. ASU has computers on each campus for student use. Locations and hours are listed at <https://uto.asu.edu/services/campus-it-sites/tempeLinks> to an external site. Assignments will not be excused for lack of internet connections.*

### **Lab Script Turn in (Format):**

*Please note that all the lab scripts are to be submitted into the canvas through “Assignment” tab after scanning all the required pages with including any graphs (if necessary) and the data taken and submit as a pdf document. DO NOT send me the direct pictures of lab pages with your iPhone. It will NOT BE ACCEPTED in that form. DO NOT send me your lab report directly by email. It MUST be submitted through canvas. PLEASE MAKE SURE TO COMPLETE ALL SECTIONS OF THE LAB EXPERIMENT PAGES BEFORE TURNING IN FOR GRADING.*

*For your own protection, you should keep a copy of everything you hand in, and you should keep your graded assignments at least until grades are finalized at the end of the semester in the event you wish to contest any grades. All assignments, unless otherwise announced by the instructor, MUST be submitted to the designated area of Canvas. Do not submit an assignment via email. Acceptable file formats are .doc, .docx, .pdf and .jpg. Other formats will be rejected by Canvas*

Assignment due dates follow Arizona Standard time. Click the following link to access the [Time Converter](#) to ensure your account for the difference in time zones. Note: Arizona does not observe daylight savings time.

**Cell phone, and iPhone use is NOT ALLOWED inside lab and need to be TURNED OFF.**

If a student is found to be using one, then a “penalty for non-participation” would be applied and points would be taken off from the lab script. Signing-in for another student is not allowed and may result in loss of points from the lab. Arriving from the Tempe Campus is NOT an excuse for being late. Exams for I-Courses or online courses are not an excuse for being late or missing class. Any student demonstrating disruptive conduct will be asked to leave the lab room and will not receive credit for the week’s experiment.

**Absence(s) for medical, academic, or other non-ASU related work reasons:**

PLEASE NOTE THAT YOU MUST NOT SET-UP ANY PHYSICIAN OR DENTIST APPOINTMENT DURING THE LAB CLASS TIMINGS. Again, this is separate from the medical emergency situation for which the class absence reason is obvious. Similarly, YOU MUST NOT SET-UP ANY ACADEMIC ADVISOR OR ACADEMIC SUPPORT RELATED APPOINTMENTS AT ANY CAMPUS DURING THE LAB CLASS TIMINGS.

Any other absences that are directly related to ASU should be discussed with the instructor prior to the class absence(s). Any absence due to non-ASU related work would be considered as an unexcused absence.

**Any health-related absence such as due to sudden illness, flu/cold etc. or hospitalization will require the student to present an official documentation such as a receipt or a note from the physician’s office giving the reason for student’s absence to the instructor. This would be considered as an excused absence.**

**Make-up Lab:**

If you are going to be absent for a particular lab(s), then you MUST let the instructor know in advance of the lab absence. A missed lab does not give any credit. If you have missed a lab due to any health issues, then let me know as soon as possible and we can discuss the make-up lab option. A make-up lab must be attended either in person or on Zoom the same week of the missed lab session.

**Lab Safety:**

Every student must read, complete, and sign the Student Safety Agreement before participating in lab activities.

**Extra Credit:**            There will be **no** extra credit for this course.

**Grading Scale:**

Grades will be determined by the percentage you accumulate from your lab scores.

89.5% - 100%	A
79.5% - 89.4%	B
69.5% - 79.4%	C
60% - 69.4%	D
< 60%	E
Withdrawal	W
Audit	X
Academic Dishonesty	XE

**Accommodation for religious practices:** In compliance with ACD 304-04, students who need to be absent from class due to the observance of a religious holiday or participate in required religious functions must notify the faculty member in writing as far in advance of the holiday/obligation as possible. Students will need to identify the specific holiday or obligatory function to the faculty member. Students will not be penalized for missing class due to religious obligations/holiday observance. The student should contact the class instructor to arrange for making up tests/assignments within a reasonable time.

**Accommodation for university-sanctioned activities:** In compliance with ACD 304-02, students who participate in university-sanctioned activities that require classes to be missed, may be given opportunities to make up examinations and other graded in-class work. However, absence from class or examinations due to university-sanctioned activities does not relieve students from responsibility for any part of the coursework required during the period of the absence.

**Grade Appeals:**

ASU has formal and informal channels to appeal a grade. If you wish to appeal any grading decision, please see <http://catalog.asu.edu/appeal>.



### **Drop and Add Dates/Withdrawals:**

Please refer to the academic calendar on the deadlines to drop/withdraw from this course.

