

## Holy Family Academy

Physics  
Course Syllabus 2017-18

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### **Course Description:**

Physics is the most basic of all studies of God's Creation. Physics includes the study of matter along with the forces that act on it. Our text for the course is God's creation. The book, Conceptual Physics published by Pearson, will give the background needed to explore concepts in the laboratory, classroom, and outside world. Students will learn by reading, experimenting, and sharing their findings with others.

### **Course outline includes:**

*Mechanics:* Newtonian mechanics, Gravitation, Relativity.

*Properties of Matter:* Atomic Nature of Matter, Solids, Liquids, Gases.

*Heat:* Temperature, Expansion, Heat Transfer, Change of Phase, Thermodynamics

*Sound and Light:* Vibrations and Waves, Reflection, Refraction, Diffraction, Interference.

*Electricity and Magnetism:* Electrostatics, Electric Fields and Potential, Electric Current, Electric Circuits, Magnetism, Electromagnetic Induction.

*Atomic and Nuclear Physics:* The Atom and the Quantum, The Atomic Nucleus and Radioactivity, Nuclear Fission and Fusion.

### **Classroom Expectations:**

Physics is not a spectator science. Students are expected to be curious, inquisitive, and supportive of their classmates. This curiosity must be nurtured with passion and preparedness

Coming to class prepared means that all reading is done, assignments are completed, formal laboratory reports and projects turned in when due. During class the student stays engaged and focused on the content of the class. This is done by taking notes and participating in discussion. In the laboratory all work is documented in a laboratory notebook. To ensure that dedicated, active students are recognized, there will be frequent scheduled and unscheduled quizzes based on reflective reading of the assigned text.

Late lab reports and projects will be graded as follows: one day late 70%, two days late 50%, three days late 0%.

### **Student Absence/Make-Up Work:**

When a student is absent, s/he must make up missed work/assignments in a timely manner. See the Parent Student handbook for school policy. When a student is absent for more than a couple of days, please see the teacher how best to make up the work.

**Grading Policy:**

Grading breakdown will be as follows:

Tests	30%
Quizzes	25%
Lab Reports	15%
Participation	10%
Final Test	20%
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Total	100%

Please remember that this syllabus is intended as a general guide of what to expect over the coming year, and may be subject to change. Students will be given full explanations for each assignment given, along with a grading rubric, and will be given adequate time to complete. Please sign and date this page and have your student return it in class tomorrow.

**Supplies:**

A three ring binder	pencils
Loose leaf lined paper	black and red pen
Loose leaf graph paper	scientific calculator (OK if you have graphing calculator)

In Christ,  
Mr. Stephen Canale