Physics 1050 Syllabus

I. College/School  College of Science and Math
Department Physics

II. Course Information

Course Title: Physics of How Things Work
Course Abbreviation and Number: Phys. of How Things Work
Course Credit Hours; 3
Course Cross Listing(s) Abbreviation and Number: PHY 1050
Check (“x”) all applicable:
General Education Course__X__ Writing Intensive Course_____ Service Learning
Course____
Laboratory Course_____ Ohio TAG (Transfer Assurance Guide) Course _____
Ohio Transfer Module Course_____ Others (specify)_____

III. Course Registration
Prerequisites: none
Corequisites: PHY1050L

IV. Student Learning Outcomes
Students in this course will acquire introductory knowledge of the physics associated with
everyday scientific and technological phenomena and devices including those associated with:

1) Electricity & Magnetism (Static electricity, copiers, magnets, electric motors)
2) Waves (Sound, musical instruments, electromagnetic spectrum)
3) Light (solar light, lasers, LEDs)
4) Optics (Vision, cameras, telescopes, microscopes, TVs, DVD players)
5) Energy (Petroleum, nuclear, coal, solar, geothermal, wind)

The General Education Element 6 learning outcomes also apply:

a. Understand the nature of scientific inquiry
b. Critically apply knowledge of scientific theory and methods of inquiry to evaluate information from a variety of sources
c. Distinguish between science and technology and recognize their roles in society
d. Demonstrate an awareness of theoretical, practical, creative and cultural dimensions of scientific inquiry
e. Discuss fundamental theories underlying modern science

V. Suggested Course Materials (required and recommended)
Textbook: How Everything Works
by Louis Bloomfield
John Wiley & Sons, Inc. (2007)

VI. Suggested Method of Instruction
Lecture

VII. Suggested Evaluation and Policy
Exam 1 20%

Page 1 of 3
Exam 2 20%
Final Exam 25%
Quizzes/HW 25%
“Clicker Questions” 10%

VIII. Suggested Grading Policy

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90 – 100 %</td>
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<tr>
<td>B</td>
<td>80 – 89 %</td>
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<tr>
<td>C</td>
<td>70 – 79 %</td>
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<tr>
<td>D</td>
<td>60 – 69 %</td>
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<tr>
<td>F</td>
<td>&lt; 60 %</td>
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IX. Suggested Assignments and Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic(s)</th>
<th>Book Chapter(s)</th>
<th>Tasks</th>
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<tbody>
<tr>
<td>1-3</td>
<td>Things that use waves… Musical instruments to radio waves to microwaves to cell phones and more</td>
<td>9 &amp; 13</td>
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<tr>
<td>4-6</td>
<td>Things that make light… Sunlight to lasers to LEDs</td>
<td>14</td>
<td>EXAM 1 (Week 5)</td>
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<tr>
<td>7-9</td>
<td>Things that use light… Vision to cameras to telescopes to microscopes to DVDs players</td>
<td>15</td>
<td></td>
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<tr>
<td>10-13</td>
<td>Things used to make energy… Electrical to petroleum to coal nuclear to solar to geothermal to wind…</td>
<td>16 &amp; 18</td>
<td>EXAM 3 (Week 10)</td>
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<tr>
<td>14</td>
<td>Comprehensive Review</td>
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<tr>
<td>FINALS</td>
<td>Final Exam (Comprehensive)</td>
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X. Other Information

none

This is a sample course syllabus guideline. Course materials, method of instruction, evaluation and policy, grading policy, assignments, and other course matters can differ by specific course sections and individual professors. Additional information can be obtained by contacting the appropriate college and department.

Approved:
Undergraduate Curriculum and Academic Policy Committee ________________________________
Faculty Senate ________________________________