MORRIS HILLS
REGIONAL DISTRICT

SUPERINTENDENT of SCHOOLS
James J. Jencarelli 973. 664.-2291

ASSISTANT SUPERINTENDENT
CURRICULUM & INSTRUCTION
Nisha Zoeller, D. Litt. 973. 664.2293

BUSINESS ADMINISTRATOR
& BOARD SECRETARY
Joann Gilman Auricchio 973.664.2281

SUPERVISOR OF
HUMAN RESOURCES
Peter Lazzaro 973.664.2297

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Annual Public Notice

In accordance with USDE Guidelines IVO, Title VI: 34 C.F.R. § 100.6 (d) this notice shall serve to advise students, parents, employees and the general public that all Career and Technical Education opportunities in Morris Hills Regional District shall be offered to all students regardless of race, color, national origin, gender or disability. During the academic year, Morris Hills Regional District shall offer the following Career and Technical opportunities as described in the Program of Studies and make available online at http://www.mhrd.org. The admission and criteria for selection in career and technical education programs do not restrict any race, color, sex, national minority origin or students with disabilities from participation in Morris Hills Regional District's career programs.

- Summary of program(s) offered and admission criteria:

  - Auto Mechanics1, Auto Mechanics 2, Auto Mechanics 3
  - Science Inquiry 1, Science Inquiry 2, Science Inquiry 3
  - CAD 1 CAD 2, Architectural Design, Engineering Design
  - Metalworking, Metals & Manufacturing Technology, Advanced Metals & Manufacturing Technology

AUTO MECHANICS 1 (TC920)

Grades 10, 11, (12 on a space available basis); 10 credits; One Year Elective

The three-year automotive mechanics program is designed to prepare the student for a career as an auto technician. The student is taught to understand the operation and repair of all parts of the vehicle. The first year begins with the learning of basic automotive theory through readings, discussions, audiovisual presentations and demonstrations. This is followed by actual practical work performed on vehicles scheduled into the shop for repairs. Experiences include service and repair of chassis, cooling system, lubricating system, electrical system, exhaust system, engine accessories and computer-assisted diagnostics. Emphasis is given to instruction in technical knowledge, practical skills, processes and techniques, and occupational information.

AUTO MECHANICS 2 (TC930)

Grades 11, 12; 10 credits; One Year Elective; Prerequisite: Auto Mechanics 1

This course re-emphasizes and expands all previously learned skills and knowledge. It provides for continued study and more advanced application of instructional units in automotive repair and service. During this second year, the emphasis is placed almost entirely on practical experience. Students perform all of their work on vehicles scheduled into the automotive shop. Units are expanded to include the study of electrical and electronic systems, air conditioning and heating operating principles/applications which lead towards Automotive Service Excellence (ASE) refrigerant/recovery/recycling certification. All instructional units will prepare students to satisfy the requirements of ASE/National Automotive Technician Educational Foundation (NATEF) certification.

AUTO MECHANICS 3 (TC940)

Grade 12; 10 credits; One Year Elective; Prerequisite: Auto Mechanics 2

This course re-emphasizes and expands all previously learned skills and knowledge, and provides for continued study and more advanced application of instructional units in automotive repair and service. During this third year, the emphasis is placed almost entirely on practical diagnostics, business management, and leadership. Students perform all of their work on vehicles scheduled into the automotive shop. Units are expanded to include the study of electrical and electronic systems, air conditioning and heating operating principles/applications which lead towards Automotive Service Excellence (ASE) refrigerant/recovery/recycling certification. All instructional units will prepare students to satisfy the requirements of ASE/National Automotive Technician Educational Foundation (NATEF) certification.

SCIENCE INQUIRY & TECHNOLOGY 1 (SC963)

Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisite: Successful completion of a ninth grade science course, application, interview and acceptance into the course; Co-requisite: Science lab course; Does not satisfy the science graduation requirement.

This course is designed for students who have demonstrated interest and ability in scientific and technological areas of study. Particular emphasis will be given to the strengthening of technical service laboratory and technological skills and study in an area selected by the student under the mentorship of a science teacher and technology teacher. Science Inquiry and Technology 1 focuses on strengthening scientific research skills by requiring participation in short-term science and technology research projects, problem solving strategies, and identifying a topic for individual research. Students will also be given instruction and trained to work as part of a research and development team.

SCIENCE INQUIRY & TECHNOLOGY 2 (SC964)

Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Science Inquiry & Technology 1; Co-requisite: Science lab course; Does not satisfy the science graduation requirement.

This course is designed for students who have demonstrated interest and ability in scientific and technological study. Emphasis will be given to the strengthening of science and technological laboratory skills and study in an area selected by the student under the mentorship of a science teacher and a technology teacher. Science Inquiry and Technology 2 focuses on scientific and technological skills acquired in Science Inquiry and Technology 1

SCIENCE INQUIRY & TECHNOLOGY 3 (SC965)

Grade 12; 5 credits; One Year Elective; Prerequisite: Science Inquiry & Technology 2; Does not satisfy the science graduation requirement.

