

Forsyth County Course Syllabus

2020-2021

COURSE TITLE: AP Physics 2

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Course Description:

AP Physics 2: Algebra-Based is equivalent to a second-semester college course in algebra-based physics. The course covers fluid statics and dynamics, thermodynamics, electrostatics, electric circuits, magnetism and electromagnetic induction, electromagnetic waves and optics, and modern physics (including quantum physics, atomic physics, and nuclear physics). Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. The course is based on six Big Ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world.

Standards:

Course Standards can be found at http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/2262.html or found in the AP Physics 2 Course documents in Itslearning.

Learning Resources/Textbook(s):

Physics, Giancoli 6th ed. \$125.00
http://wps.prenhall.com/esm_giancoli_physicsppa_6/
College Physics (High School Edition), 10th Edition
Raymond A. Serway; Chris Vuille
ISBN-10: 1-285-76249-5
ItsLearning course
Enhanced WebAssign

Required Formative Assignments:

Unit quizzes
Homework

Required Summative Assignments:

Unit Tests
4 formal Lab reports (*2 per semester*)
2 Projects (*1 per semester*)
Mid-Term
Final Exam

Recommended Assignments:

Practice AP Exam (*administered in April, TBA*)
End of year project

Availability for Extra Help:

Available virtually by appointment.

Teacher Expectations for Students:

- As this is a college-level class, students are expected to plan ahead and utilize time wisely. It is easy to fall behind, especially if you are taking multiple AP courses. We will follow closely with the pacing guide below.
- I expect all work to be turned in on time.
- I expect students to come to class prepared and participate in all class activities. I expect students to bring their best to class every day.

Student Expectations for Teacher:

- It is my goal to act as your guide as you explore and learn physics. I work hard to maintain a digital presence (fizziks.info, youtube videos and more) so that your learning is extended beyond the classroom.
- You can expect grades on formative assignments within a 5 day period and on summative assignments within a 10 day period.
- Communication via email or telephone will be returned within 24 hours, exceptions include weekends and holidays.
- I am committed to bringing my best to class every day.
- Summative evaluations may not be given until ALL formative feedback has been returned. This applies to work turned in by the due date.

Makeup Work:

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- Make up work is defined as work assigned during a student's absence, not work assigned prior to an absence. The student has five (5) school days upon returning to school to complete make-up work. The teacher has the discretion to grant a longer period to complete the work, if there are extenuating circumstances.
- It is difficult to make up missed labs with the time requirement that goes into setup, therefore lab make ups must be scheduled and are at the teacher's discretion. Assessments will draw on experiences from lab work.
- **If a student misses the scheduled exam date, the scale will not be applied to their exam score. The teacher has the discretion to grant an exception, if there are extenuating circumstances.**

Missing/Late Work:

As your teacher, I will hold you responsible for late work and missing assignments by labeling them as MISSING in Student Portal. In an effort to create opportunities for all students to turn in late or missing assignments, LASSO will be available on Saturdays throughout each semester as well as Lunch and Learn support available daily.

Grading Calculations:

50% (1st Sem. Course Work) + 50% (2nd Sem. Course Work)
1st and 2nd Semester Course Work = 75% Summative + 25% Formative

Grading Policy:

A = 90 – 100
B = 80 – 89
C = 70 – 79
Failing = Below 70

- Concept of formative and summative assessment:
<http://www.forsyth.k12.ga.us/cms/lib3/GA01000373/Centricity/Domain/3199/assessmentdefinitions%20copy.pdf>
- Due to the rigor of this course, the unit tests will be scaled based on the method used to scale the AP Exam for the course

WebAssign:

The purpose of webassign as an instructional aid:

- Students submit their answers and receive feedback in real time.
- Students are given multiple submissions to work on mastery of material before tests.
- Students do not need to wait for teachers to grade the assignment in order to know what they need to work on. Students instantly know what they need to work on.
- Students know when they need to come in for help prior to an assessment.
- Most colleges and universities use Webassign or a similar format service to deliver homework and tests.
- Increased opportunity to practice skills at the student's own pace, with immediate feedback.
- Learning for mastery rather than completion grades.

