



# Eric Evans' Lesson Plans for the Week of **Apr 29, 2018**

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
	4(A) - Computer Science 1 will be in Ms. Mendoza's room today. The 402 lab is being used for AP Spanish Language & Culture exam practice.		4(A) - Computer Science 1 will be in Ms. Mendoza's room today. The 402 lab is being used for AP Spanish Language & Culture exam practice.	Pep-Rally Schedule for Senior "Decision" Day Assembly
<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 apply my knowledge of basic aerodynamics by creating an arresting system to slow the fall of an egg</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Egg Drop Video</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 apply my knowledge of basic aerodynamics by creating an arresting system to slow the fall of an egg</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Egg Drop Video</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 apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I 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 apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 1 (8:00 AM - 8:42 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
<ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Working in Teams of 2 or Individually: <ul style="list-style-type: none"> <li>◦ Work on Building Egg Drop Rig</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <div data-bbox="121 662 453 1140" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Working in Teams of 2 or Individually: <ul style="list-style-type: none"> <li>◦ Participate in egg drop project</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <div data-bbox="499 662 831 1140" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<ul style="list-style-type: none"> <li>• Show Water Bottle Launch Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>◦ Brainstorm Project Ideas with Benefit Analysis for Each Design</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <div data-bbox="877 945 1209 1422" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<ul style="list-style-type: none"> <li>• Show Water Bottle Launch Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>◦ Brainstorm Project Ideas with Benefit Analysis for Each Design</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <div data-bbox="1260 945 1591 1422" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<ul style="list-style-type: none"> <li>• Show Water Bottle Launch Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>◦ Brainstorm Project Ideas with Benefit Analysis for Each Design</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <div data-bbox="1642 945 1974 1422" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
<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 clean-up and store materials and equipment used in the Blacklight tournament from the weekend.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Game Floor Elements <ul style="list-style-type: none"> <li>Transport game floor and game elements from cafeteria stage to classroom</li> </ul> </li> <li>Equipment Storage</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 understanding of the basic drawing tools in Python</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Load the Code <ul style="list-style-type: none"> <li>Load the assigned code and note the differences between the code and the output.</li> </ul> </li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Intro to Drawing Tools in Python</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Play with Drawing Tools</li> <li>Playing with Turtle</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Draw a "Smiley Face"</li> <li>Draw a "Turtle"</li> </ul>	<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 Computer Science by answering questions on the AP Computer Science - A practice exam.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>AP Computer Science - A Practice Exam</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>Test/Major Grades (25%)</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 understanding of the basic drawing tools in Python</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>What Could Do It?</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Drawing Tools in Python</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Free Draw</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>Free Drawing</li> </ul> </li> </ul> <p><b>Standards/Expectations:</b></p> <p><b>c.2.:</b> Communication and collaboration. The student</p>	<p>COMPUTER SCIENCE 2 (8:46 AM - 10:06 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of Computer Science by answering questions on the AP Computer Science - A practice exam.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>AP Computer Science - A Practice Exam</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>Test/Major Grades (25%)</li> </ul>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
<ul style="list-style-type: none"> <li>◦ Sort and store equipment that was used</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Clean-Up</li> </ul> </li> </ul>	<p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Daily Grades (50%) <ul style="list-style-type: none"> <li>◦ Warm-Up</li> <li>◦ Smiley Face</li> <li>◦ Turtle</li> </ul> </li> </ul> <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c.2.:</b> Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:</p> <p><b>c.2.F.:</b> display simple vector graphics using lines, circles, and rectangles;</p> </div>	<ul style="list-style-type: none"> <li>◦ AP Computer Science - A Practice Exam</li> </ul> <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>1.:</b> design, implement, and analyze solutions to problems.</p> <p><b>2.:</b> use and implement commonly used algorithms.</p> <p><b>3.:</b> use standard data structures.</p> <p><b>4.:</b> develop and select appropriate algorithms and data structures to solve new problems.</p> <p><b>5.:</b> write solutions fluently in an object-oriented paradigm.</p> <p><b>8.:</b> understand the ethical and social implications of computer use.</p> <p><b>7.:</b> read and understand a description of the design and development process leading to such a program. (Examples of such solutions can be found in the AP Computer Science Labs.)</p> </div>	<div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p>communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:</p> <p><b>c.2.F.:</b> display simple vector graphics using lines, circles, and rectangles;</p> </div>	<ul style="list-style-type: none"> <li>◦ AP Computer Science - A Practice Exam</li> </ul> <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>1.:</b> design, implement, and analyze solutions to problems.</p> <p><b>2.:</b> use and implement commonly used algorithms.</p> <p><b>3.:</b> use standard data structures.</p> <p><b>4.:</b> develop and select appropriate algorithms and data structures to solve new problems.</p> <p><b>5.:</b> write solutions fluently in an object-oriented paradigm.</p> <p><b>8.:</b> understand the ethical and social implications of computer use.</p> <p><b>7.:</b> read and understand a description of the design and development process leading to such a program. (Examples of such solutions can be found in the AP Computer Science Labs.)</p> </div>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
		<p><b>6.:</b> write, run, test, and debug solutions in the Java programming language, utilizing standard Java library classes and interfaces from the AP Java subset. read and understand programs consisting of several classes and interacting objects.</p>		<p><b>6.:</b> write, run, test, and debug solutions in the Java programming language, utilizing standard Java library classes and interfaces from the AP Java subset. read and understand programs consisting of several classes and interacting objects.</p>
<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:28 AM - 12:02 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will setup the complete game floor walls per the provided instructions.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p>	<p><b>ROBOTICS I &amp; II - SECTION 1</b> (10:28 AM - 12:02 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of the Relic Recovery game and how a robotic system can solve the challenge within the given constraints.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Relic Recovery Game</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p>	<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:28 AM - 12:02 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of degrees of freedom of a robotic system and how those translate to a classification system</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p>	<p><b>ROBOTICS I &amp; II - SECTION 1</b> (10:28 AM - 12:02 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of the Relic Recovery game and how a robotic system can solve the challenge within the given constraints.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Review Relic Recovery Game</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p>	<p><b>ROBOTICS I &amp; II - SECTION 2</b> (10:10 AM - 11:30 AM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate my understanding of the drive technology robotic classification system.</li> <li>I will demonstrate my understanding of the kinematic structure robotic classification system.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul>

