

# Career and Technical Education Region 24 (Detroit)

## CTE Program Offerings by Career Cluster- Region 24 (Detroit)

Program Name	Description	Region 24 (City of Detroit)
<b>Agriculture, Food &amp; Natural Resources</b>		
Applied Horticulture & Horticulture Operations	As the world’s population continues to grow, successful production of food and other agricultural products will remain a global issue for many years to come. Students will learn a successful business career in industries related to the food system, including: farm production, commodity marketing and processing, food manufacturing and distribution and food retailing. It also helps develop the vital decision-making skills, understanding of the agricultural-food system dynamics, and the leadership/management qualities in this field.	Golightly Career and Technical Center Randolph Career and Technical Center
<b>Architecture &amp; Construction</b>		Enrollment 151
Construction Trades Carpentry	This is a 2-yr program that prepares students with skills and knowledge for a career in residential and/or commercial carpentry. Projects include rough framing of structures, foundations and roofs; application of siding, installation of fixtures, and drywall. The student in this program build a 1200 sq foot ranch home from the ground-breaking to the finished product when materials are available. Hands-on learning will be used for entry-level jobs in the construction industry or necessary lifetime skills	Randolph Career and Technical Center

<p>Construction Trades Home Furniture Equipment</p>		<p>Randolph Career and Technical Center</p>
<p>Construction Trades Masonry</p>	<p>Brick masons are highly skilled craftsmen who use specialized equipment and tools to mix mortar, bond materials together to form patterns, and lay out and construct foundations, masonry walls, patios and other types of stonework. Upon completion, graduates may work as a mason helper, enter into an apprenticeship, or operate their own business.</p>	<p>Randolph Career and Technical Center</p>
<p>Construction Trades Plumbing and Pipe Fitting</p>	<p>Students will learn to assemble, measure and construct piping and plumbing systems. Students will fabricate piping materials for water, gas, drain, waste, and vent systems by installing hot water tanks, appliances and fixtures. Students will also learn how to lay-out plans for plumbing systems, maintain plumbing equipment, rough in piping systems and install hydronic heating systems.</p>	<p>Randolph Career and Technical Center</p>
<p>Construction Trades Electricity</p>	<p>Students are introduced to the installation, maintenance and repair of electrical systems. Students explore a variety of job tasks by wiring and actual house circuit and the electrical components. Student learn to read blueprints, design layouts, bend conduit and test electrical systems. Students learn to install electrical circuits, doorbells and lighting fixtures. Students also learn code requirements, electrical meters and their uses, electrical theory, Ohm's Law and service maintenance.</p>	<p>Breithaupt Career and Technical Center Golightly Career and Technical Center Randolph Career and Technical Center</p>
<p>Construction Trades Lineworker</p>		<p>Randolph Career and Technical Center</p>

<p>Drafting and Design Technology (CAD)</p>	<p>CAD is highly affiliated with pre-engineering in the construction trades. CAD is designed to provide students with a foundation with the basic skills needed for success in modern engineering, design and renewable technology careers. Students will use CAD in the creation of drawings and 3D geometry in both standard and metric measurements. Instruction will be given through a combination of lecture, demonstrations and hands-on projects and experiments.</p>	<p>Breithaupt Career and Technical Center Golightly Career and Technical Center Randolph Career and Technical Center</p>
<p>Heating, Air Conditioning, Ventilation and Refrigeration</p>	<p>Students test and service an air conditioning unit, perform electrical, mechanical and maintenance tasks. They learn about the installation, maintenance and operation of residential air conditioning and refrigeration systems. Principles of air conditioning and refrigeration are explained, including gas expansion and compression, heat transfer, evaporation, condensation, thermostatic control, motors and electrical circuitry. Students also learn the basic heat system with includes operating controls, carbon monoxide analysis, service maintenance and installation</p>	<p>Randolph Career and Technical Center</p>
<p>Electronics Installation &amp; Repair</p>		<p>Breithaupt Career and Technical Center Golightly Career and Technical Center Randolph Career and Technical Center</p>
<p><b>Arts, A/V Technology &amp; Communication</b></p>		<p>Enrollment 559</p>
<p>Graphics and Printing Technology and Communication</p>		<p>Crockett Career and Technical Center Golightly Career and Technical Center Randolph Career and Technical Center Central High School</p>
<p>Radio &amp; TV Broadcasting Technology</p>		<p>Detroit School for the Arts Communication and Media Arts High School</p>

<b>Business Management &amp; Administration</b>		Enrollment 495
Business Management & Administration		Randolph Career and Technical Center Cass Technical High School Martin Luther King High School Renaissance High School Mumford High School
<b>Education &amp; Training</b>		
Education General		Breithaupt Career and Technical Center
<b>Finance</b>		Enrollment 169
Finance and Financial Management Services		Golightly Career and Technical Center Randolph Career and Technical Center Cass Technical High School Martin Luther King High School Renaissance High School
<b>Government &amp; Public Administration</b>		
Army ROTC	<p><b>The Detroit Public School Community District provides a robust program; however, they are not currently a part of the Career and Technical Education programming in the district.</b></p> <p>The Army Junior Reserve Officer Training Corps (ROTC) is a program offered to high school students that teach character education, student achievement, wellness, leadership, and diversity. It is a cooperative effort between the Army and the high school to produce successful students and citizens, while fostering in each school a more constructive and disciplined learning environment.</p>	Cass Technical High School Cody High School Communication, Media & Arts High School Denby High School (2017) Detroit Collegiate Preparatory High School for Young Women Frederick Douglas Academy for Young Men East English Preparatory High School King High School Mumford High School (2017) Osborn College Preparatory High School Pershing High School Renaissance High School Western International High School
Navy ROTC		Benjamin Carson High School
<b>Health Science</b>		Enrollment 44
Therapeutic Services		Crockett Career and Technical Center

