

## PHY2020 – FALL 2024 (15641,15642, 15643, 15644)

### Introduction to Principles Of Physics / Fundamentals Of Physics (GE core)

**Instructor**

TBD

**Phone Number**

XXX-XXX-XXXX

**Email**

Use Canvas Mail

**Office Hours**

TBA – during the first week of class

**Teaching Assistant**

TBD

For questions about course content, your grade, or other personal issues, use the Canvas mail tool. Expect a response within 24 hours, not including weekends or university holidays. Send email to your TA and copy your instructor.

## COURSE INFORMATION

Credit Hours: 3

Course Modality: This course is online asynchronous. All videos are prerecorded. No synchronous requirements exist. Live office hours are available according to the schedule above for on-demand assistance. Attendance to office hours is optional and the office hours are not recorded.

This course offers a comprehensive survey of physics, covering a wide range of topics including motion, newton's laws, energy, sound, heat, electricity, magnetism, and optics. Emphasizing a conceptual understanding of physics, the course integrates critical thinking skills and real-world applications. Fundamental principles of physics in mechanics, electricity and modern physics as applied to conservation laws. An in-depth analysis of selected topics with lecture demonstration, films and other teaching aids. (p)

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## COURSE DESCRIPTION

This course exposes students to the foundations and principles of physics—the most fundamental of the experimental sciences—to give you a greater appreciation of the world around you and how it works. It assumes no previous background in physics, provides a one-semester overview of the subject, and meets the General Education Physical Science (“P”) requirement. It may be useful as preparation for courses such as PHY 2048 and PHY 2053.

## COURSE OBJECTIVES

This course offers General Education credit in the Physical Sciences, for which program area the objective is as follows: “Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.”

To achieve these goals, students will be expected to:

1. Analyze particular physical situations, and thus identify the fundamental principles pertinent to the situations,
2. Apply principles to particular situations,
3. Solve any equations arising from the application of identified principles of physics,
4. Communicate results of calculations unambiguously by reporting values containing appropriate precision and units.

**General Education credit will be earned only for a grade of C or higher in the course.**

This course will also assess Student Learning Outcomes covering both content and skills:

- *Content:* Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline.
  - students will solve analytical problems describing different types of motion, including translational, rotational, and simple harmonic motion.
  - students will apply newton's laws, and conservation laws to solve analytical problems of mechanics.
  - students will identify and analyze relevant information presented in various formats such as graphs, tables, diagrams and/or mathematical formulations.

- students will solve real-world problems using critical thinking skills and knowledge developed from this course.

- *Communication*: Students communicate knowledge, ideas and reasoning clearly effectively in written and oral forms appropriate to the discipline.
- *Critical Thinking*: Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems.

These course objectives align with the UF General Education student learning outcomes.

General Education SLO	Physical Science SLO	Course Objective Alignment	Assessment
Content	Identify, describe, and explain the basic concepts, theories and terminology of natural science and the scientific method; the major scientific discoveries and the impacts on society and the environment; and the relevant processes that govern physical systems.	Objectives 1-4	All assessments and student practice assignments offer opportunities for students to demonstrate learning about the physics content covered in this course.
Critical Thinking	Formulate empirically-testable hypotheses derived from the study of physical processes or living things; apply logical reasoning skills effectively through scientific criticism and argument; and apply techniques of discovery and critical thinking effectively to solve scientific problems and to evaluate outcomes	Objectives 1-3	<p><b>Independent Practice</b></p> <ul style="list-style-type: none"> <li>• Optional Practice Problems</li> <li>• Optional Test Your Understanding Quizzes</li> </ul> <p><b>Formative:</b> Weekly Module Quizzes</p> <p><b>Summative:</b> 3 exams</p>
Communication	Communicate scientific knowledge, thoughts, and reasoning clearly and effectively.	Objective 4	<ul style="list-style-type: none"> <li>• Required postings to discussion boards</li> <li>• Physics Photo Project</li> </ul>

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## COURSE REQUIREMENTS

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### REQUIRED TEXTBOOK

There is no required textbook for this course. All course content is contained within the modules of this course.

