

# Williamston High School Conceptual Physics

School Year 2015-2016

Instructor: Dan Keith - Room F5

## Contact information:

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Classroom Web site [www.NeatScience.com](http://www.NeatScience.com)

## Course Description for Conceptual Physics Prerequisites: None

Conceptual Physics is a science course for students who may be college bound but will probably not be pursuing a technical career. Conceptual Physics is a physics class that will study the concepts of physics with less emphasis on math than our other physics classes.

You may be thinking right now, “Yee-ha, no math!” Actually, we use a lot of math in this class at the basic algebra level and it is the same type of math used day in and day out in class, and in most people’s regular lives. The focus of my attention will be on the concepts and principles which brilliant scientists came up with to define and explain natural processes (how and why objects behave the way they do).

Conceptual physics will be a fun class for you, especially if you are interested in how natural processes work. I believe people learn best when they are active learners; therefore, we will be doing as many activities/laboratory experiments as possible.

## Philosophy

It is my desire that every student in my classes be successful and that each student will learn as much as they can. I believe that every student has the right to work in peace, in an atmosphere that is conducive to learning, and to be treated with the same respect that I wish to be treated. If a student decides not to participate in the course work for that particular day, that student does not have the right to disturb the other students in the class who want to work.

## Directions on How to Get Help and Make-up Policy:

For additional help, make-up, etc., I am usually available before and after school in Room F5. Please get help right away before serious problems develop.

1. If you are absent, it is your responsibility to get and make up any assignments missed. **If you are present on the day before a test and absent on test day, the test must be made up on the day you return.** Homework which was due on the first day of an absence must be turned in on the day you return.
2. **Being absent for a review does not excuse you from a test**, the instruction has already been done.
3. Special arrangements will be made for longer periods of absence.
4. Lab make-up: Because of equipment and space limitations, labs must be made up within four days after the class does the lab.
5. Re-do’s and Re-tests are not a common part of this class but may be offered, at my discretion.
6. Extra credit will sometimes be allowed for students who have completed all of their work but are still in need of a “Grade Boost”. This type of work is usually quite difficult and time consuming and will be designed on an individual basis. Limited to once per semester.
7. Two Tiger Passes will be issued to each student to allow them to turn in late work for full credit. Unused passes can be exchanged for some extra credit at the end of the semester.

## Course Materials

Textbook: Conceptual Physics – By Paul Hewitt

Supplies: Bring your notebook and calculator to class every day. A three-ring binder works best but you can make up your own mind. **Spiral Binders do NOT work well in this class.**

Labs and Lab Safety: Students are expected to participate in lab activities. These activities are designed to help with content understanding and to give students the experiences needed in the processes of science investigations. Students are expected to behave in an appropriate manner and to follow the rules and expectations outlined in the **Lab Safety Contract** which each student must have completed and which must be signed by a parent or guardian. (this was part of the mandatory school forms packet)

Online Resources: I have my own domain name on the Internet [www.NeatScience.com](http://www.NeatScience.com) and I will post all class notes here as well as homework. There are also lots of helpful links, just follow the **Conceptual Physics** link.

## Behavior Expectations

- Respect the right of the other students to study and work.
- Food is not allowed (unless I give it out). Some drinks are allowed in non-lab times.
- All lab equipment should be replaced from whence it came.
- All lab materials should be handled in a safe and adult manner.
- School policies are still in effect while in this class.

Consequences will be in line with the Student Handbook

## Tardy Policy (Students should have been in their seat, and be ready for work when the bell rings)

1. Warning
2. Warning with side talk
3. Detention of first five minutes of student's lunch (does not have to match my lunch) and phone call home with email follow-up.
4. Half hour detention with phone call home and email follow-up.
5. Office Referral

## Instructions for Graded Work

### Written Work

- All written work is expected to show careful effort. Leave margins. Write legibly. Use only 8.5x11 inch white paper with clean edges.
- All paper handed in must have: Your name (first and last), date, and period in upper right corner.
- Notebook should be chronological and have the **ability to have handouts placed anywhere within the notes**. A spiral binder is not a good choice.

Homework: Most homework will be assigned from the book or will be given in class. Homework is usually expected to be completed for the next class period. Homework is an essential part of being a successful student in Conceptual Physics. If you do not actually complete the homework with your own thought processes you will probably be behind for the next bit of work.

Final Exam(s): There is a semester exam that tests your understanding of the objectives of the course based on our standards.

## Grading System

Students can see their grades daily on PowerSchool and can also see their posted grades in the classroom by their student number.

### Grading scale:

The grading scale at Williamston High School is as follows:

93 or up	= A	73-77	= C
90-92	= A-	70-72	= C-
88-89	= B+	68-69	= D+
83-87	= B	63-67	= D
80-82	= B-	60-62	= D-
78-79	= C+	59 or lower	= F

## Detailed Information about the Grading System

Semester Grade: The semester grade is determined by averaging all academic work done in the semester (85%) with a cumulative semester exam (15%).

Grading: will be done on a point scale. All points for assignments will be added together and then divided by the total to get your average. School grading policy is in effect for the 4.0 system. Parents and students should check *PowerSchool* often to keep up with grades.

Online Grading Program: Students are expected to periodically check their grades online (<http://ps.gowcs.net/public>). Grades left blank are assignments that need to be made up. Grades with a zero and a designation of "M" for missing can also be made up. The zero is being used to show you what your grade will be if you fail to make up that assignment. If the grade just contains a zero, then that is the final grade for that assignment. Occasionally, there may be an assignment that a student misses and is not required to make up. In this case, a designation of "Ex" for exempt will appear.

## Conceptual Conceptual Physics Course Goals, Content, and Big Ideas:

Linear Motion	Thermodynamics
Projectile Motion	Vibrations and Waves
Newton's First Law of Motion	Sound
Newton's Second Law of Motion	Light
Newton's Third Law of Motion	Color
Momentum	Reflection and Refraction
Energy	Lenses
Circular Motion	Diffraction and Interference
Center of Gravity	Electrostatics
Rotational Mechanics	Electric Fields and Potential
Universal Gravitation	Electric Current
Temperature, Heat, and Expansion	Electric Circuits
Heat Transfer	Magnetism
Change of Phase	Electromagnetic Induction