

Department: Industrial/Technology Education
Course #: 70202W

Course Title: Electricity & Electronics
Grades: 9-12

DESCRIPTION OF COURSE: Students will experience a multitude of industrial technology systems, including basic electronics, hydraulics, CAD, pneumatics, fiber optics, technical drawing, computerized machining process, aviation, power production and transmission, simple machines, robotics and material testing. Student progress will be measured through the completion of individualized self paced modules. Evaluations will be based on lab reports, quizzes, tests computer programs and drawings. Students will acquire basic skills in keyboarding, word and document processing, and Internet research. They will learn the basics of computer hardware, software and Windows XP. They will demonstrate their skills through production of structured documents.

REQUIRED TOPICS OF STUDY	SUGGESTED INTRUCTIONAL TIME	STANDARDS/ ASSESSMENT ANCHORS
<i>Measurement</i>	<i>3 Period</i>	<i>3.6.10.B; 3.7.10.A; 3.7.10B</i>
<i>Electricity Quantities and Units</i>	<i>10 Periods</i>	<i>3.6.10.B; 3.7.10.A; 3.7.10.B</i>
<i>Electrical Charges</i>	<i>2 Periods</i>	<i>3.6.10.B; 3.6.10.C; 3.7.10.A; 3.7.10.B; 3.7.10.D; 3.8.10.B</i>
<i>Electrical Symbols</i>	<i>5 Periods</i>	<i>3.4.10.B; 3.4.10.C; 3.7.10.A; 3.7.10.B,3.8.10.B</i>
<i>Circuit Components</i>	<i>10 Period</i>	<i>3.7.10.A</i>
<i>Magnetism and Electromagnetism</i>	<i>10 Periods</i>	<i>3.6.10.C; 3.7.10.A; 3.7.10.B; 3.8.10.B</i>
<i>Alternating Current</i>	<i>2 Periods</i>	<i>3.2.10D;3.4.10.B; 3.4.10.C; 3.6.10.B; 3.6.10.C; 3.7.10.A; 3.7.10.B; 3.7.10.D; 3.8.10.B</i>
<i>Electric Motors</i>	<i>10 Periods</i>	<i>3.6.10.B; 3.6.10.C; 3.7.10.A; 3.7.10.B; 3.7.10.D</i>
<i>Solar Powered Systems</i>	<i>10 Periods</i>	<i>3.6.10.B; 3.6.10.C; 3.7.10.A; 3.7.10.B; 3.7.10.D</i>
<i>Wind Powered Systems</i>	<i>10 Periods</i>	<i>3.6.10.B; 3.6.10.C; 3.7.10.A; 3.7.10.B; 3.7.10.D</i>

INSTRUCTIONAL RESOURCES:

<i>Instructional Binders</i> <i>Computers: software</i> <i>Handouts</i> <i>Electrical Breadboards, kits and Components</i>	<i>Internet Resources: Moodle,</i> <i>Time Life Videos</i>
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