### Career Cluster: Engineering & Technology Education (STEM)

**Career Cluster Pathway:** Engineering and Technology

**CTE Program:**
- **Secondary:** Academy of Engineering and Environmental Sciences - Applied Engineering Technology (8401100)
- **Postsecondary:** St. Johns River State College, Orange Park; St. Johns River State College, Orange Park & Palatka: Engineering Technology (A.S. 1615000001), Engineering Technology Support Specialist (CCC – 0615000007), Robotics and Simulations Technician (CCC-061504514), Mechatronics (CCC-0615000013)

**Industry Certification:**
- **Secondary:** AutoCAD User (Adesk002), Revit (Adesk008), Inventor (Adesk011), Autodesk Certified Professional (ADESK021), Solidworks (SOLID003), MSSC CPT (MSSCN001), OSHA

### High School

#### 9th Grade
- **ENGLISH:** English 1 (H)
- **MATH:** Algebra 1 or Geometry (H)
- **SCIENCE:** Physical Science/Biology Honors
- **SOCIAL STUDIES:** World Geography/ AP Human Geography
- **OTHER REQUIRED COURSES:** HOPE – Health Opportunities through Physical Education
- **CAREER AND TECHNICAL EDUCATION COURSES:** Applied Engineering Technology 1 (8401110)
- **RECOMMENDED ELECTIVES:** Elective or Foreign Language

#### 10th Grade
- **ENGLISH:** English 2 (H)
- **MATH:** Geometry (H) or Algebra 2 (H)
- **SCIENCE:** Biology/Chemistry (H)
- **SOCIAL STUDIES:** World History (H/ AP)
- **CAREER AND TECHNICAL EDUCATION COURSES:** Applied Engineering Technology 2 (8401120)
- **RECOMMENDED ELECTIVES:** Elective or Foreign Language

#### 11th Grade
- **ENGLISH:** English 3 (H, DE, AP)
- **MATH:** Algebra 2 or Pre-Calculus (H)
- **SCIENCE:** Chemistry (H) or Physics (H)
- **SOCIAL STUDIES:** US History (AP)
- **CAREER AND TECHNICAL EDUCATION COURSES:** Applied Engineering Technology 3 (8401130)
- **RECOMMENDED ELECTIVES:** Elective or Foreign Language

#### 12th Grade
- **ENGLISH:** English 4 (H, DE, AP)
- **MATH:** Math for College Readiness or AP/ DE Mathematics
- **SCIENCE:** AP/ DE Course Offerings
- **SOCIAL STUDIES:** Economics/ US Government (H/AP/DE)
- **CAREER AND TECHNICAL EDUCATION COURSES:** Advanced Technology Applications (8601900)
- **RECOMMENDED ELECTIVES:** AP Computer Science Principles (0200335) or Foreign Language

### Postsecondary

**Based on the Career Cluster of interest and identified career and technical education program, the following postsecondary options are available.**

<table>
<thead>
<tr>
<th>TECHNICAL CENTER PROGRAM(S)</th>
<th>COMMUNITY COLLEGE PROGRAM(S)</th>
<th>UNIVERSITY PROGRAM(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>UF: Civil, Coastal, Electrical, Computer, Materials Science, Mechanical, Aerospace, Biomedical Engineering, BS &amp; MA</td>
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<td>St. Johns River State College, on-line: Organizational Management, B.A.S.</td>
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<td>Daytona State College, on-line: Engineering Technology, B.S.A.T.</td>
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</tbody>
</table>

### Sample Career Specialties

- Draftsman, Civil Engineering Technician, Surveyor
- Civil Engineer, Mechanical Engineer, Electrical Engineer, Aerospace Engineer, Environmental Engineer, Construction Engineer, Coastal Engineer, Aircraft Mechanics

### Articulation and CTE Dual Enrollment Opportunities

- Secondary to Technical Center (PSAV)
- Secondary to College Credit Certificate or Degree
- PSAV/PSV to AAS or AS/BS/BAS
<table>
<thead>
<tr>
<th>Career and Technical Student Association</th>
<th>AutoCAD Civil 3D earns 3 credits in Civil Engineering Technology; AutoCAD Revit earns 3 credits in Architecture Design and Construction; AutoCAD User earns 3 credits in Drafting and Design Technology; AutoCAD Inventor earns 3 credits in Engineering Technology</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Florida Technology Student Association (FL-TSA)**

**Internship/Work Experience Recommendations**

Career Academy students may apply for summer internships after their junior year. Sample internships job titles include:

Program of Study Graduation Requirements: [http://www.fldoe.org/academics/graduation-requirements](http://www.fldoe.org/academics/graduation-requirements)