



Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical resistor color codes.</li> <li>I will apply my understanding of electrical resistor color codes in circuit design.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Define Resist</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Resistance - Unit of Measure</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Color Codes</li> </ul> <p><b>Guided Practice: (We Do)</b></p>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of simple circuits and simple circuit diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Simple/Series Circuits</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity <a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml</a></li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity <a href="http://www.bbc.co.uk/scho">http://www.bbc.co.uk/scho</a></li> </ul>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical schematic diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Schematic Descriptions in Chapter 11</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Schematic Drawings</li> </ul> <p><b>Semi-Guided Practice: (We Do / You Do)</b></p> <ul style="list-style-type: none"> <li>Lab 11-12</li> </ul> <div style="border: 1px solid gray; background-color: #f0f0f0; padding: 5px; text-align: center;"><i>Standards/Expectations:</i></div>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical schematic diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Schematic Descriptions in Chapter 11</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Schematic Drawings</li> </ul> <p><b>Semi-Guided Practice: (We Do / You Do)</b></p> <ul style="list-style-type: none"> <li>Lab 11-12</li> </ul> <div style="border: 1px solid gray; background-color: #f0f0f0; padding: 5px; text-align: center;"><i>Standards/Expectations:</i></div>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:50 AM)</p>

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<ul style="list-style-type: none"> <li>Multiple Resistors Discussion</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Complete Lab 11-10 (Resistor Color Code)</li> </ul> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> </div>	<p><a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml">ols/scienceclips/ages/10_11/changing_circuits_fs.shtml</a></p> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity Quiz <a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml</a></li> </ul>	<div style="background-color: #f0f0f0; padding: 10px;"> <p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> <p><b>2c:</b> describe the difference between open and closed systems</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<div style="background-color: #f0f0f0; padding: 10px;"> <p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> <p><b>2c:</b> describe the difference between open and closed systems</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	

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<p><b>2c:</b> describe the difference between open and closed systems</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> <p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the</p>		<p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the opportunities and careers in fields related to electrical and mechanical systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p>	<p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the opportunities and careers in fields related to electrical and mechanical systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p>	

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<p>opportunities and careers in fields related to electrical and mechanical systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p> <p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>		<p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>	<p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>	
<p>COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of recursive functions with the Tower of Hanoi math problem.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Play Tower of Hanoi <a href="https://www.mathsisfun.co">https://www.mathsisfun.co</a></li> </ul>	<p>COMPUTER SCIENCE 1 - SECTION 1 (8:54 AM - 10:24 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p>	<p>COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p>	<p>COMPUTER SCIENCE 1 - SECTION 1 (8:54 AM - 10:24 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p>	<p>COMPUTER SCIENCE 2 (8:54 AM - 10:24 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p>

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<p><a href="#">m/games/towerofhanoi.html</a></p> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Definition of Recursion</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Introduce Tower of Hanoi Problem</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Guide Through Expectations and Pseudocode</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Write a functional JAVA program that solves the Tower of Hanoi</li> </ul> <div data-bbox="117 1136 457 1503" style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p><b>Standards/Expectations:</b></p> <p><b>c.4.F.:</b> identify, trace, and appropriately use recursion in programming solutions, including algebraic computations;</p> <p><b>c.4.J.:</b> compare and contrast search and sort</p> </div>	<ul style="list-style-type: none"> <li>Review Boolean Operators</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat Overview</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - cigar_party <a href="http://codingbat.com/prob/p195669">http://codingbat.com/prob/p195669</a></li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - date_fashion <a href="http://codingbat.com/prob/p129125">http://codingbat.com/prob/p129125</a></li> <li>Coding Bat - squirrel_play <a href="http://codingbat.com/prob/p135815">http://codingbat.com/prob/p135815</a></li> <li>Coding Bat - caught_speeding <a href="http://codingbat.com/prob/p137202">http://codingbat.com/prob/p137202</a></li> </ul> <div data-bbox="497 1136 840 1481" style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p><b>Standards/Expectations:</b></p> <p><b>EK.2.2.3F:</b> A logic gate is a hardware abstraction that is modeled by a Boolean function</p> <p><b>EK.4.1.1C:</b> Selection uses a Boolean condition to</p> </div>		<ul style="list-style-type: none"> <li>Review Boolean Operators</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat Overview</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - near_ten <a href="http://codingbat.com/prob/p165321">http://codingbat.com/prob/p165321</a></li> <li>Coding Bat - in1to10 <a href="http://codingbat.com/prob/p158497">http://codingbat.com/prob/p158497</a></li> <li>Coding Bat - alarm_clock <a href="http://codingbat.com/prob/p119867">http://codingbat.com/prob/p119867</a></li> <li>Coding Bat - love6 <a href="http://codingbat.com/prob/p100958">http://codingbat.com/prob/p100958</a></li> </ul> <div data-bbox="1260 1136 1602 1481" style="background-color: #f0f0f0; padding: 10px; border: 1px solid #ccc;"> <p><b>Standards/Expectations:</b></p> <p><b>EK.2.2.3F:</b> A logic gate is a hardware abstraction that is modeled by a Boolean function</p> <p><b>EK.4.1.1C:</b> Selection uses a Boolean condition to</p> </div>	

