



CAREER PROGRAMS

112 RUES LANE, EAST BRUNSWICK, NJ 08816 | 732-254-8700

MIDDLESEX COUNTY
MAGNET SCHOOLS



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AGRISCIENCE TECHNOLOGY

AgriScience provides students the opportunity to gain hands-on experience within the field of agriculture, including: greenhouse management, floriculture, plant science, food science, and biotechnology. The AgriScience program follows the Curriculum for Agricultural Science (CASE) Plant Pathway. Once completing the CASE Plant Pathway, students can graduate with college credits determined by articulation agreements. The diversity of this course, along with their involvement in the FFA (ffa.org), will prepare students for employment within the field of agriculture or to continue on to college.

ARCHITECTURAL TECHNOLOGY

Architecture Technology is designed to challenge students interested in architecture, building, construction, computers, drawing, design, and engineering. Students translate design drawings into working drawings manually and through the use of computer-assisted drafting systems. Graduates are employed as drafters for architects, mechanical engineers, structural engineers, civil engineers, surveyors, and developers.

ARTS TECHNOLOGY

This program includes scene design, costume design, lighting and audio design, stage management, projections, stage craft, computer-aided drafting for performances, live sound and audio engineering, model making, rigging, special effects, set design, and entertainment technology.



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AUTOMOTIVE SERVICES

This program stresses the basic jobs, operations and skills needed in the servicing, diagnosis and repair of automobiles. Students will gain a thorough knowledge of tools, materials, and equipment used by auto mechanics. They will learn to use meters, diagnostic equipment, and measuring instruments; learn to interpret sketches, schematics and diagrams; and use service manuals and other shop materials. Graduates of the program are employed as dealer preparation mechanics, brake specialists, tune-up mechanics, and service mechanics and parts distributors.

AUTOMOTIVE TECHNOLOGY

This program provides students the opportunity to excel in specialized training of automotive engine operations, vehicle maintenance and repair, steering and suspension systems, computerized engine control, brake systems, electrical systems, fuel and ignition systems, and front end alignment. A challenging curriculum prepares students to master skills required to pass Automotive Service Excellence (ASE) certification examinations. Graduates may pursue employment, continue their education, or enroll in the associate degree program in automotive technologies at Middlesex College. This is a joint program between the college, the Middlesex County Magnet School and Ford Motor Company. (This program offers a post-secondary articulation agreement with Ohio Technical College (12), Universal Technical Institute (12) and Fairleigh Dickinson University (3).



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BAKING

Graduates of the Baking program enter culinary careers to become bakers, pastry chefs, production workers, merchandising/marketing sales personnel, managers, supervisors, and business owners. Instruction is provided in production, mixing, molding, bench makeup, oven work, cake decorating, sales and delivery, sanitation, and safety engineering. Students participate in storefront, buffet and banquet operations. (This program offers a post-secondary articulation agreement with The Art Institute of Philadelphia (9), Atlantic Cape Community College (5) and Johnson & Wales University (3-9).

BUILDING SERVICES

Students prepare for careers in the building services industry through the study of commercial cleaning, maintenance and grounds-keeping operations. Students learn to use power and hand tools, apply materials used in cleaning procedures, painting, spray buffing, machine polishing, and basic carpentry, electricity, plumbing, small engine repair, and landscaping skills. Graduates enter the labor force as sanitation technicians, custodians, landscapers, groundskeepers, carpenter's helpers, plumber's helpers, or maintenance technicians.

BUILDING TRADES / CARPENTRY

Students in this program learn the basic skills and knowledge needed in the areas of carpentry incorporating the use of hand and power tools, and the operation of common trade equipment and accessories. Instruction includes framing, roofing, siding and general construction. Graduates work as carpenter/helper, cabinet assembler/installer, sheather, framer, panel installer, flooring installer, porch and deck helper, and roofer, or may pursue apprenticeship or advanced training in the trade.



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BUSINESS ADMINISTRATION

Overall employment in business and financial occupations is projected to grow 7 percent from 2021 to 2031.* The Business Administration program prepares students for entry-level employment or college ready studies. Instruction includes Accounting, Computer Applications, Business Management, Financial Analysis, Office Procedures, and Global Logistics. Graduates may pursue advanced training or find jobs in entry-level management positions.

*per Occupational Outlook Handbook

COSMETOLOGY / HAIRSTYLING

An exciting career in cosmetology and hairstyling offers many opportunities to both men and women. Students are trained to do all phases of hairdressing and cosmetology, including preparing materials, demonstrating and selling materials, shampooing, manicuring, hairstyling, barbering, hair conditioning, facials, and makeup. This course also includes hair cutting, rinsing, coloring, and permanent waving. Successful completion of this course prepares students for examination requirements for licensure by the State Board of Cosmetology.