Academic Integrity:

- Academic integrity is the pursuit of scholarly activity in an honest and responsible manner. In the classroom, academic integrity involves a range of issues, including – but not limited to – cheating, plagiarism, and facilitating acts of academic dishonesty by others.
- Violations of academic integrity as outlined in the Forsyth County Schools Code of Conduct will be addressed according to the guidelines listed there.

Guidelines for BYOT Use:

LHS teachers and students will work together to ensure the most productive learning environment in the classroom.

Use of BYOT supports the use of technology devices as a tool in a student's education.

- Devices are to be "powered down" as the classroom teacher directs.
- Disregard of a directive by the classroom teacher to power down will be addressed with a progressive approach beginning with a verbal warning.
- Continued disregard of a directive by the classroom teacher to power down may be considered insubordination and addressed as a code of conduct violation
- During summative assessments, devices will be powered down and put into "cell phone jail" until all students in the classroom have completed the assessment and all materials have been collected by the teacher.

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Learning Resources/Textbook(s): All learning resources, both print and digital, are meant to support and enhance the student learning experience of this class. Below are the names of the textbooks and websites that will be used in this course. Some of the web-based resources require parent permission per federal regulations. Federal laws that guide parent permission requirements are as follows:

- Children’s Internet Protection Act (CIPA): The school is required by CIPA to have technology measures and policies in place that protect students from harmful materials including those that are obscene and pornographic. Any harmful content contained within inappropriate sites will be blocked. <http://fcc.gov/cgb/consumerfacts/cipa.html>
- Children’s Online Privacy Protection Act (COPPA): COPPA applies to commercial companies and limits their ability to collect personal information from children under 13years of age. No personal student information is collected for commercial purposes. <https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions-0>
- Family Educational Rights and Privacy Act (FERPA): FERPA protects the privacy of student education records and gives parents the right to review records. Under FERPA, schools may disclose directory information in certain circumstances. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa>

Please review the resource list. Each website related to the curriculum resources is provided along with their privacy policies. Should you have any questions regarding these resources immediately contact the course teacher via email or phone.

Name of Resource*	Digital	Privacy Policy
Physics for Scientists & Engineers - Cengage (2014)	AP Physics Cengage/NGLsync	Privacy
WebAssign	WebAssign	Privacy
AP Classroom	My AP Login – College Board	Privacy Center
OpenStax	Algebra-based College Physics	Terms of Service
Georgia Virtual School	AP Physics C Mechanics	Home
Discovery Education	Classlink Access SP1-SP6	Discovery Media
NewsELA Physics	Classlink Access CLEVER	NewsELA Privacy Policy
CK-12 FlexBook: Physics	Classlink Access CLEVER	CK-12 Terms of Use
Georgia Public Broadcasting Streaming Inquiry Labs	GPB Chemistry & Physics	GPB

* The following resources are county approved. These resources may vary by school due to sequencing, pacing, curriculum design, and/or individual needs of students.

Parent Initial for Approval	Name of Resource	Website	Privacy Policy
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<i>Please Initial Electronically in the syllabus signature page</i>	PIVOT Interactives	Pivot Interactives	Privacy Policy
	Perusall	https://perusall.com	Privacy Policy
	Parlay	https://parlayideas.com	Privacy Policy (1)

**** The following resources are web-based resources that require parent permission. By signing the syllabus, the parent is approving these resources. Should you have any questions regarding any of these classroom resources, please contact your student's teacher via email.**

Science Department Behavior (Late Work) Policy:

- 1st infraction: verbal warning
- 2nd infraction: parent contact
- 3rd and 4th infractions: teacher detention (assigned Lunch & Learn)
- 5th infraction: office referral (assigned Saturday LASSO session or Friday Night School)

Course Pacing:

Semester 1:

Unit 1: Fluid Statics and Dynamics - 4.5 weeks
 Unit 2: Thermodynamics – 5 weeks
 Unit 3: Electrostatics – 4.5 weeks
 Unit 4: Electric Circuits – 3 weeks

Semester 2:

Unit 5: Magnetism and Electromagnetic Induction – 3 weeks
 Unit 6: Light and Geometric Optics – 4 weeks
 Unit 7: Interference and Physical Optics – 3 weeks
 Unit 8: Quantum Mechanics- 2.5 weeks
 Unit 9: Nuclear Physics– 3 weeks
 AP Exam Review: 1 week
 Final Project: 2 weeks