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### RECOMMENDED TEXTBOOKS

1. Douglas Giancoli, *Physics: Principles with Applications*, published by Pearson
2. Paul Hewitt, *Conceptual Physics*, published by Pearson. Available through UF Access

Use of one or the other of these textbooks may be helpful, **but is not required**. Each book has several editions that are basically the same, and many used copies are available. \$20 should buy a decent copy if you are looking for a traditional textbook to supplement this course. In general, Giancoli's book is more formal and quantitative, whereas Hewitt's book is more conceptual with words and pictures. Depending on your learning preferences, you may find one book or the other more useful.

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### PREREQUISITES

There are no prerequisites for this course. Facility with high school math (basic algebra, geometry, and trigonometry) is expected.

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### MINIMUM TECHNOLOGY REQUIREMENTS

The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to their degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the internet and related equipment (cable/DSL modem)
- Microsoft Office Suite installed (provided by the university)

**Honorlock Requirements:** In order to take exams under the supervision of Honorlock, you need access to a computer with a video camera, a microphone, and a good internet connection, located in a quiet room where you can take the exams in privacy. You must take your exam using the Google Chrome browser after installing the Honorlock extension. It is your responsibility to be sure you meet all these technical requirements. You are strongly advised to check your setup ahead of each exam using the link at <https://honorlock.com/support/> . Interruptions in the internet connection or entry of other persons into the room will be reported by Honorlock and investigated to ensure the academic integrity of the exam.

**Calculator:** A calculator is required for numerical calculations, and the [Honorlock Scientific Calculator](#) [Links to an external site.](#) may be used instead of a physical calculator for all coursework. Note: Only the Honorlock Scientific Calculator is permitted during exams. No handheld calculators are allowed during exams. Therefore it is advised to become accustomed to using this calculator in your practice.

## **MINIMUM TECHNICAL SKILLS**

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To complete your tasks in this course, you will need a basic understanding of operating a computer and using word processing software. You will also need basic understanding of how to operate a scientific calculator, including knowledge of entering values in scientific notation, using trig functions, and how the calculator uses order of operations to perform calculations, like the calculator app mentioned in the previous section.

## **MATERIALS/SUPPLY FEES**

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There is no supply fee for this course.

## **HONORLOCK**

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Honorlock is an online proctoring service that allows students to take exams on-demand 24/7. There are no scheduling requirements or fees.

You will need a laptop or desktop computer with a webcam, a microphone, and a photo ID. The webcam and microphone can be either integrated or external USB devices.

Honorlock requires that you use the [Google ChromeLinks to an external site.](#) browser and that you must add the Honorlock extension to Chrome. For further information, FAQs, and technical support, please visit [HonorlockLinks to an external site.](#)

## ZOOM

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Office hours will be conducted using Zoom.

You can find resources and help using Zoom at the [University of Florida's ZoomLinks to an external site.](#) website.

## COURSE POLICIES

### ATTENDANCE

Since the course is online, you can work at your own pace provided that you complete all quizzes and exams by the deadlines set in the course schedule below. Generally, you can work ahead on all quizzes leading up to the next exam.

As this is an online class, you are responsible for observing all posted due dates and are encouraged to be self-directed and take responsibility for your learning.

### MAKE-UPS

Make-ups are rare but will be considered on a case-by-case basis, consistent with university policies that can be found at <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> . Contact the instructor at least five UF teaching days in advance for predictable events, or as soon as possible after any emergency.

### EXTRA CREDIT

The only extra credit planned is for a mid-course survey. Individual extra credit assignments will not be allowed out of fairness to other students.

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## GRADING POLICY

I will make every effort to have each assignment graded and posted within one week of the due date.

## COURSE GRADING POLICY

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This course evaluates your progress on the learning outcomes as you demonstrate your understanding completing the assignments in two primary categories: quizzes and exams.

Assignment Group	Percentage of Course Total
15 quizzes	10% combined
3 unit discussion boards	6% combined
1 project	9% combined
3 exams	75% (25% for each exam)
Playposit Participation	1%
1 course survey	1%

**QUIZZES:** The 15 quizzes are untimed and taken in Canvas. You may submit each quiz just once. It may be attempted at any time between its opening and 11:59 p.m. on the day before the next exam is scheduled. However, quizzes submitted after 11:59 p.m. on the quiz's due date will receive only a fraction of the credit that the same answers would have received for an on-time submission. Submissions that are up to 24 hours late will receive credit for 75% of the raw score, while submissions that are more than 24 hours late will receive credit for 50% of the raw score. It is in your best interest to submit each quiz on time.