CULINARY ARTS

This course develops skills in the culinary arts and prepares students for the many occupations available in the restaurant industry. Instruction emphasizes understanding essential cooking techniques, which can then be adapted to create innovative food items. Instruction also includes food sanitation, nutrition and use of equipment. In a simulated restaurant, students prepare and execute a daily lunch menu and learn front and back operations in a restaurant. Employment opportunities range from sous chef, working chef, pantry worker, grade manager, pastry assistant and kitchen sanitation worker. Post-secondary opportunities are available in various culinary schools and colleges.



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DANCE (AUDITIONS REQUIRED)

This program educates and prepares students who have demonstrated a strong interest in the field of dance. Dance students have a daily dance techniques class in modern dance, ballet or jazz. The dance curriculum includes choreography, dance production, criticism and dance history. This program provides professional training and preparation for advanced post-secondary studies.

DIGITAL FILMMAKING (AUDITIONS REQUIRED)

A program that prepares individuals to communicate dramatic information, ideas, moods and feelings through the making and production of films and videos. This program includes instruction in theory of film, film technology and equipment operation, film production, film directing, cinematographic art, film audio, techniques for making specific types of films and/or videos, media technologies, computer image making, multimedia production and the planning and management of film/video operations. It will emphasize becoming both a competent technician as well as a thinking producer. Just as important as gaining the knowledge of the technology of media arts is coming to appreciate and using film as a creative and expressive medium.

GRAPHIC DESIGN/COMMERCIAL ART AND ILLUSTRATION (AUDITIONS REQUIRED)

In the Graphic Design curriculum students will learn skills such as layout and design, computer graphics, color theory, typography, photography, composition, image creation and editing. Students use Apple Computers and programs such as Adobe Photoshop, Illustrator and InDesign. Students learn visual communication, problem-solving and creative thinking. There are a variety of assignments and projects given. Students create posters, book covers, .gifs, interactive magazines, albums, logos, packaging, advertisements, and portraits for a charity. Individuals graduate with a strong printed portfolio, as well as a .pdf and web-based portfolio.



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HEALTH SERVICES

This program is designed to provide students with occupational experience and training associated with occupational titles such as physical therapy aide, home health aide, laboratory assistant, occupational therapy aide, or dietary aide. Students participate in clinical experiences. Students compete in skills competitions conducted by the Health Occupation Students of America (HOSA) on a regional and state level.

HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION TECHNOLOGY (HVAC/R)

Students in the program use meters, measuring instruments, tools and equipment and interpret sketches, schematics and diagrams. Instruction includes installation, maintenance, repair, and knowledge of duct systems for various types of equipment in residential and commercial systems, and solar heating technology. Graduates are employed as technicians or installers. They may work with local contractors or pursue advanced training. Students will be taught the skills necessary for proper maintenance, servicing, repair, installation of gas, electric, solar heating and cooling units for commercial and domestic use.

MACHINE TOOL TECHNOLOGY

The Machine Tool Technology Program will challenge students who are interested in design, engineering, or computers. Instruction includes blueprint reading, machine theory, metallurgy, measuring techniques, and computerized numerical control. Students work with all types of metal alloys, plastics, wood, and composite materials, manufacturing (CAM), and robotics.



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MULTIMEDIA ART AND DESIGN (AUDITIONS REQUIRED)

Multimedia, Art, and Digital Design is structured as a synthesis of the classical, realistic, old master studio atelier experience, coupled with state-of-the-art digital technologies to maximize and enhance each student's artistic abilities as they master both traditional and technological skill sets. Artistic and technological disciplines include areas such as: art foundations, drawing, painting, anatomy, art history, illustration, digital media communications, design and composition, digital photography, CGI special effects, digital literacy, social media, website design, animation, video game design, 3D printing and scanning, portfolio preparation, industrial design, and emerging digital technologies.

MUSIC PERFORMANCE AND TECHNOLOGY (AUDITIONS REQUIRED)

This program will prepare students for career pathways in both musical performance and audio technology. Instruction will include music theory, history, composition, acoustics, live and studio performance, scoring for film, dance, theater and multimedia projects, instrumental, ear and voice training, audio recording technology, electronic music synthesis, entertainment and music as business and career options, entertainment law and more.



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PRE-ENGINEERING AND MANUFACTURING TECHNOLOGY

Students will work in project-based learning teams and individually in our brand new, 2600-square-foot “mechatronics lab” with state-of-the art workstations including robotics, programmable logic controllers, electronics and power distribution, CNC milling, mechanical power transmission, lifting mechanisms, pneumatics, hydraulic power systems, integrated mechatronic systems, and a diverse maker space. Students will learn how to become successful leaders in manufacturing and develop 21st-century skills employable in a technology-driven marketplace. They will receive a solid foundation in mechatronics, a blended curriculum of electronics, mechanical, and computers, which can readily be used for employment or pursuit of an advanced degree in engineering or technology.

THEATRE (AUDITIONS REQUIRED)

This program educates and prepares students who have demonstrated a strong interest in the field of theatre. Students are immersed in an innovative arts-infused curriculum that is challenging and incorporates performance-based learning. The Theatre curriculum includes acting techniques, principles of production and design, theatre history, improvisation, directing, playwriting and criticism. This program provides professional training and preparation for advanced post-secondary studies.