**Hospitality and Tourism**

Enrollment 436

Hospitality & Food Services	Students learn basic and advanced principles of food preparation and services practiced in the hospitality industry. Students perform job related tasks found in typical commercial dining establishments; dining room services; pantry shops (cold foods); and restaurant style food preparations; as well as the art of preparing food, proportionally suited to serve quantities specific to special occasions, catering and gourmet services are taught. Students also, receive instruction in computer applications relative to food industries.	Breithaupt Career and Technical Center Golightly Career and Technical Center Communication and Media Arts High School
Travel & Tourism	Students learn skills for exciting career opportunities within the travel, tourism and hospitality industries, including airlines, cruise lines, tour operators, wholesalers, charter operations, hotel representatives, car rental agencies, tourist offices, as well as, meeting, event and convention planning companies and travel agencies.	Breithaupt Career and Technical Center Golightly Career and Technical Center Communication and Media Arts High School
Baking and Pastry	Students learn practical baking operations associated with the preparation of breads, cakes, pies, pastries and other bakery products, decorating, counter display, and packaging merchandise.	Breithaupt Career and Technical Center Golightly Career and Technical Center
Meat Cutting	Students learn to process, package, display and sell retail and restaurant cuts of meat. Students are taught the art of Customer Service through the operations and management of the various shops which comprise our Culinary Department. Students also learn marketing and entrepreneurial skills as they serve the public	Breithaupt Career and Technical Center Golightly Career and Technical Center

<b>Human Services</b>		Enrollment 90
Cosmetology	Students enrolled in the Cosmetology program are educated in the science and art of beauty culture. Students learn practical techniques and manipulative skills utilized in the care and styling of hair. Students are expected to earn 500 clock hours each year of the three year program and upon attainment of the 1500 hours, participate in the State of Michigan Licensing Examination for Cosmetologist.	Breithaupt Career and Technical Center Crockett Career and Technical Center Communication and Media Arts High School
Manicuring 1-yr.	(10-12 <sup>th</sup> Graders only!) – Students enrolled in this one year course, will learn the art and science of hands and feet. Core skills include: entrepreneurship, salon ecology, mechanical/electrical safety, salon management, ethics, occupational safety and health administration, anatomy/physiology with basic and advanced nail care techniques. At completion of this comprehensive 400 hour course, students will have the knowledge and ability to take the Manicuring Licensure Examination.	Breithaupt Career and Technical Center
<b>Information Technology</b>		
Information Technology		Golightly Career and Technical Center Cass Technical High School
<b>Law, Public Safety, Corrections &amp; Security</b>		Enrollment 34
Protective Services		Golightly Career and Technical Center Randolph Career and Technical Center Medicine and Community Health Academy at Cody High School

<b>Manufacturing</b>		Enrollment 46
Welding and Cutting	<p>Students learn major welding and cutting processes, those utilized in industrial welding industries, such as oxy-acetylene welding and brazing, shielded metal arc welding, gas metal arc welding, and tungsten arc welding. The students design, lay out, cut and fabricate metals in the production of various projects such as, free standing basketball rims, decorative yard furniture, fencing, and barbeque pits. Students are privy to National Welding Certifications, as well.</p>	<p>Breithaupt Career and Technical Center Crockett Career and Technical Center Communication and Media Arts High School</p>
<b>Marketing</b>		Enrollment 178
Marketing	<p>The Marketing course is designed to develop student understanding and skills in the areas of distribution, pricing, product/service management, promotion and sales. Emphasis will be placed on the impact that customer behavior has on the implementation of marketing functions. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical thinking skills. Participation in cooperative education education is encouraged in order to provide the students the opportunity to apply newly acquired marketing skills in the workplace.</p>	<p>Randolph Career and Technical Center Golightly Career and Technical Center Cass Technical High School Communication and Media Arts Academy</p>
<b>Science, Technology, Engineering &amp; Mathematics</b>		Cass Technical High School

**Transportation, Distribution & Logistics**

Enrollment 127

Aeronautics/ Aviation/Aerospace Science & Technology		Davis Aerospace Technical High School
Airframe Technology		Davis Aerospace Technical High School
Automotive Collision Repair	Students learn to repair and/or restore automobiles and truck bodies; weld broken frame parts, replace damaged or missing vehicle body parts; estimate cost of repairs; prep and paint repaired vehicle body surfaces.	Breithaupt Career and Technical Center Golightly Career and Technical Center Communication and Media Arts High School
Automotive Services Technician	With an emphasis on professional service and diagnostic procedures, students will learn the operation of automotive systems and will perform skill exercises in: (1) Engine Performance, (2) Brakes (3) Steering and Suspension (4) Electrical/Electronic System relative to automotive services. The Automotive Services Technician Program develops technical skills necessary to maintain one's personal automobile and seek professional mechanic certification. (NATEF Cert.)	Breithaupt Career and Technical Center Golightly Career and Technical Center Communication and Media Arts High School
Power Plant Technology		Davis Aerospace Technical High School