

Course Name	AP Physics 1	Course Codes	40.0831001-1 AP PHYSICS A (Fall) 40.0832002-1 AP PHYSICS B (Spring)
School Name	Lakeside High School	Teacher Name	Mr. Malik
School Phone Number	678-874-6702 <i>Malik vmail: 6788746891</i>	Teacher Email	Naoman_F_Malik@dekalbschoolsga.org
School Website	http://www.lakesidehs.dekalb.k12.ga.us	Teacher Website *	http://www.lakesidehs.dekalb.k12.ga.us/MrMalik.aspx

* Mr. Malik will utilize Office 365 for most downloads, email updates, announcements, and class discussion purposes, accessible to all students. The teacher website above will explain many details about this and other class info.

Curriculum Overview A two-semester course in algebra-based physics for prospective science and engineering majors; this inquiry-based, lab-oriented course emphasizes experimental work, conceptual understanding, scientific practices, and problem solving (& can give successful students a year of college credit). The student will learn to: apply concepts of speed, velocity and acceleration to describe the linear motion of objects; apply Newton's Laws of motion to the study of objects' movement and interactions; apply the mathematical concept of vectors to their physical quantities; apply the concepts of momentum and energy and their conservation to the behavior of objects or systems; analyze the cause and universal effects of the force of gravity; analyze rotational and circular motion, relating them to centripetal force and torque; analyze oscillatory and simple harmonic motion, understanding how it relates to wave behavior; apply principles of wave behavior to sound and other mechanical waves; and design, build, and quantify & describe various properties of simple DC resistor-based circuits.

The College Board designates the following as **Big Ideas**:

1. Objects and systems have properties such as mass and charge. Systems may have internal structure.
2. Fields existing in space can be used to explain interactions.
3. The interactions of an object with other objects can be described by forces.
4. Interactions between systems can result in changes in those systems.
5. Changes that occur as a result of interactions are constrained by conservation laws.
6. Waves can transfer energy and momentum from one location to another without the permanent transfer of mass and serve as a mathematical model for the description of other phenomena.

The following are the **Science Practices**. The student can:

1. Use representations and models to communicate scientific phenomena and solve scientific problems;
2. Use mathematics appropriately;
3. Engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course;
4. Plan and implement data analysis and evaluation of evidence;
5. Work with scientific explanations and theories; and
6. Connect and relate knowledge across various scales, concepts, and representations in and across domains.

Source: *The College Board 2015*

Course Outline : **

(Both Fall and Spring Semester Topics below...)

Unit 1 The Science of Physics	Unit 9 Rotational Kinematics
Unit 2 Kinematics (the study of motion) in 1D	Unit 10 Rotational Dynamics, Torque
Unit 3 2D Kinematics / Vectors	Unit 11 Angular Momentum & Rotational Energy
Unit 4 Dynamics: Newton's laws of motion	Unit 12 Oscillations & Simple Harmonic Motion
Unit 5 Momentum and its Conservation (linear)	Unit 13 Wave Behavior
Unit 6 Work and Power	Unit 14 Mechanical Waves & Sound (Acoustics)
Unit 7 Energy and its Conservation	Unit 15 Electrostatics / Electric Forces
Unit 8 Circular Motion and Universal Gravitation	Unit 16 Circuits, DC with resistors

** The teacher reserves the right to change or adjust any section of this syllabus during semester to more adequately meet the needs of the class and students. The full class calendar will be updated regularly and kept on Office 365. Additionally, information regarding laboratory investigations/activities (which are emphasized strongly by the College Board as part of this course) will be found there, along with a course breakdown document of standards by unit.

BOARD-APPROVED INSTRUCTIONAL MATERIALS

Textbook Title	Giancoli, D.C. <i>Physics: Principles with Applications</i> . Upper Saddle River, NJ: Pearson Education, 2005 (6 th ed.)
ISBN	978-0131846616
Replacement Cost	\$118.00
Online book and/or resources	See Mr. Malik's website for online resources.
Online student access code	Use Office 365 with DeKalb County system student password to access online materials and resources. Details on Mr. Malik's website.

GRADING SYSTEM: The DeKalb County School District believes that the most important assessment of student learning shall be conducted by the teachers as they observe and evaluate students in the context of ongoing classroom instruction. A variety of approaches, methodologies, and resources shall be used to deliver educational services and to maximize each student's opportunity to succeed. Teachers shall evaluate student progress, report grades that represent the student's academic achievement, and communicate official academic progress to students and parents in a timely manner through the electronic grading portal. **See Board Policy IHA.**

GRADING CATEGORIES	*GRADE PROTOCOL
- Pre-Assessment – 0%	A 90 – 100 ~P (pass)
- Assessment During Learning – 25%	B 80 – 89
- Guided, Independent, or Group Practice – 45%	C 71 – 79
- Summative Assessment or Assessment of Learning – 30%	D 70
	F Below 70 ~F (fail)