**PHYSICS PHOTO PROJECT:** You will complete one project in this course to photograph and describe the physics principles of some event. The project is scaffolded so that you will submit a draft, conduct peer reviews, and a final submission.

**EXAMS:** The three exams are timed (120 minutes) and taken in Canvas under the supervision of Honorlock during a window specified in the Course Schedule below. You do not need to schedule a start time in advance, but you must meet all Honorlock technical and administrative requirements and submit the exam before the end of its window. It is your responsibility to take each exam within its specified window.

**UNIT DISCUSSION BOARDS:** Modules are grouped into units and each unit contains a discussion board for posting questions and offering your classmates assistance. It is the space which affords us to build a community of learners and work collaboratively to assist you in meeting the course objectives. Your participation is strongly encouraged

and will be awarded based on the frequency of participation and the quality of your post to offer thoughtful and substantive contributions as evidence of your engagement with your peers. To be considered for maximum points, you should post weekly with substantive comments, questions, or responses to peers.

**PLAYPOSIT PARTICIPATION:** Course videos may contain questions for student response. Students earn points for these and they accumulate over the semester. The responses are graded as participation.

**OPTIONAL ASSIGNMENTS:** Each module contains Test Your Understanding quizzes which do not count towards your overall course grade. These quizzes are for your practice and feedback.

**CALCULATING SCORES AND OVERALL GRADE:** All scores and grades in the course will be communicated to students via the Canvas Gradebook (Grades in the left margin of the Canvas page). Scores on each quiz and exam will appear automatically in the gradebook so students can estimate their projected grade:

- "Quizzes" = (points earned on quizzes) / (points available on quizzes) x 100%
- "Exams" = (points earned on exams) / (points available on exams) x 100%
- Discussion Boards = (points earned on posts) / (points available on post) x 100%
- "Project" = (points earned on draft submission, peer review, final submission) / (points available on draft, review, final) x 100%
- "Participation" = (points earned on PlayPosit) / (points available on PlayPosit) x 100%
- "Total" = 0.1 x (Quizzes %) + 0.75 x (Exams %) + 0.06 x (Discussion Boards %) + 0.09 x (Project %) + 0.01 x (Participation %) + 0.01 x (Extra Credit %)

## GRADING SCALE

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Percent	Grade	Grade Points
76%	A	4.00
71%	A-	3.67
66%	B+	3.33



<b>Percent</b>	<b>Grade</b>	<b>Grade Points</b>
61%	B	3.00
56%	B-	2.67
51%	C+	2.33
46%	C	2.00
42%	C-	1.67
38%	D+	1.33
34%	D	1.00
31%	D-	0.67
<31%	E	0.00



See the [current UF grading policies](#)Links to an external site. for more information.

## UF POLICIES

### UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES

Students with disabilities requesting accommodations should first register with the [Disability Resource Center](#)Links to an external site. (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

## UNIVERSITY POLICY ON ACADEMIC CONDUCT

UF students are bound by The Honor Pledge, which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code." 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." The [Student Honor Code and Student Conduct CodeLinks to an external site.](#) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

## PLAGIARISM

The [Student Honor Code and Student Conduct CodeLinks to an external site.](#) states that:

"A Student must not represent as the Student's own work all or any portion of the work of another. Plagiarism includes but is not limited to:

- Stealing, misquoting, insufficiently paraphrasing, or patch-writing.
- Self-plagiarism, which is the reuse of the Student's own submitted work, or the simultaneous submission of the Student's own work, without the full and clear acknowledgment and permission of the Faculty to whom it is submitted.
- Submitting materials from any source without proper attribution.
- Submitting a document, assignment, or material that, in whole or in part, is identical or substantially identical to a document or assignment the Student did not author."

## COURSE SCHEDULE

Day	Date	Assignment	Title
Thurs	Aug 22	COURSE OPENS	
Fri	Aug 23	<b>Quiz 1 due</b> (1 question)	<i>Introduction to Physics</i>

