

Academy of Architecture & Construction

Career Cluster: Architecture & Construction

Program Strand: Materials and Processes Technology

Students who choose a career in Materials and Processes Technology find ways to use and improve existing materials including: metals, ceramics and glass, plastics, and other natural and synthetic materials and then come up with new materials or ways to use them. They work in a wide variety of businesses including the: automotive, sports, electrical, energy, microelectronics, aeronautical, aerospace, telecommunications industries.

Secondary Career Academy Development Timetable Academy classes are listed in bold type.

Pre-Academy Grades 6 – 8	Grade 9	Grade 10	Grade 11	Grade 12
6 th grade—Middle Moves 7 th grade—Career Preparation Requirement 8 th grade—Transition Tools MJ Wheel 8600020015 Introduction to Technology 860001001 Exploring Technology 860002012 Exploration of Production Technology 860005001 Exploration of Power & Energy Technology 860025002	English I	English II	English III	English IV
	Algebra or higher	Geometry or higher	Algebra II or higher	Pre-calculus or Other Mathematics Course
	Earth & Space Science or Biology	Biology or Chemistry	Chemistry or Physics or Physical Science	Science Elective or Other Elective
	World History	Elective	American History	American Government / Economics
	9 th Grade Transition	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective
	Materials and Processes Technology 1 860111001	Materials and Processes Technology 2 860112001	Materials and Processes Technology 3 860113001 (H)	Advanced Technology Applications 860190001 (H)
	Elective	Elective	Elective	Elective
	Elective	Elective	Elective	Elective

Suggested Electives:

- Students may in their Junior or Senior year opt to participate in the Career Experience Opportunity (CEO) internship program using the following course numbers: Workplace Essentials – 83003101A (Honors .5) and CEO internship – 0500330CE (Honors .5).
- Students may complete more than one program within the Academy of Architecture and Construction providing courses are offered at the school site.
- In addition, students can choose to enroll in Drafting/Illustrative Design Technology 1-3 classes to enhance their marketability.

To find a Miami-Dade County Public High School with this Program Strand, please link to http://ssr.dadeschools.net/acad_tally_schls.pdf

Internship Opportunities	Student Organizations / Clubs	Earn Upon Completion
<ul style="list-style-type: none"> • Internship • Cooperative Education • Job Shadowing • School-Based Enterprise • Service Learning • Dual Enrollment • Portal to CEO 	<ul style="list-style-type: none"> • Junior Engineering and Technical Society • SECME • Technology Student Association (TSA) 	<ul style="list-style-type: none"> • Industry Title & FLDOE OCP's correlated to the individual areas. • For more information on the Florida Department of Education Bright Futures Scholarship Programs: Florida Academic Scholars Award (FAS), Florida Medallion Scholars Award (FMS), and Florida Gold Seal Vocational Scholars Award (GSV) please contact a guidance counselor or visit: http://www.floridastudentfinancialaid.org/ssfad/factsheets/BF.htm. • For more information on advanced standing at local public and private post secondary institutions as established per articulation agreements please contact a guidance counselor.

POSTSECONDARY OPTIONS

Certification Programs	Community College (A.A./A.S.) or Proprietary Programs	Four-Year College and University Programs
<ul style="list-style-type: none"> • Welding • Electrical Journeyman • Building Construction Technician • D. A. Dorsey Vocational Center • Robert Morgan Educational Center • Wm. Turner Technical Arts Center 	<ul style="list-style-type: none"> • Manufacturing Engineering Technologist • Miami Dade College • D. A. Dorsey Vocational Center • Robert Morgan Educational Center • Wm. Turner Technical Arts Center 	<ul style="list-style-type: none"> • Agricultural Engineering and Bioengineering • Chemical Engineering • Chemistry • Industrial Engineering • Materials Engineering • Molecular Biology • FIU Department of Construction Management • Univ. of North Florida Building Construction Management Dept. • Univ. of Florida College of Design, Construction and Planning

CAREER OPTIONS

Entry Level	After Post-Secondary Education
<ul style="list-style-type: none"> • Building Maintenance Helper • Welding Helper • Manufacturing CNC Operator • Chemical Assistant • Industrial Worker • Machinist 	<ul style="list-style-type: none"> • Biomedical Engineer • Building Contractor / Entrepreneur • Inventor • Manufacturing • Industrial Engineer • Technical Writer • Engineering Project Manager • Consultant