Consult with your advisor and notify your instructor if you are going to drop/withdraw this course. If you are considering a withdrawal, review the following ASU policies: Withdrawal from Classes, Medical/Compassionate Withdrawal.

Please note that the ASU Academic Calendar only refers to withdrawal for the academic portion of your study abroad program. Please refer to the Study Abroad Withdrawal Policies for important dates regarding withdrawing from your Faculty Directed program.

### **Late or Missed Assignments:**

Notify the instructor **BEFORE** an assignment is due if an urgent situation arises and you are unable to submit the assignment on time. If you have already communicated with me about any late or missed lab report and I have allowed you to submit the report, I will extend the window of submission, but late submission penalty may apply.

Follow the appropriate University policies to request an [accommodation for religious practices](#), or to request accommodation for missed assignments [due to University-sanctioned activities](#) or [active military service](#).

### **Communicating with your Instructor and Classmates:**

#### **Classroom Community**

To build a course climate that is comfortable for all, it is important that students (1) display respect for all members of the class – including the instructor and students; (2) pay attention to and participate in all interactive student partner/instructor sessions and activities; and (3) observe the rules of appropriate online behavior (also known as *netiquette*). This term is defined by the instructor and includes keeping course discussion posts and oral communication with other students (or the instructor) focused on the assigned topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. In addition, they must avoid racist, sexist, homophobic, or other negative language that may unnecessarily exclude course members. This is not an exhaustive list of behaviors; rather, it represents examples of the types of things that can have a dramatic impact on the course environment. Your final grade may be reduced each time you engage in the types of negative behaviors indicated above.

ASU email is an [official means of communication](#) among students, faculty, and staff. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly.

*All instructor correspondence will be sent to your ASU email account.*

### **Academic Integrity:**

Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see [provost.asu.edu/academicintegrity](http://provost.asu.edu/academicintegrity).

If you fail to meet the standards of academic integrity in any of the criteria listed on the university policy website, sanctions will be imposed by the instructor, college, and/or dean. Academic dishonesty includes, but is not limited to, cheating on an academic evaluation or assignment, plagiarizing, academic deceit (such as fabricating data or information), or falsifying academic records. Turning in an assignment (all or in part) that you completed for a previous class is considered self-plagiarism and falls under these guidelines. Any infractions of self-plagiarism are subject to the same penalties as copying someone else's work without proper citations. Students who have taken this class previously and would like to use the work from previous assignments should contact the instructor for permission to do so.

If you have any questions about your work and the academic integrity policy, please discuss your assignment or concerns with your instructor, teaching assistant, or your college Academic Integrity Officer in advance of submitting an assignment. Student resources on Sun Devil Integrity and strategies for completing your work with integrity and avoiding plagiarism are available here: [ASU Student Resources for Academic Integrity](http://ASU Student Resources for Academic Integrity) or [provost.asu.edu/academicintegrity](http://provost.asu.edu/academicintegrity) for more information.

### **Harassment Prohibited:**

ASU policy prohibits harassment on the basis of race, sex, gender identity, age, religion, national origin, disability, sexual orientation, Vietnam era veteran status, and other protected veteran status. Violations of this policy may result in disciplinary action, including termination of employees or expulsion of students. Students are encouraged to report harassment to instructors and the Dean of Students Office.

### **Student Conduct:**

ASU and the College of Integrative Sciences and Arts expects and requires its students to act with honesty, integrity, and respect. Required behavior standards are listed in the [Student Code of Conduct and Student Disciplinary Procedures](#), [Computer, Internet, and Electronic Communications policy](#), [ASU Student Academic Integrity Policy](#), and outlined by the [Office of Student Rights & Responsibilities](#). Anyone in violation of these policies is subject to sanctions. [Students are entitled to receive instruction free from interference](#) by other members of the class. An instructor may withdraw a student from the course when the student's behavior disrupts the educational process per [Instructor Withdrawal of a Student for Disruptive Classroom Behavior](#).

The Office of Student Rights and Responsibilities accepts [incident reports](#) from students, faculty, staff, or other persons who believe that a student or a student organization may have violated the Student Code of Conduct.

Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

### **Title IX:**

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish to discuss any concerns confidentially and privately.

### **Disability Accommodations:**

Qualified students with disabilities who will require disability accommodations in this class are encouraged to make their requests to the instructor at the beginning of the semester either during office hours or by appointment. Note: Prior to receiving disability accommodations, verification of eligibility from the Disability Resource Center (DRC) is required. Disability information is confidential.

