

SPRING 2019 Department of Physics & Astronomy, UGA**PHYS 1112 Introductory Physics - Electricity and Magnetism, Optics (as of Jan. 08/2019)**

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Course Description:	The continuation of Introductory Physics. Electricity and electric circuits, magnetism, geometric and wave optics.
Athena Title:	INTRO PHYS ELEC
Pre or Corequisite:	PHYS 1111-1111L or PHYS 1211-1211L
Grading System:	A-F (Traditional)
Instructor:	Dr. Andrei Galiautdinov
Preferred method of communication:	During office hours
Office:	Physics 220 (Phone: 706-583-8224)
Emailing Policy:	Before emailing, make sure you read and understood this syllabus in its entirety. I will not respond to your inquiry if the question you are asking had already been answered here. ag@physast.uga.edu
Sections:	45173 2:00pm – 3:15pm (TR)
Office hours:	3:15p – 04:15p TR [or, by a verbal appointment, after the departmental colloquium, if there is one on Thursday; takes place in the auditorium (Rm. 202), usually ends at 4:35p]
Text:	<i>Physics</i> , vol. 2, 4 th Edition (3 rd & 2 nd OK), James S. Walker (Pearson Addison-Wesley)
Clickers:	None
Academic Honesty:	<i>As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: www.uga.edu/honesty. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.</i>
In-class rules:	<ul style="list-style-type: none"> ➤ No laptops, pagers, cellphones, iPads, iPods, or any other electronic/communication devices are permitted in the classroom. ➤ If you are late for class, you must enter in the back of the room.
Attendance policy:	➤ Optional
Labs:	<ul style="list-style-type: none"> ➤ All inquiries related to labs must be directed to our Lab Coordinator, Mr. Tom Barnello, at: tjbar@physast.uga.edu 706-542-2903, Rm. 310 ➤ Labs begin the week of Jan. 14 – 18. ➤ Attendance mandatory. ➤ Students who are not assigned a lab grade due to non-attendance will receive a failing grade ("F") for the course.
Lab syllabus:	➤ May be found here: http://www.physast.uga.edu/courses
LON-CAPA Homework:	<p>Your homework assignments will be posted and automatically graded on LON-CAPA*, http://spock.physast.uga.edu</p> <p>*Users will be added after the drop/add period ends (by around Jan. 22). Do not email me (or anyone else at the department) before then. After that, it will be your responsibility to keep track of the HMWK deadlines.</p> <p>NOTE: If a particular physics problem has formatting issues and the system doesn't assign the correct number of points to you, make a note on how many problems had malfunctioned and then send me the list <u>at the end of semester</u> (after the last HMWK deadline had passed). I will drop those problems from the overall calculation.</p>
In case you can't log into LON-CAPA:	<p>Read the "Log-in Help" link on the main login page, and/or the "Student FAQ". There are several possible causes outlined on those pages, including:</p> <ul style="list-style-type: none"> ➤ Is your UGA password expired? Check to see whether you can log in to eLC or DegreeWorks or Athena. Sometimes UGA servers expire student passwords for some services and not others. Therefore, your first step should almost always be to reset your UGA password on myid.uga.edu. ➤ Have you tried quitting your browser and restarting it? Have you tried a different browser (Chrome vs. Firefox, for example)? Have you tried a different computer?

