**Career Cluster:** Manufacturing  
**CTE Program:** Academy of Biotechnology and Medical Research  
**Secondary:** Ponte Vedra High School, St. Johns County School District  
**Industrial Biotechnology (8736000)**  
**Postsecondary:** FL State College at Jacksonville  
**Biomedical Science (B.S. - 26.0102), Biotechnology Laboratory Technician (A.S. - 1341010100), Biotechnology Laboratory Specialist (CCC-034101010101), Biotechnology Specialist (CCC-0626120101)**

**Career Cluster Pathway:** Maintenance, Installation & Repair  
**Industry Certification:**  
**Secondary:** Biotechnician Assistant (CERHB001)  
**Postsecondary:** FL State College at Jacksonville; NA

### 16 CORE CURRICULUM CREDITS

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>MATH</th>
<th>SCIENCE</th>
<th>SOCIAL STUDIES</th>
<th>OTHER REQUIRED COURSES</th>
<th>CAREER AND TECHNICAL EDUCATION COURSES</th>
<th>RECOMMENDED ELECTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 credits</td>
<td>4 credits</td>
<td>3 credits, 2 with lab</td>
<td>3 credits</td>
<td>FINE ARTS (1 credit)</td>
<td>PHYSICAL EDUCATION (1 credit)</td>
<td>(ALIGNED WITH COMMUNITY COLLEGE &amp; STATE UNIVERSITY SYSTEM PROGRAMS)</td>
</tr>
</tbody>
</table>

### HIGH SCHOOL

#### 9th Grade
- **English 1, English 1 Honors**  
- **Algebra 1, Algebra 1 Honors**  
- **Physical Science, Physical Science Honors**  
- **World Culture Geography or AP Human Geography**  
- **HOPE – Health Opportunities through Physical Education**  
- **Biotechnology I – (Honors)- 3027010**  
- **Foreign Language (Latin recommended)**

#### 10th Grade
- **English 2, English 2 Honors**  
- **Geometry, Geometry Honors, Pre-Calculus**  
- **Biology 1, Biology 1 Honors, AP Biology**  
- **World History or International Relations Honors**  
- **Elective**  
- **Biotechnology II – (Honors)- 3027020**  
- **Foreign Language (Latin recommended)**

#### 11th Grade
- **English 3, English 3 Honors**  
- **Algebra 2, Algebra 2 Honors**  
- **Earth & Space Science, AP Environmental Science, Chemistry, Chemistry 1 Honors, AP Chemistry**  
- **US History, US History Honors, AP US History**  
- **Elective**  
- **Biotechnology III – (Honors)- 8736030**  
- **Foreign Language (Latin recommended)**

#### 12th Grade
- **English 4, English 4 Honors**  
- **Pre-Calculus Honors, Math for College Readiness, Advanced Topics in Math, AP Calculus, AP Statistics**  
- **Marine Science, Anatomy & Physiology Honors**  
- **American Government or American Government Honors or AP U.S. Government & Politics .5 + Economics .5 or Economics Honors .5, AP Macroeconomics, AP Microeconomics & DE US Fed Gov't**  
- **Elective or UNF Dual Enrollment – Speech – SPC 2608**  
- **Experimental Science - (Honors)- 2002340**

- **Students are encouraged to use www.mycareershines.org to explore careers and postsecondary options.**
- **Students are also encouraged to participate in dual enrollment courses which may be used to satisfy high school graduation or Bright Futures Gold Seal Vocational Scholars course requirements.**
- **One course within the 24 credit program must be an online course. Cumulative GPA of 2.0 on a 4.0 scale for 24 credit program.**
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>Florida State College at Jacksonville: Certificates in Biotechnology Laboratory Specialist in Health Science, Biotechnology Laboratory Specialist in Manufacturing, Biotechnology Specialist</td>
<td>FL State College at Jacksonville: A.S. in Biotechnology Laboratory Technology and Environmental Science Technology</td>
<td>University of Florida, Gainesville B.S. in Biomedical Engineering, Biological Engineering, Biochemical &amp; Molecular Biology</td>
</tr>
<tr>
<td>Florida State College at Jacksonville: Certificates in Biotechnology Laboratory Specialist in Health Science, Biotechnology Laboratory Specialist in Manufacturing, Biotechnology Specialist</td>
<td>University of Florida, Gainesville B.S. in Biomedical Sciences</td>
<td></td>
</tr>
</tbody>
</table>

Sample Career Specialties – Careers from the Targeted Occupations List are in bold.

<table>
<thead>
<tr>
<th>CAREER</th>
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</thead>
<tbody>
<tr>
<td>Biomedical Technician</td>
</tr>
<tr>
<td>Molecular Biologist; Analytical Chemist; Biomedical Engineer; Microbiology Cell Scientist; Plant Pathologist</td>
</tr>
</tbody>
</table>

Articulation and CTE Dual Enrollment Opportunities

<table>
<thead>
<tr>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary to Technical Center (PSAV) (Minimum # of clock hours awarded)</td>
</tr>
<tr>
<td>No articulation agreement. No CTE Dual Enrollment.</td>
</tr>
<tr>
<td>FSC at Jax.: Biotechnician Assistant Industry Certification = 4 credits in Introduction to Biotechnology Methods – BSC1421C. Dual enrollment credits are not offered.</td>
</tr>
<tr>
<td>Secondary to College Credit Certificate or Degree (Minimum # of clock or credit hours awarded)</td>
</tr>
<tr>
<td>No articulation agreement. No CTE Dual Enrollment.</td>
</tr>
<tr>
<td>PSAV/PSV to AAS or AS/BS/BAS (Statewide and other local agreements included here)</td>
</tr>
</tbody>
</table>

Career and Technical Student Association

Ponte Vedra High School Biotechnology Club

Internship/Work Experience Recommendations

Career Academy students may apply for summer internships after their junior year. Sample internships: Mayo Clinic Researcher, Hospital Medical Lab Technician, Veterinary Clinic Animal Care

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