Wed	Aug 28	<b>Quiz 2 due</b> (4 questions)	<i>Vectors and Geometry</i>
Wed	Sept 4	<b>Quiz 3 due</b> (4 questions)	<i>Description of Motion and Falling Bodies</i>
Wed	Sept 11	<b>Quiz 4 due</b> (5 questions)	<i>Newton's Laws</i>
Wed	Sept 18	<b>Quiz 5 due</b> (3 questions)	Circular Motion and Newtonian Gravity
Tues	Sept 24	<b>Quiz 6 due</b> (4 questions)	Work and Energy
Wed	Sept 25	Quizzes 1-6 close	
Thur	Sept 26	Exam 1	Covers Modules 1-6
		120 minutes, start after 7am, end by 11:59pm	
Wed	Oct 2	<b>Quiz 7 due</b> (3 questions)	<i>Momentum</i>
Wed	Oct 9	<b>Quiz 8 due</b> (3 questions)	<i>Rotational Motion and Equilibrium</i>
Thurs	Oct 10	<b>Physics Project Draft Submission</b> due at 11:59PM	
Wed	Oct 16	<b>Quiz 9 due</b> (3 questions)	<i>Fluids and Archimedes' Principle</i>
Thurs	Oct 17	<b>Physics Project Peer Reviews</b> due at 11:59PM	
Tues	Oct 22	<b>Quiz 10 due</b> (4 questions)	<i>Temperature and Heat</i>
Wed	Oct 23	Quizzes 7-10 close	

Thur	Oct 24	Exam 2	Covers Modules 7-10
		120 minutes, start after 7am, end by 11:59pm	
Wed	Oct 30	<b>Quiz 11 due</b> (4 questions)	<i>Waves and Sound</i>
Wed	Nov 6	<b>Quiz 12 due</b> (3 questions)	<i>Electrostatics</i>
Thurs	Nov 7	<b>Physics Project Final Submission</b> due at 11:59PM	
Wed	Nov 13	<b>Quiz 13 due</b> (3 questions)	<i>Electric Currents</i>
Wed	Nov 20	<b>Quiz 14 due</b> (3 questions)	<i>Magnets and Magnetism</i>
Wed	Dec 4	<b>Quiz 15 due</b> (3 questions)	<i>Light Rays</i>
Sun	Dec 8	Quizzes 11-15 close	
Mon	Dec 9	Exam 3	Covers Modules 1-15
		120 minutes, start after 7am, end by 11:59pm	

## NETIQUETTE AND COMMUNICATION COURTESY

It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. These guidelines for online behavior and interaction are known as netiquette.

### Security

- [General Guidelines](#)
- [Email](#)
- [Discussion Boards](#)
- [Zoom](#)

Remember that your password is the only thing protecting you from pranks or more serious harm.

- Don't share your password with anyone.
- Change your password if you think someone else might know it.
- Always log out when you are finished using the system.

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## GETTING HELP

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### TECHNICAL DIFFICULTIES

For help with technical issues or difficulties with Canvas, please contact the UF Computing Help Desk at:

- <http://helpdesk.ufl.edu>[Links to an external site.](#)
- 352-392-HELP (4357)
- Walk-in: HUB 132

Any requests for make-ups (assignments, exams, etc.) due to technical issues should be accompanied by the ticket number received from the UF Computing Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You should email your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

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### HEALTH AND WELLNESS

- **U Matter, We Care:** If you or someone you know is in distress, please email [umatter@ufl.edu](mailto:umatter@ufl.edu), call 352-392-1575, or visit [U Matter We Care](#)[Links to an external site.](#) to refer or report a concern, and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit the [UF Counseling & Wellness Center](#)[Links to an external site.](#) website or call 352-392-1575 for information on crisis services and non-crisis services.
- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [UF Student Health Care Center](#)[Links to an external site.](#) website.
- **University Police Department:** Visit the [UF Police Department](#)[Links to an external site.](#) website or call 352-392-1111 (or 9-1-1 for emergencies).

- **UF Health Shands Emergency Room/Trauma Center:** For immediate medical care in Gainesville, call 352-733-0111, or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Shands Emergency Room/Trauma Center](#)[Links to an external site.](#) website.

## ACADEMIC AND STUDENT SUPPORT

- **Career Connections Center:** For career assistance and counseling services, visit the [UF Career Connections Center](#)[Links to an external site.](#) website or call 352-392-1601.
- **Library Support:** For various ways to receive assistance concerning using the libraries or finding resources, visit the [UF George A. Smathers Libraries Ask-A-Librarian](#)[Links to an external site.](#) website.
- **Teaching Center:** For general study skills and tutoring, visit the [UF Teaching Center](#)[Links to an external site.](#) website or call 352-392-2010.
- **Writing Studio:** For help with brainstorming, formatting, and writing papers, visit the [University Writing Program Writing Studio](#)[Links to an external site.](#) website or call 352-846-1138.

