“Insanity is doing the same thing, over and over again, but expecting different results.”
— Albert Einstein

STUDENT PERFORMANCE OBJECTIVES:

1. To develop 21st century learning skills which will enable you to understand the concepts of physics and to apply them to practical everyday situations.
2. To demonstrate creative thinking on and apply the scientific method to assignments, projects and labs.
3. To practice responsible and safe laboratory techniques.
4. To work with your classmates and teacher to build a safe, supportive and effective learning environment.

STANDARDS FOR OUR LEARNING ENVIRONMENTS

1. Be ready to go before the tardy bell rings with all the necessary materials.
2. Clean up after yourself and help others. You are responsible for keeping your assigned areas clean and putting back materials in their proper places before leaving the classroom.
3. At the end of class remain seated. DO NOT line up at the door!
4. Honor our time together. During class you are expected to focus on PHYSICS. If you are all caught up with your class work, ask permission before having other materials (magazines, math books, cliff notes, etc.) out and working on them.
5. Electronic items such as calculators, cell phones, iPads, iPods, eReaders, and laptops are welcome, provided they are being used to further your Physics education.
6. In Class and online discussions are opportunities to share & learn; so please show equal courtesy to everyone and follow proper etiquette.
7. You will learn the lab safety rules and abide by them; infractions are cause enough to be removed from the class.
8. The MHS Academic Honor Code and HBUHSD Acceptable Use Policy are to be followed at all times.

The class will work best when the students work together as a team instead of competitors. My job, as teacher, is to "coach" you to be as successful as possible. But, success will come only as the result of consistent and diligent effort on each person's part.
This is an outline of the Conceptual Physics course as taught at Marina High School. Included are appropriate chapters in Conceptual Physics, by Paul Hewitt.

PreRequiste: This course has a strong conceptual base, dealing with the applications of physics in our daily lives. However, it will deal with mathematical concepts through basic trigonometry and second year algebra. Students should have completed geometry successfully to get the maximum benefit from the course.

I. Motion & Forces
   A. Linear Motion (Ch. 2)
   B. Newton’s Laws of Motion (Ch. 3, 4, 5)
   C. Vectors- Motion & Forces in 2 Dimensions (Ch. 6, 13)

II. Conservation of Momentum & Energy
   A. Momentum (Ch. 7)
   B. Energy (Ch. 8)

III. Heat & Thermodynamics
   A. Temperature, Heat & Expansion (Ch 21)
   B. Thermodynamics (Ch 24)

IV. Electric and Magnetic Phenomena (CASTLE)
   A. Charges, Fields and Potentials (Ch. 32, 33)
   B. Electrical Circuits & Current (Ch. 34, 35)
   C. Magnetism (Ch. 36)
   D. Electromagnetic Induction (Ch. 37)

V. Waves
   A. Vibrations & Waves (Ch 25)
   B. Sound & Music (Ch 26)
   C. Light & Color (Ch 27, 28)
   D. Reflection & Refraction (Ch 29)
   E. Diffraction & Interference (Ch 31)
**Grading Policies**

“No great discovery was ever made without a bold guess.” — *Isaac Newton*

**Progress Grades:** will be posted on a regular basis in the [Canvas LMS](https://www.canvaslms.com). It is your responsibility to check your grades to see how you are doing and report any errors that may have occurred. Course grades are a combination of class participation, online assignments, learning blogs, homework, projects, quizzes, final exams, and labs. Comprehensive Final Exams will be given at the end of each semester.

**Extra Credit:** will be available in many ways, which you will find out about as the year progresses, however it may be unavailable to students with more than 3 tardies or unexcused absences and shall not exceed 3% of the total points possible in the course. You will have the opportunity to retake quizzes and resubmit assignments after you have developed and executed a mutually agreed upon improvement plan.

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**Grading Scale**

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100% - 90%</td>
</tr>
<tr>
<td>B</td>
<td>89% - 80%</td>
</tr>
<tr>
<td>C</td>
<td>79% - 70%</td>
</tr>
<tr>
<td>D</td>
<td>69% - 60%</td>
</tr>
<tr>
<td>F</td>
<td>59% - 0%</td>
</tr>
</tbody>
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### Due Dates, Late Work & Make-Ups

You are responsible for communicating with me about making up all of the below items and **NO make-up work will be given for unexcused absences without prior arrangements.**

**ASQ:** (Acquire-Summarize-Question) are due before coming to class on the date listed on Canvas. It is important for you to do these on-time so that you are prepared to contribute and learn. If you are not able to meet the due date contact me for alternative arrangements.

