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Rm. 138

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TEXT: Glencoe – McGraw Hill *Physics: Principles and Problems* (Cost \$71.00) ISBN: 978-0-07-880721-3

COURSE DESCRIPTION:

The Physics I course is designed to prepare the student for a college level physics course, and for those who wish to pursue a science related major. This course is designed as a survey course. It covers a number of topics in physics including: mechanics, thermodynamics, electricity and magnetism, waves, light and optics, and modern physics. The fall semester will be spent studying mechanics and thermodynamics.

Timeline and Objectives for Fall Semester:

CHAPTER		TIME LINE	Tentative Test Date
Chapter 1:	A Physics Toolkit (UNIT ZERO)	10 days	August 19 th , 2016 - Friday
Chapter 2:	Representing Motion	12 days	Sept 7 th , 2016 - Wednesday
Chapter 3:	Accelerated Motion (UNIT 1)		
Chapter 4:	Forces and the Laws of Motion	15 days	Sept 28 th , 2016 - Wednesday
Chapter 5:	Forces in Two Dimensions (UNIT 2)		
Chapter 6:	Motion in Two Dimensions	15 days	Oct 21 st , 2016 - Friday
Chapter 7:	Gravitation (UNIT 3)		
Chapter 8:	Rotational Motion		
Chapter 10:	Energy, Work, and Simple Machines	10 days	Nov 4 th , 2016 - Friday
Chapter 11:	Energy and it's Conservation (UNIT 4)		
Chapter 9:	Momentum and it's Conservation (UNIT 5)	11 days	Nov 29 th , 2016 - Tuesday
Chapter 12:	Thermal Energy (UNIT 6)	11 days	Dec 14 th , 2016 - Wednesday

The specific Georgia Performance Standards that will be addressed in physics this semester are as follows:

SP1. Students will analyze the relationships between force, mass, gravity and the motion of objects.

SP3. Students will evaluate the forms and transformations of energy.

GSGHT OBJECTIVES: The specific objectives on the Georgia High School Graduation Test (GSGHT) covered for this quarter of this course are as follows. The student will:

- PS.1 relate and use terms and processes employed in scientific research.
- PS.34 define the research problem.
- PS.35 select and use appropriate reference sources and retrieval systems.
- PS.36 analyze, evaluate, and present information.
- PS.17 describe the concept of force.
- PS.20 describe the concept of gravity and the effect of gravity on a falling object, and differentiate between weight and mass.
- PS.21 relate motion and unbalanced forces, differentiate between measured and calculated speed, velocity, and acceleration, and identify and demonstrate Newton's three laws of motion.
- PS.18 distinguish between and calculate work and power.
- PS.19 explain and demonstrate how machines enable one to do work.
- PS.14 demonstrate implications of energy conservation.
- PS.15 demonstrate an understanding of the interaction of matter and energy, and analyze the nature of heat
- PS.25 identifies properties of waves, wave motion, and describes the nature of sound.
- PS.23 describes how waves reflect and refract.
- PS.24 analyze electromagnetic waves and describe how light interacts with optical devices.

Timeline and Objectives Spring Semester:

CHAPTER		TIME LINE	Tentative Test Date
Chapter 30:	Atomic and Nuclear Physics (UNIT 1s)	11 days	Jan 24 th , 2017-Tuesday
Chapter 20-21	Electric Forces and Fields (UNIT 2s)	10 days	Feb 7 th , 2017-Tuesday
Chapter 22-23	Electric Current and Circuits (UNIT 3s)	15 days	March 2 nd , 2017- Thursday
Chapter 24-26	Magnetism and Induction (UNIT 4s)	12 days	March 22 nd , 2017- Wednesday
Chapter 14-15	Vibration, Waves, and Sound (UNIT 5s)	14 days	April 18 th , 2017 - Tuesday
Chapter 16	Fundamentals of Electromagnetic Radiation(UNIT6s)	10 days	May 2 nd , 2017 - Tuesday
Chapter 17-18	Reflection, Refraction, Mirrors, and Lenses (UNIT 7s)	12 days	May 18 th or 19 th 2015 – Thursday / Friday

GHS GT OBJECTIVES:

The specific objectives on the Georgia High School Graduation Test (GHS GT) covered for this semester is as follows.

The student will:

- PS.1 relate and use terms and processes employed in scientific research.
- PS.34 define the research problem.
- PS.35 select and use appropriate reference sources and retrieval systems.
- PS.36 analyze, evaluate, and present information.
- PS.7 Interpret the consequences of radioactivity
- PS.23 Demonstrate how waves interact with matter
- PS.24 Analyze Electromagnetic Waves
- PS.25 Describe the nature of sound
- PS.27 Describe various methods for generating electricity
- PS.28 Differentiate between an insulator and a conductor
- PS.29 Describe electrical circuits and demonstrates safe use of electrical devices
- PS.30 Discriminate relationships among units in electrical circuits
- PS.31 Analyze relationship between an electric field and its magnetic field
- PS.36 Analyze, evaluate, and present information

This year the state of Georgia has begun to implement new standards called Common Core standards. These include literacy (reading and writing) standards for the sciences. This will mean an intentional effort to improve both your reading and writing skills particularly in science and scientific thinking. This link will take you to them:

https://www.georgiastandards.org/Common-Core/Documents/CCGPS_11-12_SS-Science-Tech-Literacy_Standards.pdf

CLASSROOM RULES

1. Come to class on time, prepared, and ready to learn.
2. Bring all needed materials to class.
3. Be in your seat and ready to work when the bell rings.
4. Respect and be polite to all people. Treat others as you would like to be treated.
5. Listen and stay seated when someone is talking.
6. Unacceptable behavior during lab or class activity or failure to clean up after a lab or activity will result in a grade of ZERO for that activity.
7. Food and canned/bottled drinks are not to be consumed in the classroom.
8. Respect other people's property.
9. Obey school rules.