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<ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Game Floor Walls Setup</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Setup Game Floor Walls</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Review Punchlist</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Work Punchlist</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Daily Grades (50%) <ul style="list-style-type: none"> <li>◦ Daily Work to Complete Punchlist Tasks</li> </ul> </li> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Weekly Work to Complete Punchlist Tasks</li> </ul> </li> <li>• Test/Major Grades (25%) <ul style="list-style-type: none"> <li>◦ Engineering Notebook Contributions for Punchlist Tasks</li> </ul> </li> </ul> <div data-bbox="499 1174 835 1450" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c3:</b> The student participates in team projects in various roles. The student is expected to:</p> </div>	<ul style="list-style-type: none"> <li>• Discuss Classification Systems for Robots</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Degrees of Freedom in Relation to Chairs</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Demonstrate Assigned Degrees of Freedom Classification with Model</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Daily Grades (50%) <ul style="list-style-type: none"> <li>◦ Notes</li> </ul> </li> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Degrees of Freedom Classification Model</li> </ul> </li> </ul> <div data-bbox="879 1029 1215 1503" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c7:</b> The student demonstrates an understanding of advanced mathematics and physics in robotic and automated systems. The student is expected to:</p> <p><b>c7B:</b> describe the term degrees of freedom and apply it to the design of</p> </div>	<ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Review Punchlist</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Work Punchlist</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Daily Grades (50%) <ul style="list-style-type: none"> <li>◦ Daily Work to Complete Punchlist Tasks</li> </ul> </li> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Weekly Work to Complete Punchlist Tasks</li> </ul> </li> <li>• Test/Major Grades (25%) <ul style="list-style-type: none"> <li>◦ Engineering Notebook Contributions for Punchlist Tasks</li> </ul> </li> </ul> <div data-bbox="1262 1174 1598 1450" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c3:</b> The student participates in team projects in various roles. The student is expected to:</p> </div>	<p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Classification Systems for Robots</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>• Discuss Drive Technology Classification System <ul style="list-style-type: none"> <li>◦ Electric</li> <li>◦ Hydraulic</li> <li>◦ Pneumatic</li> </ul> </li> <li>• Discuss Kinematic Structure Classification System <ul style="list-style-type: none"> <li>◦ Serial or Open Loop - anchored on one end (ex. Human Arm)</li> <li>◦ Parallel - anchored on both ends (ex. Stewart Platform)</li> <li>◦ Hybrid - combination of both</li> </ul> </li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>• Demonstrate Assigned Degrees of Freedom Classification with Model</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• Daily Grades (50%)</li> </ul>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
	<p><b>c3A:</b> explain the importance of teamwork in the field of robotics;</p> <p><b>c3B:</b> apply principles of effective problem solving in teams to collaboration and conflict resolution; and</p> <p><b>c3C:</b> demonstrate proper attitudes as a team leader and team member.</p> <p><b>c1D:</b> recognize the principles of teamwork related to engineering and technology;</p> <p><b>c3:</b> The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:</p> <p><b>c3A:</b> demonstrate an understanding of and discuss how teams function;</p> <p><b>c3B:</b> apply teamwork to solve problems;</p> <p><b>c3C:</b> follow directions and decisions of responsible</p>	<p>joints used in robotic and automated systems;</p>	<p><b>c3A:</b> explain the importance of teamwork in the field of robotics;</p> <p><b>c3B:</b> apply principles of effective problem solving in teams to collaboration and conflict resolution; and</p> <p><b>c3C:</b> demonstrate proper attitudes as a team leader and team member.</p> <p><b>c1D:</b> recognize the principles of teamwork related to engineering and technology;</p> <p><b>c3:</b> The student learns and contributes productively as an individual and as a member of a project team. The student is expected to:</p> <p><b>c3A:</b> demonstrate an understanding of and discuss how teams function;</p> <p><b>c3B:</b> apply teamwork to solve problems;</p> <p><b>c3C:</b> follow directions and decisions of responsible</p>	<ul style="list-style-type: none"> <li>◦ Notes</li> <li>• Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>◦ Degrees of Freedom Classification Model</li> </ul> </li> </ul> <p><b>Standards/Expectations:</b></p> <p><b>c7:</b> The student demonstrates an understanding of advanced mathematics and physics in robotic and automated systems. The student is expected to:</p> <p><b>c7B:</b> describe the term degrees of freedom and apply it to the design of joints used in robotic and automated systems;</p>