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<p>algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;</p>	<p>determine which of two parts of an algorithm is used.</p> <p><b>EK.5.5.1E:</b> Logical concepts and Boolean algebra are fundamental to programming.</p> <p><b>EK.7.5.1B:</b> Advance search tools, Boolean logic, and key words can refine the search focus and/or limit search results based on a variety of factors (e.g., data, peer-review status, type of publication).</p> <p><b>EK.5.5.1G:</b> Intuitive and formal reasoning about program components using Boolean concepts helps in developing correct programs.</p> <p><b>c.K.V.:</b> demonstrate proficiency in the use of the logical operators; and</p> <p><b>EU.5.5:</b> Programming uses mathematical and logical concepts.</p>		<p>determine which of two parts of an algorithm is used.</p> <p><b>EK.5.5.1E:</b> Logical concepts and Boolean algebra are fundamental to programming.</p> <p><b>EK.7.5.1B:</b> Advance search tools, Boolean logic, and key words can refine the search focus and/or limit search results based on a variety of factors (e.g., data, peer-review status, type of publication).</p> <p><b>EK.5.5.1G:</b> Intuitive and formal reasoning about program components using Boolean concepts helps in developing correct programs.</p> <p><b>c.K.V.:</b> demonstrate proficiency in the use of the logical operators; and</p> <p><b>EU.5.5:</b> Programming uses mathematical and logical concepts.</p>	
<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:28 AM - 12:02 PM)</p>	<p><b>ROBOTICS I &amp; II - SECTION 1</b> (10:28 AM - 12:02 PM)</p>	<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:28 AM - 12:02 PM)</p>	<p><b>ROBOTICS I &amp; II - SECTION 1</b> (10:28 AM - 12:02 PM)</p>	<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:28 AM - 12:02 PM)</p>

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<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my engineering skills to build and program a LEGO Mindstorm EV3 tricycle.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Overview of Parts</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Build a LEGO Tricycle</li> </ul> <div data-bbox="121 1016 457 1458" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c7B:</b> demonstrate knowledge of motors, gears, gear ratios, and gear trains used in the robotic systems;</p> <p><b>c8B:</b> describe the relationship between torque and gear ratio to weight of payload in a</p> </div>	<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my engineering skills to build and program a LEGO Mindstorm EV3 tricycle.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Overview of Parts</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Build a LEGO Tricycle</li> </ul> <div data-bbox="499 1016 835 1458" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c7B:</b> demonstrate knowledge of motors, gears, gear ratios, and gear trains used in the robotic systems;</p> <p><b>c8B:</b> describe the relationship between torque and gear ratio to weight of payload in a</p> </div>	<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my engineering skills to build and program a LEGO Mindstorm EV3 tricycle.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Overview of Parts</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Build a LEGO Tricycle</li> </ul> <div data-bbox="877 1016 1213 1458" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c7B:</b> demonstrate knowledge of motors, gears, gear ratios, and gear trains used in the robotic systems;</p> <p><b>c8B:</b> describe the relationship between torque and gear ratio to weight of payload in a</p> </div>	<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my engineering skills to build and program a LEGO Mindstorm EV3 tricycle.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Gear Ratios</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Overview of Parts</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Build a LEGO Tricycle</li> </ul> <div data-bbox="1260 1016 1596 1458" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c7B:</b> demonstrate knowledge of motors, gears, gear ratios, and gear trains used in the robotic systems;</p> <p><b>c8B:</b> describe the relationship between torque and gear ratio to weight of payload in a</p> </div>	

