

Regents Physics 9 - Course Information – September 2021

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Course	4030 REGENTS PHYSICS 9; 7 1/2 periods per week (1.00 Physical Science Credit / Weight 1.00)																		
Textbook	Zitzewitz et.al, <i>Physics-Principles and Problems</i> , Glencoe, 1999 edition Fullerton, D. APlusPhysics: Your Guide to Regents Physics Essentials Online ed.																		
Review Book	Cook, H. <i>Physics: the Physical Setting 201x (Prentice Hall Brief Review for the New York Regents Exam)</i> (Available from School Bookstore)																		
Major Topics	<table border="1"> <tr> <td>Introduction</td><td>Physics Tool Kit – scientific process, measurements, math essentials</td></tr> <tr> <td>Kinematics</td><td>Describing Motion – 1-D & 2-D, free fall, projectiles, vectors</td></tr> <tr> <td>Dynamics</td><td>Affecting motion with forces – Newton’s Laws, applications of Newton’s Laws, friction, gravity, equilibrium</td></tr> <tr> <td>Circular Motion</td><td>Centripetal force and acceleration, Universal Gravitation</td></tr> <tr> <td>Momentum</td><td>Momentum, impulse, conservation of momentum, collisions</td></tr> <tr> <td>Energy</td><td>Energy, kinetic, potential, elastic, work, conservation of energy, power</td></tr> <tr> <td>Electricity & Magnetism</td><td>Electrostatics, electric fields, current, series and parallel circuits, magnetism, EM induction</td></tr> <tr> <td>Waves & Optics</td><td>Wave Motion, mechanical, sound, light, properties, behaviors, refraction, electromagnetic spectrum</td></tr> <tr> <td>Modern Physics</td><td>Wave-particle duality, quantum mechanical model of the atom, mass-energy conversion, Standard Model of Particle Physics</td></tr> </table>	Introduction	Physics Tool Kit – scientific process, measurements, math essentials	Kinematics	Describing Motion – 1-D & 2-D, free fall, projectiles, vectors	Dynamics	Affecting motion with forces – Newton’s Laws, applications of Newton’s Laws, friction, gravity, equilibrium	Circular Motion	Centripetal force and acceleration, Universal Gravitation	Momentum	Momentum, impulse, conservation of momentum, collisions	Energy	Energy, kinetic, potential, elastic, work, conservation of energy, power	Electricity & Magnetism	Electrostatics, electric fields, current, series and parallel circuits, magnetism, EM induction	Waves & Optics	Wave Motion, mechanical, sound, light, properties, behaviors, refraction, electromagnetic spectrum	Modern Physics	Wave-particle duality, quantum mechanical model of the atom, mass-energy conversion, Standard Model of Particle Physics
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Final Exam	NYS Regents Examination: Physical Setting/Physics																		
Laboratory Requirement	Approximately 2 periods per week will be spent conducting hands-on laboratory activities that will require subsequent written Lab Reports. * Please note that <u>IN ORDER TO BE ELIGIBLE TO TAKE THE REGENTS EXAMINATION IN PHYSICS, A STUDENT MUST SUBMIT SATISFACTORY REPORTS REPRESENTING A MINIMUM OF 1200 MINUTES OF LABORATORY WORK.</u> Graded lab reports will be kept in a file in the classroom, and may not be removed from the room. NYS requires that lab reports remain on file by the school for NYS to review after the course is over. • Lab Report Format Requirements will be provided separately. • 10% will be deducted for each school day that a lab is handed in late. Any lab handed in more than 3 days late can receive a maximum grade of 65%. • If you fail a lab report (<65%), it will be handed back to you for revision. Within five (5) school days of receiving back a failing lab, you must make corrections, or if necessary re-write the lab report. Resubmitted “passing labs” can earn a maximum grade of 65%. Labs resubmitted after 5 days may still earn lab time, but will receive																		

	a maximum grade of 50% in the current marking period, or 0% if submitted for the next marking period.
Grading - Approximate Weightings	A total points system will be used for calculating grades and will be posted on the Infinite Campus Gradebook. Approximate weightings are as follows: Tests, Projects: 35% Quizzes: 15% - 20% Labs: 30% Homework: 10% Class Participation: 5% - 10%
Homework	Homework will be assigned a regular basis. It is generally posted on Schoology. In order to receive HW credit, show your work, including all calculations.
Grades Reports	Grades will be recorded and reported on Infinite Campus .
Supplies	Supplies required to bring to class every day: • Notebook with full size pages. • Folder for handouts (or a 3-ring binder) • Scientific calculator (TI-30XIIS or Graphing Calculator is recommended) • Pen, pencil, and eraser • Physics Reference Table (School Supplied) • Metric ruler (30 cm) Supplies required at home: • Textbook - supplied by school. • Protractor (6 inch is good.) • Graph paper: 4, 5 or 10 squares/inch. (You may choose to simply download one sheet at a time as needed from a website such as http://incompetech.com/graphpaper/) During the COVID 19 Pandemic you will also need: • Chromebook (school-supplied), laptop or tablet computer that you bring to school on the days you come in.
Class Participation Expectations	Every student is an important member of our class learning community. All students are expected to consistently attend class prepared to learn, adhere to classroom rules, and actively engage in physics learning activities. The use of cell phones and other electronic distractions is not permitted in class, unless a student receives specific permission to use their personal electronic device as part of a learning activity. Most importantly, come prepared to enjoy learning an incredibly wonderful science and to ask questions!
Classroom Rules	1. Bring all supplies to class every day. 2. Be in your assigned seat when the bell rings. 3. Follow directions from the teacher the first time they are given. 4. Be respectful of yourself, your fellow students, your teacher, and your school. 5. Leave the room quietly when your teacher dismisses you.
Safety	It is essential that students adhere to the Laboratory Safety Procedures provided and conduct themselves in a responsible manner in the science room.
Office hours	I am generally available for extra help Tue - Thurs after school in Room 225 or via Google Meet until 3:15pm and by appointment.