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
	<p>individuals of the project team;</p> <p><b>c3D:</b> participate in establishing team procedures and team norms; and</p>		<p>individuals of the project team;</p> <p><b>c3D:</b> participate in establishing team procedures and team norms; and</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 apply my knowledge of basic aerodynamics by creating an arresting system to slow the fall of an egg</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Egg Drop Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul>	<p>COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate understanding of the basic drawing tools in Python</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>Load the Code <ul style="list-style-type: none"> <li>Load the assigned code and note the differences between the code and the output.</li> </ul> </li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Intro to Drawing Tools in Python</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 apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Water Bottle Launch Video</li> </ul>	<p>COMPUTER SCIENCE 1 - SECTION 2 (1:06 PM - 2:36 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will demonstrate understanding of the basic drawing tools in Python</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>What Could Do It?</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>Drawing Tools in Python</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p>	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (1:58 PM - 2:40 PM)</p> <p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Water Bottle Launch Video</li> </ul>



Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
<p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Working in Teams of 2 or Individually: <ul style="list-style-type: none"> <li>Work on Building Egg Drop Rig</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <div data-bbox="117 581 455 1058" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Play with Drawing Tools</li> <li>Playing with Turtle</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Draw a "Smiley Face"</li> <li>Draw a "Turtle"</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>Daily Grades (50%) <ul style="list-style-type: none"> <li>Warm-Up</li> <li>Smiley Face</li> <li>Turtle</li> </ul> </li> </ul> <div data-bbox="497 781 835 1330" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c.2.:</b> Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:</p> <p><b>c.2.F.:</b> display simple vector graphics using lines, circles, and rectangles;</p> </div>	<p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>Brainstorm Project Ideas with Benefit Analysis for Each Design</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <div data-bbox="877 821 1215 1299" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>	<ul style="list-style-type: none"> <li>Free Draw</li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>Quiz/Minor Grades (25%) <ul style="list-style-type: none"> <li>Free Drawing</li> </ul> </li> </ul> <div data-bbox="1260 428 1598 977" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>c.2.:</b> Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:</p> <p><b>c.2.F.:</b> display simple vector graphics using lines, circles, and rectangles;</p> </div>	<p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>Brainstorm Project Ideas with Benefit Analysis for Each Design</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <div data-bbox="1640 821 1978 1299" style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p><b>Standards/Expectations:</b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p> </div>
	<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p>		<p>PRINCIPLES OF APPLIED ENGINEERING - SECTION 2 (2:40 PM - 3:30 PM)</p>	

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
	<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will apply my knowledge of basic aerodynamics by creating an arresting system to slow the fall of an egg</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Egg Drop Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Working in Teams of 2 or Individually: <ul style="list-style-type: none"> <li>Participate in egg drop project</li> </ul> </li> </ul> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><i>Standards/Expectations:</i></p>		<p><b>Learning Outcomes:</b></p> <ul style="list-style-type: none"> <li>I will apply my knowledge of basic aerodynamics by creating a system to reduce drag to allow a water-bottle rocket to achieve a greater launch height.</li> </ul> <p><b>Warm-Up Assignment:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Review of Prior Knowledge:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Introduction to New Material: (I Do)</b></p> <ul style="list-style-type: none"> <li>Show Water Bottle Launch Video</li> </ul> <p><b>Guided Practice: (We Do)</b></p> <ul style="list-style-type: none"> <li>Discuss Thrust, Drag, Lift, and Gravity Forces</li> </ul> <p><b>Independent Practice: (You Do)</b></p> <ul style="list-style-type: none"> <li>Working in Teams of 1 to 4: <ul style="list-style-type: none"> <li>Brainstorm Project Ideas with Benefit</li> </ul> </li> </ul>	

Mon, Apr 30 (Day B)	Tue, May 1 (Day A)	Wed, May 2 (Day B)	Thu, May 3 (Day A)	Fri, May 4 (Special)
	<p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p>		<p>Analysis for Each Design</p> <p><b>Graded Items</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b><i>Standards/Expectations:</i></b></p> <p><b>2:</b> The student investigates the components of engineering and technology systems. The student is expected to:</p> <p><b>2d:</b> describe how technological systems interact to achieve common goals</p>	