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<p>robotic arm operation; and</p> <p><b>c8C:</b> demonstrate knowledge of linkages and gearing in end effectors used in a robotic arm system.</p> <p><b>c9B:</b> demonstrate an understanding and apply the concepts of torque, gear ratio, stability, and weight of payload in a robotic or automated system arm operation; and</p> <p><b>c9C:</b> demonstrate an understanding and apply the concepts of linkages and gearing in end effectors and their use in a robotic or an automated arm system.</p> <p><b>c7D:</b> describe the operation of direct current (DC) motors, including control, speed, and torque; and</p> <p><b>c7E:</b> describe the operation of servo motors, including control, angle, and torque.</p>	<p>robotic arm operation; and</p> <p><b>c8C:</b> demonstrate knowledge of linkages and gearing in end effectors used in a robotic arm system.</p> <p><b>c9B:</b> demonstrate an understanding and apply the concepts of torque, gear ratio, stability, and weight of payload in a robotic or automated system arm operation; and</p> <p><b>c9C:</b> demonstrate an understanding and apply the concepts of linkages and gearing in end effectors and their use in a robotic or an automated arm system.</p> <p><b>c7D:</b> describe the operation of direct current (DC) motors, including control, speed, and torque; and</p> <p><b>c7E:</b> describe the operation of servo motors, including control, angle, and torque.</p>	<p>robotic arm operation; and</p> <p><b>c8C:</b> demonstrate knowledge of linkages and gearing in end effectors used in a robotic arm system.</p> <p><b>c9B:</b> demonstrate an understanding and apply the concepts of torque, gear ratio, stability, and weight of payload in a robotic or automated system arm operation; and</p> <p><b>c9C:</b> demonstrate an understanding and apply the concepts of linkages and gearing in end effectors and their use in a robotic or an automated arm system.</p> <p><b>c7D:</b> describe the operation of direct current (DC) motors, including control, speed, and torque; and</p> <p><b>c7E:</b> describe the operation of servo motors, including control, angle, and torque.</p>	<p>robotic arm operation; and</p> <p><b>c8C:</b> demonstrate knowledge of linkages and gearing in end effectors used in a robotic arm system.</p> <p><b>c9B:</b> demonstrate an understanding and apply the concepts of torque, gear ratio, stability, and weight of payload in a robotic or automated system arm operation; and</p> <p><b>c9C:</b> demonstrate an understanding and apply the concepts of linkages and gearing in end effectors and their use in a robotic or an automated arm system.</p> <p><b>c7D:</b> describe the operation of direct current (DC) motors, including control, speed, and torque; and</p> <p><b>c7E:</b> describe the operation of servo motors, including control, angle, and torque.</p>	



Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<p><b>c7F:</b> apply the operation of direct current (DC) motors, including control, speed, and torque;</p> <p><b>c7G:</b> apply the operation of servo motors, including control, angle, and torque;</p> <p><b>c8:</b> The student creates a program to control a robotic or automated system. The student is expected to:</p> <p><b>c8B:</b> use programming best practices for commenting and documentation;</p> <p><b>c8C:</b> describe how and why logic is used to control the flow of the program;</p> <p><b>c8D:</b> create a program flowchart and write the pseudocode for a program to perform an operation;</p>	<p><b>c7F:</b> apply the operation of direct current (DC) motors, including control, speed, and torque;</p> <p><b>c7G:</b> apply the operation of servo motors, including control, angle, and torque;</p> <p><b>c8:</b> The student creates a program to control a robotic or automated system. The student is expected to:</p> <p><b>c8B:</b> use programming best practices for commenting and documentation;</p> <p><b>c8C:</b> describe how and why logic is used to control the flow of the program;</p> <p><b>c8D:</b> create a program flowchart and write the pseudocode for a program to perform an operation;</p>	<p><b>c7F:</b> apply the operation of direct current (DC) motors, including control, speed, and torque;</p> <p><b>c7G:</b> apply the operation of servo motors, including control, angle, and torque;</p> <p><b>c8:</b> The student creates a program to control a robotic or automated system. The student is expected to:</p> <p><b>c8B:</b> use programming best practices for commenting and documentation;</p> <p><b>c8C:</b> describe how and why logic is used to control the flow of the program;</p> <p><b>c8D:</b> create a program flowchart and write the pseudocode for a program to perform an operation;</p>	<p><b>c7F:</b> apply the operation of direct current (DC) motors, including control, speed, and torque;</p> <p><b>c7G:</b> apply the operation of servo motors, including control, angle, and torque;</p> <p><b>c8:</b> The student creates a program to control a robotic or automated system. The student is expected to:</p> <p><b>c8B:</b> use programming best practices for commenting and documentation;</p> <p><b>c8C:</b> describe how and why logic is used to control the flow of the program;</p> <p><b>c8D:</b> create a program flowchart and write the pseudocode for a program to perform an operation;</p>	
<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p> <p><b>Learning Outcomes:</b></p>	<p>COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM)</p> <p><b>Learning Outcomes:</b></p>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p> <p><b>Learning Outcomes:</b></p>	<p>COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM)</p> <p><b>Learning Outcomes:</b></p>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p>

