


<b>Career Cluster:</b> Engineering & Technology Education (STEM)		<b>CTE Program:</b> <b>Secondary: Academy of Leadership in Emerging Technologies</b> - Applied Robotics (9410100) Tocoi Creek High School, St. Johns County School District						
<b>Career Cluster Pathway:</b> Engineering and Technology		<b>Industry Certification:</b> <b>Secondary:</b> MTA Introduction to Programming Using Python (MICRO112), Small UAS Safety (USINS001), RECF Robotics (RECFN002), Autodesk Certified User – AutoCAD (ADESK002), SOLIDWORKS CSWA (SOLID003)						
		<b>16 CORE CURRICULUM CREDITS</b>				<b>8 ADDITIONAL CREDITS</b>		
		<b>ENGLISH</b> 4 credits	<b>MATH</b> 4 credits	<b>SCIENCE</b> 3 credits, 2 with lab	<b>SOCIAL STUDIES</b> 3 credits	<b>OTHER REQUIRED COURSES</b> <b>FINE ARTS</b> (1 credit) <b>PHYSICAL EDUCATION</b> (1 credit)	<b>CAREER AND TECHNICAL EDUCATION COURSES</b>	<b>RECOMMENDED ELECTIVES</b> (ALIGNED WITH STATE COLLEGE & UNIVERSITY SYSTEM PROGRAMS)
<ul style="list-style-type: none"> <li>• Students are encouraged to use <a href="http://mycareershines.org">mycareershines.org</a> to explore careers and postsecondary options.</li> <li>• 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.</li> <li>• 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</li> </ul>								
<b>HIGH SCHOOL</b>	<b>9<sup>th</sup></b>	English 1, English Honors 1	Algebra I, Algebra 1 Honors, Geometry Honors, Algebra 2 Honors	Environmental Science, Physical Science, Biology 1 Honors	AP Human Geography or Elective	HOPE – Health Opportunities through Physical Education	Foundations of Mechatronic Programming (Robotic Design Essentials 9410120)	Elective
	<b>10<sup>th</sup></b>	English 2, English Honors 2	Liberal Arts Math 1, Geometry, Geometry Honors, Pre-Calculus Honors	Biology, Biology Honors, Chemistry, Chemistry Honors	AP World History, World History, World History Honors	World Language 1	Robotic Systems and Survey of Emerging Technologies (Robotic Systems 9410130)	Elective
	<b>11<sup>th</sup></b>	English 3, English Honors 3 DE Freshman English 1 ENC 1101, AP Language	Geometry, Algebra 2, Algebra 2 Honors, AP Calculus AB	Marine Science, Marine Science Honors, Earth Science, Anatomy and Physiology Honors, Chemistry, Chemistry Honors, Physics Honors	AP US History, US History, Dual Enrollment AMH 2010	World Language 2	Entrepreneurial Leadership in Emerging Technologies (Course code pending FLDOE approval)	Elective
	<b>12<sup>th</sup></b>	English 4, English Honors 4, AP or DE Freshman English 1 (ENC1102), AP Literature	Financial Algebra, Math for College Readiness, Probability and Statistics, AP Statistics, AP Calculus BC	AP Biology, AP Chemistry, AP Environmental Science, AP Physics	American Government .5 + Economics .5, AP Macro/Micro Econ, AP US Fed Gov't	Elective	Leadership in Artificial Intelligence (AI) (Robotic Applications Capstone 9410140)	Elective
<b>Based on the Career Cluster of interest and identified career and technical education program, the following postsecondary options are available.</b>								
<b>POSTSECONDARY</b>	<b>TECHNICAL COLLEGE PROGRAM(S)</b>		<b>STATE COLLEGE PROGRAM(S)</b>			<b>UNIVERSITY PROGRAM(S)</b>		
	N/A		<b>St. Johns River State College, St. Augustine:</b> College Credit Certificates (CCC): Engineering Technology Support Specialist, Mechatronics, Robotics and Simulation Technician  Associate in Science (A.S.) Degree in Engineering Technology			<b>University of North Florida, Jacksonville:</b> College of Computing, Engineering & Construction – Mechanical Engineering (B.S.), MS in Mechanical Engineering  <b>Embry-Riddle Aeronautical University, Daytona:</b> Mechanical Engineering (B.S.), MS in Mechanical Engineering, Ph.D. in Mechanical Engineering, MS in Unmanned and Autonomous Systems Engineer, MS in Unmanned Systems		

**Sample Career Specialties from the Demand Occupations List**

<b>CAREER</b>	Electrical and Electronics Repairers, Commercial and Industrial Equipment, Electrical and Electronic Equipment Assemblers, Electromechanical Equipment Assemblers, Aerospace Engineering and Operations Technicians	First-line Supervisors of Production and Operating Workers, Engineering Technology Support Specialist, Robotics and Simulation Technician	Automation Engineer, Autonomous Vehicle, Design Engineer, Design Engineer, Factory Automations Engineer, Research Engineer Robotic Systems Engineer, Mechanical Engineer, Unmanned and Autonomous Systems Engineer
	<p><b>Career and Technical Student Association</b>                  FL-TSA, SkillsUSA</p> <p><b>Internship/Work Experience Recommendations</b>                  Career Academy students may apply for summer internships after their junior year.</p> <p align="center">Program of Study Graduation Requirements: <a href="http://www.fldoe.org/academics/graduation-requirements">http://www.fldoe.org/academics/graduation-requirements</a></p>		