	<ul style="list-style-type: none"> ➤ Disabling browser add-ons and extensions sometimes helps. There are some add-ons that don't always play well with login pages.
LON-CAPA Homework rules:	<ul style="list-style-type: none"> ➤ No make-ups. ➤ Collaboration OK.
Exams:	<ul style="list-style-type: none"> ➤ There will be three (3) midterm exams on selected chapters, and one (1) final exam. ➤ No make-ups or re-scheduling permitted.
Midterm exam rules:	<ul style="list-style-type: none"> ➤ One (1) standard formula sheet (8.5 in. × 11 in.) containing anything you want, all handwritten. You may write on both sides. ➤ A simple (non-graphing, non-symbolic, non-programmable) scientific calculator. No other electronic device(s) permitted. ➤ I will let you know if you'd be permitted to use a formula sheet on the Final Exam by verbal announcement at the end of semester. Please be in attendance on that day.
Grades:	Your grades will be posted on the eLC-New, http://elcnew.uga.edu
Grading policy:	<p>10% HMWK (no make-up; must be completed on LON-CAPA before the deadline; if you wait till last minute, the system may boot you out and your grade will be lost)</p> <p>10% LABS (attendance mandatory; see above for details)</p> <p>20% EXAM 1 (Multiple-Choice (MC), no individual re-scheduling or make up)</p> <p>20% EXAM 2 (MC, no individual re-scheduling or make up)</p> <p>20% EXAM 3 (MC, no individual re-scheduling or make up)</p> <p>20% EXAM 4 (a cumulative MC Final Exam; no individual re-scheduling or make up)</p> <p>NOTE: Our departmental policy prohibits rescheduling of missed exams (regardless of the reason, be it a court appearance, immigration, medical, family, sporting, or any other type of emergency). The final exam will replace your worst midterm if it is better (say, if you got a zero for non-attendance). That replacement will not be visible on the eLC.</p> <p>Your overall grade will become available on Athena after the corresponding deadline. Use Excel to calculate your overall grade with the help of the formula below. Email me only if you strongly believe there was a mistake in my calculation. Do not ask for a bump-up, a curve, or any extra credit. Make sure to include your class and section number.</p> <p style="text-align: center;">100% TOTAL = 10% HMWK + 10% LABS + 80% EXAMS (including the Final)</p>
Cut-offs:	<p>F : [0, 60)</p> <p>D : [60, 68)</p> <p>C-: [68, 70) C : [70, 75) C+: [75, 78)</p> <p>B-: [78, 80) B : [80, 85) B+: [85, 88)</p> <p>A-: [88, 90) A : [90, 100]</p> <p style="text-align: right;">NOTE: No rounding; 89.99 = A-, etc.</p>
Grade appeal:	Grade appeals are resolved by following our departmental due procedure as described here: https://www.physast.uga.edu/policies/policiesonstudentissues/grievance
Incompletes:	<p>No "Incompletes" will be assigned in this class unless requested by the UGA Office of Student Support Services.*</p> <p><i>*You must remove the "I" by the end of the semester subsequent to its assignment.</i></p>
Hardship withdrawals:	If your course performance is significantly affected by issues beyond your control, please seek assistance promptly from the Office of Student Support Services http://sco.uga.edu/ It is always easier to address exceptional circumstances when you raise these concerns as early as possible. Waiting until the end of the semester to take action may limit my ability to provide appropriate support.

2019 Spring Schedule				
Week	Day	Date	Reading	Topic
	W	Jan. 09		
	R	Jan. 10	26.1-2	Intro to this course; 6 Principles of GO GO: Reflection, plane mirrors
	F	Jan. 11		
	M	Jan. 14		
	T	Jan. 15	26.3-4	GO: Spherical mirrors, ray tracing, mirror equation

2				Drop/Add ends
	W	Jan. 16		
	R	Jan. 17	26.3-4	GO: Spherical mirrors, ray tracing, mirror equation (cont.)
	F	Jan. 18		
3	M	Jan. 21		MLK DAY
	T	Jan. 22	26.5	GO: Refraction & total internal reflection
	W	Jan. 23		
	R	Jan. 24	26.6-7	GO: Ray tracing for lenses; thin lens equation
	F	Jan. 25		
4	M	Jan. 28		
	T	Jan. 29	26.6-7	GO: Ray tracing for lenses; thin lens equation (cont.)
	W	Jan. 30		
	R	Jan. 31	27.1-2	OI: Human eye, camera, corrective optics
	F	Feb. 01		
5	M	Feb. 04		
	T	Feb. 05	27.1-2	OI: Human eye, camera, corrective optics (cont.)
	W	Feb. 06		
	R	Feb. 07	27.3-5	OI: Magnifying glass, microscope, telescope
	F	Feb. 08		
6	M	Feb. 11		
	T	Feb. 12		EXAM 1
	W	Feb. 13		
	R	Feb. 14	28.1-2	WO: Superposition & interference; Two-slit experiment
	F	Feb. 15		
7	M	Feb. 18		
	T	Feb. 19	28.4,6	WO: Single-slit diffraction; diffraction gratings; spectrometers
	W	Feb. 20		
	R	Feb. 21	19.1-3	EF: Electric charge; insulators & conductors; Coulomb's Law
	F	Feb. 22		
8	M	Feb. 25		
	T	Feb. 26	19.1-3	EF: Electric charge; insulators & conductors; Coulomb's Law (cont.)
	W	Feb. 27		
	R	Feb. 28	19.4-6	EF: Electric field; field lines; capacitor; shielding & charging by induction
	F	Mar. 01		
9	M	Mar. 04		
	T	Mar. 05	19.4-6	EF: Electric field; field lines; capacitor; shielding & charging by induction (cont.)
	W	Mar. 06		
	R	Mar. 07		EXAM 2
	F	Mar. 08		
10	M	Mar. 11		
	T	Mar. 12		
	W	Mar. 13		SPRING BREAK
	R	Mar. 14		
	F	Mar. 15		
11	M	Mar. 18		
	T	Mar. 19		REVISITING: Energy, WkET & LCE
	W	Mar. 20	20.1-2	EP: Electric potential & energy; energy conservation
	R	Mar. 21	20.3-4	EP: Electric potential of point charges; equipotential surfaces & E-field Withdrawal deadline
	F	Mar. 22		
12	M	Mar. 25		
	T	Mar. 26	20.5-6	EP: Capacitors & dielectrics; electric energy storage
	W	Mar. 27		
	R	Mar. 28	21.1-3	DC: Electric current; Ohm's Law; Energy & power in electric circuits

