**PLTW PROGRAM STRUCTURE**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td><strong>Intro to Engineering Design H</strong></td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td><strong>Digital Electronics H</strong></td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td><strong>Principles of Engineering H</strong></td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td><strong>AP Computer Science Principles H</strong></td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td><strong>Engineering Design &amp; Develop H</strong></td>
<td>1</td>
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*Practical Arts credit H=Honors Level*

**TOPICS COVERED**
- employability skills
- design process, research, and analysis
- communication methods
- engineering standards
- engineering design problems
- 3D solid modeling design software
- mathematics, science, and technology
- mechanisms, energy sources, energy applications, machine control, fluid power, statics, material properties & testing
- statistics, and kinematics
- manufacturing processes
- social and political consequences of technological change
- electronic circuits and devices
- combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation
- digital circuitry
- design, engineer, create a prototype, perform product testing, and produce a finished product

**CLUB OPPORTUNITY**
SkillsUSA ensures America has a skilled workforce by helping each student excel in programs, events, and competitions.

**WHAT IS ENGINEERING PATHWAYS?**
From launching space explorations to delivering safe, clean water to communities, engineers find solutions to pressing problems and turn their ideas into reality. PLTW Engineering empowers students to step into the role of an engineer, adopt a problem-solving mindset, and make the leap from dreamers to doers.

**FREE COLLEGE CREDITS**
Upon completion of Intro to Engineering Design, Digital Electronics, and Principles of Engineering, students have the opportunity to receive 12 **general education credits at Indian River State College**.

In addition, the following “Career Pathways” credits can be awarded:
- EGN 1111 Engineering Graphic 3 credits
- EET 1015C DC Circuits 3 credits
- ETD 1320Intro to AutoCAD (CPR) 3 credits

**INDUSTRY CERTIFICATIONS**
Students have the opportunity to earn the Engineering Core, AutoDesk Inventor, and Robotics Education and Competition Foundation certifications.

**CAREER OUTLOOK**
Median wage: $84,770-$132,280 annually