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical resistor color codes.</li> <li>I will apply my understanding of electrical resistor color codes in circuit design.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Define Resist</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Resistance - Unit of Measure</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Color Codes</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Multiple Resistors Discussion</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Complete Lab 11-10 (Resistor Color Code)</li> </ul> <div data-bbox="121 1377 457 1458" style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> </div>	<ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Boolean Operators</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat Overview</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - cigar_party <a href="http://codingbat.com/prob/p195669">http://codingbat.com/prob/p195669</a></li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - date_fashion <a href="http://codingbat.com/prob/p129125">http://codingbat.com/prob/p129125</a></li> <li>Coding Bat - squirrel_play <a href="http://codingbat.com/prob/p135815">http://codingbat.com/prob/p135815</a></li> <li>Coding Bat - caught_speeding <a href="http://codingbat.com/prob/p137202">http://codingbat.com/prob/p137202</a></li> </ul>	<ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical schematic diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Schematic Descriptions in Chapter 11</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Schematic Drawings</li> </ul> <p><b>Semi-Guided Practice: (We Do / You Do)</b></p> <ul style="list-style-type: none"> <li>Lab 11-12</li> </ul> <div data-bbox="877 1010 1220 1490" style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a</p> </div>	<ul style="list-style-type: none"> <li>I will demonstrate my understanding of basic Boolean logic problems.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Boolean Operators</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Boolean Operators</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat Overview</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Coding Bat - near_ten <a href="http://codingbat.com/prob/p165321">http://codingbat.com/prob/p165321</a></li> <li>Coding Bat - in1to10 <a href="http://codingbat.com/prob/p158497">http://codingbat.com/prob/p158497</a></li> <li>Coding Bat - alarm_clock <a href="http://codingbat.com/prob/p119867">http://codingbat.com/prob/p119867</a></li> <li>Coding Bat - sorta_sum <a href="http://codingbat.com/prob/p116620">http://codingbat.com/prob/p116620</a></li> </ul>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> <p><b>2c:</b> describe the difference between open and closed systems</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p>	<p><b>Standards/Expectations:</b></p> <p><b>EK.2.2.3F:</b> A logic gate is a hardware abstraction that is modeled by a Boolean function</p> <p><b>EK.4.1.1C:</b> Selection uses a Boolean condition to determine which of two parts of an algorithm is used.</p> <p><b>EK.5.5.1E:</b> Logical concepts and Boolean algebra are fundamental to programming.</p> <p><b>EK.7.5.1B:</b> Advance search tools, Boolean logic, and key words can refine the search focus and/or limit search results based on a variety of factors (e.g., data, peer-review status, type of publication).</p> <p><b>EK.5.5.1G:</b> Intuitive and formal reasoning about program components using Boolean concepts helps in developing correct programs.</p>	<p>member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> <p><b>2c:</b> describe the difference between open and closed systems</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> <p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies</p>	<ul style="list-style-type: none"> <li>Coding Bat - love6 <a href="http://codingbat.com/prob/p100958">http://codingbat.com/prob/p100958</a></li> </ul> <p><b>Standards/Expectations:</b></p> <p><b>EK.2.2.3F:</b> A logic gate is a hardware abstraction that is modeled by a Boolean function</p> <p><b>EK.4.1.1C:</b> Selection uses a Boolean condition to determine which of two parts of an algorithm is used.</p> <p><b>EK.5.5.1E:</b> Logical concepts and Boolean algebra are fundamental to programming.</p> <p><b>EK.7.5.1B:</b> Advance search tools, Boolean logic, and key words can refine the search focus and/or limit search results based on a variety of factors (e.g., data, peer-review status, type of publication).</p> <p><b>EK.5.5.1G:</b> Intuitive and formal reasoning about program components using Boolean concepts</p>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the opportunities and careers in fields related to electrical and mechanical systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p>	<p><b>c.K.V.:</b> demonstrate proficiency in the use of the logical operators; and</p> <p><b>EU.5.5:</b> Programming uses mathematical and logical concepts.</p>	<p>fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the opportunities and careers in fields related to electrical and mechanical systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p> <p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>	<p>helps in developing correct programs.</p> <p><b>c.K.V.:</b> demonstrate proficiency in the use of the logical operators; and</p> <p><b>EU.5.5:</b> Programming uses mathematical and logical concepts.</p>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
<p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>				
	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of simple circuits and simple circuit diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Simple/Series Circuits</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity  <a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_1">http://www.bbc.co.uk/schools/scienceclips/ages/10_1</a></li> </ul>		<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of electrical schematic diagrams.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>N/A</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Schematic Descriptions in Chapter 11</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Presentation of Schematic Drawings</li> </ul>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
	<p><a href="#">1/changing_circuits_fs.shtml</a></p> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity <a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml</a></li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Online Activity Quiz <a href="http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml">http://www.bbc.co.uk/schools/scienceclips/ages/10_11/changing_circuits_fs.shtml</a></li> </ul>		<p><b>Semi-Guided Practice: (We Do / You Do)</b></p> <ul style="list-style-type: none"> <li>Lab 11-12</li> </ul> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <p><b>Standards/Expectations:</b></p> <p><b>1:</b> The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:</p> <p><b>1b:</b> show the ability to cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome</p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2b:</b> identify the inputs, processes, and outputs associated with technological systems</p> <p><b>2c:</b> describe the difference between open and closed systems</p> </div>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
			<p><b>2d:</b> describe how technological systems interact to achieve common goals</p> <p><b>4:</b> The student uses appropriate tools and demonstrates safe work habits. The student is expected to:</p> <p><b>4g:</b> demonstrate the use of precision measuring instruments</p> <p><b>6:</b> The student thinks critically and applies fundamental principles of system modeling and design to multiple design projects. The student is expected to:</p> <p><b>6c:</b> use problem-solving techniques to develop technological solutions</p> <p><b>6d:</b> use consistent units for all measurements and computations</p> <p><b>8:</b> The student understands the opportunities and careers in fields related to electrical and mechanical</p>	

Mon, Mar 5 (Day B)	Tue, Mar 6 (Day A)	Wed, Mar 7 (Day B)	Thu, Mar 8 (Day A)	Fri, Mar 9 (Day B)
			<p>systems. The student is expected to:</p> <p><b>8a:</b> describe the applications of electrical and mechanical systems</p> <p><b>8b:</b> describe career opportunities in electrical and mechanical systems</p> <p><b>8c:</b> identify emerging trends in electrical and mechanical systems</p> <p><b>8d:</b> describe and apply basic electronic theory</p>	