## COURSE EVALUATIONS

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 on the GatorEvals [Providing Constructive Feedback](#)[Links to an external site.](#)FAQ page.

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 the [GatorEvals](#)[Links to an external site.](#) website. Summaries of course evaluation results are available to students at the [GatorEvals Public Results](#)[Links to an external site.](#) page. More information about UF's course evaluation system can be found at the [GatorEvals Faculty Evaluations](#)[Links to an external site.](#) website.

## TIPS FOR SUCCESS

Taking a course online can be a lot of fun! Here are some tips that will help you get the most of this course while taking full advantage of the online format:

- Schedule "class times" for yourself. It is important to do the coursework on time each week. Late work may not be accepted. See descriptions above for which assignments may carry a grade reduction for late work.

- Read ALL of the material contained on this site. There is a lot of helpful information that can save you time and help you meet the objectives of the course.
- Print out the Course Summary located in the Course Syllabus and check things off as you go.
- Take full advantage of the online discussion boards. Ask for help or clarification of the material if you need it.
- Do not wait to ask questions! Waiting to ask a question might cause you to miss a due date as you need to allow for a response time.
- Do your work well before the due dates. Sometimes things happen. If your computer goes down when you are trying to submit an assignment, you'll need time to troubleshoot the problem.
- To be extra safe, back up your work to an external hard drive, thumb drive, or through a cloud service.

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## HONORLOCK ONLINE PROCTORING

In order to maintain a high standard of academic integrity and assure that the value of your University of Florida degree is not compromised, course exams will be proctored. Some students will take their exams online and will be proctored by Honorlock. You will take your exam electronically using the course website. You **do not** need to register for your exam. However, you will need to have installed and enabled the Google Chrome Honorlock extension prior to taking your exams. You will need a webcam, speakers, microphone, laptop or desktop computer, and a reliable internet connection to take your exams. Wireless internet is not recommended. You may also need a mirror or other reflective surface. Google Chrome is the only supported browser for taking exams in Canvas.

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### BEFORE YOUR EXAM

Prior to each exam and in the same environment you plan to take the exam, review the [Honorlock Guidelines \(Links to an external site.\)](#) (PDF), and go to [Honorlock Support \(Links to an external site.\)](#) to run a system check. This process takes just a few minutes and is completely free. If your course offers an Honorlock Practice Quiz, it is strongly recommended that you take it to practice using Honorlock before each of your exams on the machine you will use to sit each exam.

Honorlock will enter the exam access code as part of the security authentication procedures as outlined above. Do not request an exam access code from your instructor.

**Important:** If you are unable to take an exam because of a technical glitch on your end, that is your responsibility. However, if you do experience technical difficulties during the exam, Honorlock's support menu will be visible on-screen for you to contact a support agent.

## GETTING HELP

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Honorlock offers 24/7/365 technical support to assist students before, during, and after exams. If you experience any trouble with Honorlock, begin a live chat on the [Honorlock Support \(Links to an external site.\)](#) page, call 844-243-2500, or email [Support@Honorlock.com](mailto:Support@Honorlock.com).

## PRIVACY AND ACCESSIBILITY POLICIES

For information about the privacy policies of the tools used in this course, see the links below:

- Adobe
  - [Adobe Privacy PolicyLinks to an external site.](#)
  - [Adobe AccessibilityLinks to an external site.](#)
- Honorlock
  - [Honorlock Privacy PolicyLinks to an external site.](#)
  - [Honorlock AccessibilityLinks to an external site.](#)
- Instructure (Canvas)
  - [Instructure Privacy Policy](#)
  - [Instructure Accessibility](#)
- Microsoft
  - [Microsoft Privacy PolicyLinks to an external site.](#)
  - [Microsoft AccessibilityLinks to an external site.](#)
- PlayPosit
  - [PlayPosit Privacy PolicyLinks to an external site.](#)
  - [PlayPosit AccessibilityLinks to an external site.](#)
- Sonic Foundry (Mediasite Streaming Video Player)
  - [Sonic Foundry Privacy PolicyLinks to an external site.](#)
  - [Sonic Foundry AccessibilityLinks to an external site.](#) (PDF)
- Zoom
  - [Zoom Privacy PolicyLinks to an external site.](#)
  - [Zoom AccessibilityLinks to an external site.](#)

(Links to an external site.)