**Disability Resource Center** ([eoss.asu.edu/drc](https://eoss.asu.edu/drc))

**Email:** DRC@asu.edu

**DRC Phone:** 480-965-1234

**DRC FAX:** 480-965-0441

### **Statement on Inclusion:**

Arizona State University is deeply committed to positioning itself as one of the great new universities by seeking to build excellence, enhance access, and have an impact on our community, state, nation, and the world. To do that requires our faculty and staff to reflect the

intellectual, ethnic, and cultural diversity of our nation and world so that our students learn from the broadest perspectives, and we engage in the advancement of knowledge with the most inclusive understanding possible of the issues we are addressing through our scholarly activities. We recognize that race and gender historically have been markers of diversity in institutions of higher education. However, at ASU, we believe that diversity includes additional categories such as socioeconomic background, religion, sexual orientation, gender identity, age, disability, veteran status, nationality, and intellectual perspective.

### **Mental Health:**

As a student, like anyone else, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating, and/or lack of motivation. These emotional health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. ASU Counseling Services provides counseling and crisis services for students who are experiencing a mental health concern. Any student may call or walk-in to any ASU counseling center for a same-day or future appointment to discuss any personal concern. Here is the website: [eoss.asu.edu/counseling](http://eoss.asu.edu/counseling). After office hours and 24/7 ASU's dedicated crisis line is available for crisis consultation by calling 480-921-1006.

### **Establishing a Safe Environment:**

Learning takes place best when a safe environment is established in the classroom. In accordance with [SSM 104-02](#) of the Student Services Manual, students enrolled in this course have a responsibility to support an environment that nurtures individual and group differences and encourages engaged, honest discussions. The success of the course rests on your ability to create a safe environment where everyone feels comfortable to share and explore ideas. We must also be willing to take risks and ask critical questions. Doing so will effectively contribute to our own and others' intellectual and personal growth and development. We welcome disagreements in the spirit of critical academic exchange, but please remember to be respectful of others' viewpoints, whether you agree with them or not.

All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the [Office of the Dean of Students](#). If either office determines that the behavior poses or has posed a serious threat to personal safety or to the welfare of the campus, the student will not be permitted to return to campus or reside in any ASU residence hall until an appropriate threat assessment has been completed and, if necessary, conditions for return are imposed. ASU PD, the Office of the Dean of Students, and other appropriate offices will coordinate the assessment in light of the relevant circumstances.

### **Prohibition of Commercial Notetaking Services:**

In accordance with [ACD 304-06 Commercial Note Taking Services](#), written permission must be secured from the official instructor of the class in order to sell the instructor's oral

communication in the form of notes. Notes must have the note taker's name as well as the instructor's name, the course number, and the date.

### **Course Evaluation:**

Students are expected to complete the course evaluation. The feedback provides valuable information to the instructor and the college and is used to improve student learning. Students are notified when the online evaluation form is available. The results are always anonymous and cannot be reviewed by the instructor/department until after final grades have been posted.

### **Trigger Warning:**

Please note that some course content may be deemed offensive by some students, although it is not my intention to offend anyone. In addition, some materials that we link with online might also be considered offensive, troubling, or difficult to review in terms of language or graphics. I attempt to provide warnings when introducing this kind of material; yet, if I forget to do so, or if something else (in my materials or posts from fellow students) seems offensive, please contact me at [arkhare@asu.edu](mailto:arkhare@asu.edu), or the faculty head, [Dr. Douglas Green](#).

### **Academic Affairs Manual:**

For a complete guide to Arizona State University course policies, please refer to the [Academic Affairs Manual \(ACD\)](#).

### **Syllabus Disclaimer:**

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule, but the possibility exists that unforeseen events will make syllabus changes necessary. Remember to check your ASU email and the course site often.

### Physics Lab Schedule (Tentative)

Week of	Lab Experiment
01/11	Lab 1: Capstone Tutorial
01/18	MLK Holiday (No lab this week)
01/25	Lab 2: 1 D Motion
02/01	Lab 3: Vectors
02/08	Lab 4: Projectile Motion
02/15	Lab 5: Newton's Laws 1
02/22	Lab 6: Newton's Laws 2
03/01	Lab 7: Friction
03/08	Lab 8: Uniform Circular Motion
03/15	Lab 9: Moment of Inertia
03/22	Lab 10: Torque and Equilibrium
03/29	Lab 11: Momentum and Impulse
04/05	Lab 12: Energy
04/12	Lab 13: Ballistic pendulum
04/19	Lab 14: Simple Harmonic Oscillator