Four Components	Sub-Categories	Main	Sub†	Comments
Pre-Assessments Prior to Learning		0%		<i>These types of assessments are known as Formative Assessments</i>
	Formal or Informal Pre-Assessments		0%	<i>Includes any pre-tests, such as SLO and force concepts</i>
Assessments During Learning		25%		<i>Lab Category</i>
	Skills Assessment (Warm-Up)		10%	<i>Includes packet/booklet check</i>
	Quiz		5%	<i>Lab quiz included here</i>
	Projects		10%	<i>Includes Labs / Lab Reports</i>
Guided, Indep., or Group Practice		45%		<i>Class work , HW, Practice Tests/ Quizzes, & Optional Project</i>
	Classwork		5%	<i>"Participation" + turned in work</i>
	Project or Performance		20%	<i>Semester Project grade; practice AP tests/quizzes</i>
	Homework		20%	
Summative Assessments or Assessments of Learning		30%		<i>Unit / Chapter Tests</i>
	Formal Post-Assessment Test		25%	<i>Unit Tests</i>
	Culminating Project or Performance		0%	<i>N/A</i>
	Final or Culminating Exam		5%	
TOTAL		100%	100%	<i>† The subcategory % breakdown are rough estimates only</i>

DISTRICT EXPECTATIONS FOR SUCCESS	
STUDENT PROGRESS	Semester progress reports shall be issued four and a half, nine and thirteen and a half weeks into each semester. The progress of students shall be evaluated frequently and plans shall be generated to remediate deficiencies as they are discovered. Plans shall include appropriate interventions designed to meet the needs of the students. See Board Policy IH.
ACADEMIC INTEGRITY	Students will not engage in an act of academic dishonesty including, but not limited to, cheating, providing false information, falsifying school records, forging signatures, or using an unauthorized computer user ID or password. See the Code of Student Conduct - Student Rights and Responsibilities and Character Development Handbook.
HOMEWORK	Homework assignments should be meaningful and should be an application or adaptation of a classroom experience. Homework is at all times an extension of the teaching/learning experience. It should be considered the possession of the student and should be collected, evaluated and returned to the students. See Board Policy IHB.

MAKE-UP WORK DUE TO ABSENCES	When a student is absent because of a legal reason as defined by Georgia law or when the absence is apparently beyond the control of the student, the student shall be given an opportunity to earn grade(s) for those days absent. Make-up work must be completed within the designated time allotted. See Board Policy IHEA.
SCHOOL EXPECTATIONS FOR SUCCESS	
CLASSROOM EXPECTATIONS	Students should be familiar with and confirm to the behavior expectations of Dekalb County Schools and Lakeside High School. Classroom Rules: 1. Display Academic Integrity. 2. Be prepared to learn. 3. Respect yourself and others. 4. Exhibit behavior conducive to the learning process. 5. Follow all Lakeside High School and DeKalb County rules. Please remember the key points--- attend, participate, study, be prompt, be alert, be considerate, and be careful. Most important KEEP a good attitude about what you are doing! You can develop an appetite for learning about the Physical Sciences (Chemistry and Physics).
MATERIALS AND SUPPLIES	Each student will bring the following to class daily: textbook, lab and class notebook, paper, pens (blue or black ink only) and/or pencils, and a calculator with trig functions. (A calculator and lined notebook are required for this class.)
EXTRA HELP	Tutorial Days: Tuesdays, Thursdays -- Unless otherwise indicated Tutorial Hours: 7:30 – 7:55am & 3:15 – 4:00pm
PARENT AS PARTNERS	Students are encouraged to write assignments in their notebooks and it would be a wonderful reinforcement if you would check that they wrote down their assignments. Please feel free to email me if you have any questions or comments about your child's performance.

PLEASE SIGN BELOW AND RETURN (This is a graded assignment.)

I have read and reviewed the syllabus.

Date ___ / ___ / 2016

Print Student Name _____ Print Parent/Guardian Name _____

Student Signature _____ Parent/Guardian Signature _____

Additional information to support continued contact:

Information	Parent/Guardian
Day Time Phone Number	
Cellular Phone Number	
Home Phone Number	
Email Address (contact info for Mr. Malik's files)*	

* **Parents:** If you would like to receive **periodic email updates** about the class (i.e., newsletter), please *also fill out* the short **online form** by clicking the *QR code* here from your mobile device (or see reverse...):



OR visit Mr. Malik's webpage at <http://www.lakesidehs.dekalb.k12.ga.us/MrMalik.aspx> and click on the email signup link.



I **have completed** the **online** form.

If you **cannot fill out the form** online but would still like to receive the emails, please make sure your email address below signature is legibly filled in and check this box.

or... _____

I do **not want to receive the emails**, or I do **not** currently have an email address. **Parent Initials:** _____

Additional info about this class can be found on the website, specifically under the "General Info" page.