**Course Description:**

***Goals / Objectives:***

The **Physics First** course deals with the relationships of real world actions and the theory of mathematical interpretation connected with them. The concepts studied will have applications in surveying, navigation, engineering, physics, chemistry, and more... Students will learn to model real-life problems mathematically by utilizing various mathematical functions and formulae as necessary.

The **Physics First** course will also employ computer technology to access assisted instructional units for enrichment and to research, analyze, and calculate various problems that address other disciplines in both the natural and physical sciences. Students who complete the **Physics First** course shall be prepared to continue their studies with chemistry, biology, and algebra based mathematics.

***Modes of Assessment:***

**Written Tests:**

Written tests will be administered periodically in order to assess the students’ knowledge of topics within Physics.

**Homework Assignments:**

The importance of homework is to be emphasized in this course. Homework is given on a regular basis and students are to complete the assignments in a thorough manner. Homework is given to develop skills taught in class and benefits the student, and is therefore not optional.

**Projects:**

In order to fully implement the concept of Physics, application is essential. Therefore, students will be expected to perform in-depth research and create/engage in projects on topics assigned. This component of the course will be conducted on an individual or group basis.

**Class Work/Activities:**

Students are expected to actively and respectfully participate in all activities and assignments. Courtesy, consistency and work ethic are major factors in grading these activities. No tolerance will be extended for misbehavior and disruption as ALL students are hindered by a few off task individuals.

**Oral Presentations:**

Students may be expected to present topics that will adequately demonstrate their understanding of physics concepts.

***Textbook:***

**Not Applicable Class Website:** [**math-science.weebly.com**](math-science.weebly.com)

***Intended Course Outline:***

To view a complete topical overview, click the link to see the [Class Webpage](http://math-science.weebly.com/physics-page-unit-1.html). We will begin the year with a “**Review and Preview”** of previous mathematical concepts.

**All** students enrolled in the **Physics First Summer Course** will study the following:

1. Use trigonometry functions to solve right triangle problems.

2. Solve trigonometric equations with Vectors.

3. Graph various algebraic functions.

4. Use interactive activities to analyze and understand physical relationships.

5. Gather, organize, graph, display and explain data.

6. Use and understand Newton’s Laws of Motion.

7. Use and complete internet based lab activities IN CLASS.

8. Explore difficult concepts outside of class using web based resources.

***Grading Scale:***

A = 90 to 100%

B = 80 to 89%

C = 70 to 79%

D = 60 to 69%

F = 0 to 59%

***Course Evaluations:***

Averages for each quarter shall be determined as follows:

**Class work – 40%**

* Labs, Projects, Independent Work, Research Assignments, Presentations

**Assessments – 35%**

* Quizzes, Tests, Final Exams, Benchmarks, EOC exams, AP exams

**Participation – 15%**

* Do Now, Journals, Discussion Posts, Exit Slips, Leadership Roles, Attendance

**Homework – 10%**

* As Assigned (No Exceptions Granted)

**Summer Course Outline:**

**Week 1:**

*Functional understandings, compound units, unit analysis, vector notation*

**Week 2:**

***Graphs****: time, velocity, acceleration; Friction Lab 1, Friction Lab 2*

**Week 3:**

*Projectile Motion Lab*

**Week 4:**

***Newton’s Law’s****: 1st, 2nd, 3rd; Kinematics.***Classroom Rules:**

* **WE WILL RESPECT ONE ANOTHER**
  + Course language is unacceptable
  + Inappropriate physical contact is unacceptable
* **WE WILL BE PUNCTUAL**
  + Be in room and on task on time everyday
* **WE WILL BE PREPARED**
  + Bring text, paper, pencil and eraser everyday
* **WE WILL BE PROFESSIONAL**
  + Stay seated and working
  + Quietly raise hands for help
  + Maintain quiet room for everyone’s benefit
  + Dress according to school codes
  + Damage or destroy nothing
  + Do not leave seats or room until officially dismissed

**Consequences:**

* VERBAL WARNING
* LOSS OF BONUS POINTS
* REFERRAL AND PARENTAL NOTIFICATION
* PRINCIPAL DISCIPLINARY ACTION(S)
* *Consequences may not always occur in this order. Disturbances will result in appropriate consequences*.

**Micro Economy Bonus and Demerit Designations:**

**Daily Participation: 10 points** *(Must be present to gain these points)*

**Bonus: Fines:**

Exceptionality +2 Insubordination -2 per occurrence

Work Ethic +2 Tardiness -2 per occurrence

Group Value +2 Wardrobe Violation -1 per occurrence

***Summer School Attendance Policy:***

**Absent 3 days –** Summarily dropped from class with no credit granted.

**Tardy –** 3 tardies = 1 Absence

**Abusive Tardiness -** *(Tardiness over 10 minutes result in referral to office for disciplinary discussion with Principal)*

***Summer School Behavior Policy:***

**Minor Behavioral Infraction –** Redirect/discussion

**Minor Insubordination (initial) –** Redirect/discussion

**Major Insubordination –** Ejection from class and potentially summer school

***Summer school is a voluntary credit recovery program...If you DO NOT comply and engage fully, or disrupt the learning opportunities of your peers, then you will be formally asked to leave the program.***

**Parents:**

If you have any questions or concerns about your student’s achievement, or if there is anything that I should know that might help me to teach your student, please feel free to contact me [gregory.taylor@slps.org](mailto:gregory.taylor@slps.org) throughout the school year. Electronic copy of the syllabus is available at: <http://math-science.weebly.com/physics-syllabus.html>

I am here to prepare your child for college and/or the adult working environment. Good citizenship is highly emphasizes and factored in the grades using cooperative activities, peer and self assessments. Whether this is a freshman or up to a senior level course, citizenship and work ethic shall be emphasized and expected. Any help you might offer will be greatly appreciated and utilized. Thank you.

Finally there is an expectation that you will assume the responsibility of maintaining a current phone number with me, or the main office, to ensure my ability to contact you with issues of concern, or excellence, as necessary throughout the year.

I have read and understand the rules and regulations for Dr. Taylor’s class:

***Parent phone for immediate discretionary contact: ( ) -***

Parent Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_

By signing above ALL parties agree to abide by the technology acceptable usage criteria for both the SLPS district and Carnahan HSOF. Any infraction can result in the above student losing ALL technology privileges for the remainder of the school year.

Returning this portion of the syllabus document completed and signed in a prompt manner is the ***first assignment*** of the year and ***does carry point value*** for your student grade. Failure to complete this will result in a PAN *(parental appearance notification).*

Thank you for all of your support.

Gregory L. Taylor, Ed.D.