**Concept Developments:** The due date is always your target, but there is a 2 day grace period on these provided you are being productive in class.

**Explorations:** You may perform these up to one week after the due date. Make-Ups can be done during class-time or scheduled with the teacher as needed.

**Quizzes:** You may take, make-up or retake quizzes up to two weeks after the due date.

**Final Evaluations:** The final exam and final project will be due according to the school final examination schedule. There are no re-takes for this. If you miss a final due to an excused absence, please be ready to make-up as soon as you return to school.
Degrees & Credentials:
Leading Edge Online Teacher; Certificate through OCDE
M.A. in Teaching w/ specialization in Ed. Technology; National
University
Professional Clear, Single Subject Teaching Credential; CSULB
B.A. in Physics; CSULB
A.A. in Science & Mathematics; Golden West College

Partnerships & Collaborations:
OCDE: iPads & iPod Touch Connecting to the Curriculum (2011)
OC•STEM: Partner Award (2010)
Connected Classroom’s Technology Leadership Summit (2000)
Participant: Teach The Teachers Collaborative (2000)
Science Department Co-Chairman (1999-2000)
PHYS LAB Participant (1998)
Mentor teacher for NSF Comprehensive Conceptual Curriculum for
Physics
Laser Applications in Science Education, San Diego (1997)
Science, Technology and Society Fellow (STS) (1996)
Consultant for Mindworks: Making Scientific Concepts Come Alive
(1995)
Implementing Technology in your Classroom (1995)

Qualifications:
My Family

On Teaching...
I used to believe that to be a good teacher I needed to discover a
perfect formula that when applied everyone would pay attention,
ask critical questions, understand every word I was saying and
perform flawlessly on exams and laboratories. Looking for that
secret ingredient, I attended a PLC conference and was enamored
by something Richard DuFour said. “I teach, I test, I hope for the
best.” Oh no, this was me!

Flash Forward… I now believe that the best teacher is the best
learner. Gone are the days where I cover the material for my
students… I am here to challenge and help my students uncover
the material for themselves. I am merely in charge of designing
learning spaces that enable students to learn not only at school,
but everywhere. The tools are many, the learners are diverse, but
our mission is unwavering! We will use everything at our disposal
to discover the underlying physical principles that govern nature.
Dear Parent,

- Please take the time to read my expectations, lab safety rules and our department letter.

- Fill in the areas on the last page.

- If you have any questions please feel free to contact me via email or voicemail.

- Physics is a laboratory class that requires a large expenditure of funds for laboratory related materials and equipment therefore, we need donations of materials and funds to be used in our classroom. We are requesting a lab donation of $20 from each family (see Science donation letter). If a family is unable to do this or you have further questions regarding this, please contact me via e-mail or voice mail.

- Please make your check for the laboratory donation payable to the MHS Educational Foundation (include student name and school ID number).

- I would appreciate any additional resources that you can provide to help your son/daughter have a better experience in Physics. Some examples are to provide guest speakers, or donate any science or other supplies (AAA, AA & D Cell batteries, copier/printer paper, masking tape, steel balls, pencils, scissors, woodworking, videos, paper towels, science magazines, facial tissues, Zip lock storage bags, beakers, fishing line, string, calculators, graph paper, etc.; -).

- Thank you for your support, patience, and cooperation

Chris Long
Please return this page completed with all signatures and attach your check for the $20 lab donation.

Make check payable to MHS Educational Foundation with student name and ID. -- attach here --

Print Student Name: ___________________________________________  Period: _______

I have read the classroom expectations and safety regulations for Mr. Long’s Physics class and agree to abide by them. I will take every effort to make this a successful, exciting, productive year for me and the other students in my class.

Student Signature: ___________________________________________  Date: ____________

Print Parent Name: ____________________________________________

Home Phone #: ____________________  Work Phone #: ____________________

Parent E-mail Address: __________________________________________

Parent Signature: ____________________________________________  Date: ____________

Comments:

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