


<b>Career Cluster:</b> Science, Technology, Engineering and Mathematics (STEM)				<b>CTE Program:</b> Applied Engineering Technology				
<b>Career Cluster Pathway:</b> Applied Engineering Technology 840110				<b>Industry Certification:</b> Autodesk Certified Professional - AutoCAD (ADESK021) Autodesk Certified Professional - Inventor (ADESK024) Autodesk Certified Professional - Revit Architecture (ADESK025)				
	<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> FINE ARTS (1 credit) PHYSICAL EDUCATION (1 credit)	<b>CAREER AND TECHNICAL EDUCATION COURSES</b>	<b>RECOMMENDED ELECTIVES</b> (ALIGNED WITH COMMUNITY COLLEGE & STATE UNIVERSITY SYSTEM PROGRAMS)	
<b>HIGH SCHOOL</b>	<ul style="list-style-type: none"> <li>• Students are encouraged to use <a href="http://flchoices.org">flchoices.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>9<sup>th</sup></b>	English/Language Arts (ELA) I (1 credit)	Algebra 1 (1 credit)	Biology I (1 credit)		Physical Education (1credit) (Not required for ACCEL Program)	Applied Engineering Technology 1 (Honors)	Foreign Language for SUS admission or other elective appropriate for student's career and education plan.
	<b>10<sup>th</sup></b>	English/Language Arts (ELA) II (1 credit)	Geometry (1 credit)	Physical Science* (1 credit) *Recommended	World History (1 credit)		Applied Engineering Technology 2 (Honors)	Foreign Language for SUS admission or other elective appropriate for student's career and education plan.
	<b>11<sup>th</sup></b>	English/Language Arts (ELA) III (1 credit)	Algebra II* (1 credit) Pre-Calculus Honors* *Recommended	Chemistry* (1 credit) Physics 1 Honors* *Recommended	US History (1 credit)	Practical Arts or Fine Arts course (1 credit)	Applied Engineering Technology 3 (Honors)	Other elective course appropriate for student's career and education plan.
	<b>12<sup>th</sup></b>	English/Language Arts (ELA) IV (1 credit)	Math for College Readiness* Advanced Placement Calculus AB* *Recommended	Physics 2 Honors* *Recommended	Economics (1/2 credit) United States Government (1/2 credit)		Advanced Technology Applications	Other elective course appropriate for student's career and education plan.

<b>POSTSECONDARY</b>	Based on the Career Cluster of interest and identified career and technical education program, the following postsecondary options are available.		
	<b>TECHNICAL CENTER PROGRAM(S)</b>	<b>COMMUNITY COLLEGE PROGRAM(S)</b>	<b>UNIVERSITY PROGRAM(S)</b>
	Not Applicable	<b>Miami Dade College</b> AS Degree in Advanced Manufacturing (22030)	<b>Florida International University</b> Biomedical Engineering Engineering Management Materials Science and Engineering  <b>University of Miami</b> Biomedical Engineering Industrial Engineering
<b>CAREER</b>	Sample Career Specialties (The Targeted Occupations List may be used to identify appropriate careers.)		
	Medical Equipment Technician / Programmer	Engineering Manager Manufacturing Technician Industrial Engineering Technician Medical Appliance Technician Precision Inspector, Tester and Grader	Biomedical Engineer Industrial Engineer Manufacturing Engineer Project Manager Quality Control Engineer Systems Engineer
<b>CREDIT</b>	Articulation and CTE Dual Enrollment Opportunities		
	<b>Secondary to Technical Center (PSAV)</b> (Minimum # of clock hours awarded)	<b>Secondary to College Credit Certificate or Degree</b> (Minimum # of clock or credit hours awarded)	<b>PSAV/PSV to AAS or AS/BS/BAS</b> (Statewide and other local agreements may be included here)

	<p>Not Applicable</p>	<p align="center"><b><u>Successful Completion of M-DCPS Courses articulate to Miami Dade College Courses AS Degree in Advanced Manufacturing (22030)</u></b></p> <p>Applied Engineering Technology 1 to ETD 1340 Computer-Aided Drawing &amp; Design (3 credits)  Applied Engineering Technology 1, &amp; 2 to EET 1082 Intro to Electronics (3credits)  Applied Engineering Technology 3 and  Advanced Technology Applications (Capstone/Portfolio) to EGN 1008 C Intro to Engineering (3 credits)</p> <p align="center"><b><u>Gold Standard Career Pathways Statewide Articulation Agreement Industry Certification Passed in High School to AAS/AS Degree Program</u></b></p> <p>Autodesk Certified Professional - AutoCAD (ADESK021)  Autodesk Certified Professional - Inventor (ADESK024)  Autodesk Certified Professional - Revit Architecture (ADESK025)</p> <p align="center"><b><u>MDC Dual Enrollment</u></b></p> <p>MAC 1105 College Algebra (3 credits)  MAC 1114 Trigonometry (3 credits)  COP 2270 C for Engineers (4 credits)  CGS 1060 Introduction to Microcomputers (4 credits)</p> <p align="center"><b><u>Non-Articulated Industry Certifications</u></b></p> <p>ADESK002 Autodesk Certified User - AutoCAD, ADESK011 Autodesk Certified User - Inventor, CNCSI002 Mastercam Associate - Mill Design and Toolpaths, NINSC001 LabView (CLAD) - The Associate Developer, RECFN002 RECF Robotics, SOLID001 Certified Solidworks Associate (CSWA), SOLID002 Certified Solidworks Prof. (CSWP)</p>	<p align="center"><b>Statewide Articulation Agreements</b></p> <p align="center">Not Applicable</p> <p align="center"><b>Gold Standard Career Pathways Statewide Articulation Agreement - Industry Certification Passed in PSAV Program to AAS/AS Degree Program</b></p> <p align="center">Autodesk Certified Professional - Inventor (ADESK024) to Engineering Technology (3 credits)</p> <p align="center"><b><u>Associate Science to Baccalaureate Degree Statewide Articulation Agreement</u></b></p> <p align="center">Not Applicable</p>
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Career and Technical Student Association

Technology Student Association (Secondary)

Internship/Work Experience Recommendations

Intern, Shadow or work at the following industries: Industrial Design; Aerospace/Aviation Manufacturing; Pharmaceutical; Medical Device Design / Manufacturing, Mechanical Maintenance of Automation Systems; Food or Consumer Products Manufacturing.

National Academy Foundation (NAF) Pathways to Engineering students have the opportunity to participate in job shadowing, internships, and on-the-job training (OJT).

In addition, the ACE Mentor Organization offers students the opportunity to work with mentors from local building industry firms, engage in a wide range of activities which may include visits to university engineering and other construction-related departments and offices, and collaborate on projects that simulate industry situations.

Program of Study Graduation Requirements 2013-2014: [Program of Study Graduation Requirements Checklist](#)