CLASSROOM PROCEDURES

Tardy Students: Students arriving tardy to first period by more than 10 minutes must check-in through the Attendance Office, then report to class. Students tardy to periods two through six are to report directly to class. Below are the consequences for repeated tardiness to a particular class in a six week grading period. You are to be in your seat when the bell rings.

- First Tardy – verbal warning.
- Second Tardy – one day private detention with teacher.
- Third Tardy - one day public detention.
- Fourth Tardy - two days public detention.
- Fifth Tardy - one day Saturday School.
- Sixth Tardy's and beyond – multiple days of Saturday School



Leaving the Room: Students must use the time in between classes to go to their lockers, use the phone, go to the restroom, etc. Students are expected to use the 6 minutes between periods to use the restroom, go to their lockers and take care of any other personal needs.

Student Participation: Students are expected to pay attention and contribute to class activities. This includes taking notes. Do not sit in the class and try to soak up what I have to say. Tell me what you think, let me know you are alive, and most important do not be afraid to ask “why”. Just because I say something doesn't always mean it is true or right. If something does not look right, point it out to me then. Good participation can be very effective towards a borderline grade.



Required Supplies: 3-ring binder, textbook, paper, pencil, Calculator, colored pencils (12), ruler, protractor, blue or black whiteboard marker, high-lighter.

Honor Code: As explained in the student handbook, cheating is defined as “the giving or receiving, in any form, information relating to a gradable experience.” Violations of the honor code will result in a zero for the assignment, plus an honor code violation form placed in the student's disciplinary file. Read the handbook carefully to fully understand what constitutes a violation.

Seating Chart: Every student will be assigned a place to sit in the class. Assigned seats may be changed by the teacher, if the need arises. Exceptions will be made if the parent writes a note to the teacher, explaining the students special needs. The seating chart for each class will be posted on the bulletin board.

Grading Procedure:	Final Exam: 15%	Homework (WebAssign): 10%	Quizzes: 10%
	Classwork: (Labs, worksheets, Writing assignments) 20%		Tests: 45%

Unit tests will be cumulative. This means that each unit test will cover the current material, as well as material from the previous two units. (roughly 10-20% of each test will cover previously learned material). Class Notebooks should be maintained and should include class notes, graded and ungraded homework / classwork. Classwork and homework will be graded for completeness and/or accuracy dependent upon the assignment. Students will be responsible for all work, even if it is not taken up for a grade immediately.

We will also use an online, homework service (WebAssign) that will cost \$12/student.

Late Work Policy: Late work will receive a 20% penalty for each day the assignment is late.

Grading Scale: A: 90-100	B: 80-90	C: 70-80	F: 0-69
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Recovery Policy: Opportunities designed to allow students to recover from a significant decline (two letter grades) in performance or a low / failing *cumulative* grade will be allowed when *all* work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including acceptable attendance. Students who have not attempted to complete *all* course requirements are not eligible for recovery.

Provision for Improving Grades (formerly known as the “recovery” policy) – Updated from Board Policy Docs – Aug 2011: Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance. Students should contact the teacher concerning recovery opportunities. Teachers are expected to establish a reasonable time period for recovery work to be completed during the semester. All recovery work must be directly related to course objectives and must be completed ten school days prior to the end of the semester. Students must contact the teacher concerning recovery opportunities at the time his/her grade falls below 74. Recovery work must be completed within ten school days prior to the end of the semester. The nature and type of recovery assignment is given at the discretion of the teacher.

Student Responsibility: Be respectful to me and my things and equipment. Also be respectful to your fellow classmates. If you act like mature adults, you will be treated as such. Correction of student misconduct within a given class period will follow the following procedure:

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| 1st Occurrence | Verbal Warning |
| 2nd Occurrence | Private Detention (15 min) and Parent Contact |
| 3rd Occurrence | Parent contact and 30 minute private detention |
| 4th Occurrence | Write-up to Administrator & Parent Contact |

NOTE: Blatant defiance of classroom rules or teacher instructions/authority will result in an immediate Administrative Referral.

Progress Reports: The students will be informed about their progress at the end of each chapter. A hard copy of their progress will be issued to the student, only if requested by his/her parents. It is recommended that parents sign up for Parent Connect at the school , to keep on top of their children’s academic and attendance performance.

End of Period: I will let the students know when they may begin putting materials away. No student is allowed to get out of their seats before the bell rings.

Parent Communication: Home Access Center allows parents/guardians to access their children’s school information via the Internet.

MAKE-UP WORK POLICY:

From an excused absence: Make-up work should be obtained on the day the student returns to school. Students have the same number of days to complete make-up work as the absence. This does not include the day of return. Tests and labs will be made-up before school as scheduled and within a reasonable time period from the date of the absence.

From an unexcused absence: Make-up work from an unexcused absence is subject to the above requirements. In addition, the maximum grade for make-up work due to an unexcused absence is 80. Please refer to the Northview High School Student/Parent Handbook, 2014-2015 for more detailed information regarding make-up work policies.