	F	Mar. 29		
13	M	Apr. 01		
	T	Apr. 02	21.4-5	DC: Simple circuits; resistors in series & parallel
	W	Apr. 03		
	R	Apr. 04	22.1-2	MF: Magnetic field; magnetic force on moving charges
	F	Apr. 05		
14	M	Apr. 08		
	T	Apr. 09	22.3	MF: Motion of charged particles in a magnetic field
	W	Apr. 10		
	R	Apr. 11	22.4-5	MF: Magnetic force on current-carrying wire; loops & magnetic torque
15	F	Apr. 12		
	M	Apr. 15		
	T	Apr. 16		EXAM 3
	W	Apr. 17		
16	R	Apr. 18	23.1 23.2-4	EMI: Induced e.m.f. EMI: Magnetic flux; Faraday's Law; Lenz's Rule
	F	Apr. 19		
	M	Apr. 22		
	T	Apr. 23	23.5 23.6	EMI: Motional e.m.f. EMI: Generators & Motors
17	W	Apr. 24		
	R	Apr. 25	23.7-8	EMI: Inductance; <i>RL</i> -Circuits
	F	Apr. 26		
18	M	Apr. 29		
	T	Apr. 30	23.9-10	EMI: Energy stored in the magnetic field; Transformers Classes End
	W	May 01		Reading Day
	R	May 02		FINAL EXAM: 3:30p - 6:30p
19	F	May 03		
	M	May 06		
	T	May 07		
	W	May 08		
	R	May 09		
19	F	May 10		Commencement
	M	May 13		Grades due (5 PM)
	T	May 14		

Spring Semester 2019
Based on 50 minutes classes (MWF), 75 minutes classes (TTH), 15 weeks of classes + Exams

Orientation/Advisement	January 7	Monday
Registration	January 8	Tuesday
Classes Begin	January 9	Wednesday
Drop/Add	January 9-15	Wednesday - Tuesday
Holiday: Martin Luther King Jr. Day	January 21	Monday
Midterm	March 1	Friday
Last Day of Classes Prior to Spring Break	March 8	Friday
Spring Break - No Classes	March 11-15	Monday – Friday
Classes Resume	March 18	Monday
Withdrawal Deadline	March 21	Thursday
Classes End	April 30	Tuesday
Reading Day	May 1	Wednesday
Final Exams	May 2-8	Thursday - Wednesday
Commencement	May 10	Friday
Grades Due	May 13	Monday, 12:00 PM

Spring 2019 – Regular Final Exam Schedule

Monday/Wednesday/Friday Classes		Tuesday/Thursday Classes	
Meeting Time	Exam	Meeting Time	Exam
8:00 am	Mon., May 6 8:00 - 11:00 am	8:00 am	Thur., May 2 8:00 - 11:00 am
9:05 am	Wed., May 8 8:00 - 11:00 am	9:30 am	Tues., May 7 8:00 - 11:00 am
10:10 am	Fri., May 3 8:00 - 11:00 am	11:00 am	Thur., May 2 12:00 - 3:00 pm
11:15 am	Mon., May 6 12:00 - 3:00 pm	12:30 pm	Tues., May 7 12:00 - 3:00 pm
12:20 pm	Wed., May 8 12:00 - 3:00 pm	2:00 pm	Thur., May 2 3:30 - 6:30 pm
1:25 pm	Fri., May 3 12:00 - 3:00 pm	3:30 pm	Tues., May 7 3:30 - 6:30 pm
2:30 pm	Mon., May 6 3:30 - 6:30 pm	5:00 pm	Mon., May 6 7:00 - 10:00 pm
3:35 pm	Wed., May 8 3:30 - 6:30 pm	6:30 pm	Wed., May 8 7:00 - 10:00 pm
4:40 pm	Fri., May 3 3:30 - 6:30 pm	8:00 pm	Mon., May 6 7:00 - 10:00 pm
5:45 pm	Fri., May 3 7:00 - 10:00 pm	9:30 pm	Wed., May 8 7:00 - 10:00 pm
6:50 pm	Tues., May 7 7:00 - 10:00 pm		
7:55 pm	Tues., May 7 7:00 - 10:00 pm		
9:00 pm	Thur., May 2 7:00 - 10:00 pm		