This course is designed for students who have demonstrated interest and ability in scientific and technological areas of study. Further emphasis will be given to strengthening of technical service laboratory skills and study in an area selected by the student under the mentorship of a science teacher and technology teacher.

COMPUTER AIDED DESIGN 1 (TC911)

Grades 9, 10, 11, 12; 5 credits; One Year Elective

This course introduces the student to the use of drawing as the language of industry and provides the opportunity to use the computer and drafting instruments in preparing various types of drawings. Experiences are provided in the basic fundamentals of Computer Aided Drafting and on the drawing board. Topics include related technical knowledge, practical skills, general information, and an overview of career opportunities related to the drafting field. Special attention is given to technique, method, and industrial applications. The areas taught are orthographic projection, sections, primary auxiliaries, shop processes, fasteners, dimensioning, blueprint reading, detail and assembly drawing, and pictorial drawing. Emphasis is on the value of a planned approach to problem solving by developing models of lawn sheds to actual scale drawings.

COMPUTER AIDED DESIGN 2 (921)

Grades 10, 11, 12; 5 credits; One Year Elective Prerequisite: Computer Aided Design 1

Fundamentals of CAD is a course in which students develop problem solving skills, with emphasis placed on advanced mechanical drafting, basic 3D modeling and architectural design. Students will start with base concepts and apply them to real world projects in both the fields of engineering and architecture. In engineering, students will go from creating simple sketches and geometric shapes to producing 3D drawings and assemblies. In architecture, students will design a house while learning the basics of surveying, planning and design. Students will continue their studies in AutoCAD and will be introduced to 3D modeling in Autodesk Inventor.

ARCHITECTURAL DESIGN (TC941)

Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Computer Aided Design 2

Architectural Design is a course designed for the student who is considering a career in the field of architecture or other related areas. The comprehensive skills learned and advanced lessons on house design, layout construction methods, materials and building codes will enable a student to draw a complete set of original plans for a house design of their own. Students will also get hands on experience by building a physical model of their house design. Students will also complete real world projects in commercial design and Green building practices. Students will continue their studies in AutoCAD and also be introduced to the Autodesk Revit 3D modeling, AutoCAD Architectural Desktop, Google SketchUp and Photoshop software programs. All students will have the opportunity to enter state and national architectural design contests and with successful completion of this third year course, will be eligible to earn an ADDA certificate and be recognized as an apprentice drafter.

ENGINEERING DESIGN (TC931)

Grades 11, 12; 5 credits; One Year Elective; Prerequisite: Computer Aided Design 2

Engineering Design is a course designed for the student who is considering a career in the field of engineering or other related areas. Students will utilize the Engineering Design Process to complete a multitude of projects designed to replicate real world problems in various engineering fields. Students will continue their studies in AutoCAD and Autodesk Inventor and be introduced to topics including advanced 3D modeling and construction, 3D animation and 3D printing. All students will have the opportunity to enter state and national engineering design contests and with successful completion of this third year course, will be eligible to earn an ADDA certificate and be recognized as an apprentice drafter.

METALWORKING (TC954)

Grades 9, 10, 11, 12; 5 credits; One Year Elective

This is a general metalworking course offering instruction and study activity in the areas of sheet metal, foundry, welding, forging, precision measuring, and machine shop practices. Background and developmental demonstration and informational study and discussion are supplemented through practical experience in the use of tools and materials. Activities will include the study of the production of metals, sheet metal layout and fabrication, pattern making, soldering and brazing, welding exercises, metal finishing and metal lathe operation. Projects will be carried out commensurate with the interest and ability of the student.

METALS AND MANUFACTURING TECHNOLOGY (TC965)

Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisites: Metalworking

This course is designed to provide students with advanced skills used in the manufacturing trades. Advanced machine tool and welding operations, inspection, CNC machining, and foundry operations will be emphasized. Students will design their own projects by hand sketching or through the use of design software (AutoCAD). Experimentation with the various processes available is encouraged. The history and current trends of manufacturing will be studied from an occupational viewpoint.

ADVANCED METALS AND MANUFACTURING TECHNOLOGY (TC966)

Grades 10, 11, 12; 5 credits; One Year Elective; Prerequisites: Metals and Manufacturing Technology, Application and Instructor Approval

As the culminating course in the Machine Shop Technology CTE Program, this course will build upon the skills learned in Metals and Manufacturing Technology. Students will approach this course independently, working towards completing projects they have designed on their own. Portions of the second half of this course will focus on preparation for an industry-approved completer examination. Opportunities for job-shadowing will be made available to the students who are enrolled in this course.

All programs are offered to all students.

The following individuals are designated to coordinate compliance and handle complaints under Title IX and Section 504:

Title IX
Sonya Boyer, District
48 Knoll Drive
Rockaway, NJ 07866
973-664-2324
sboyer@mhrd.org

Section 504
Yesenia Rivera, Morris Hills High School
520 West Main Street
Rockaway, NJ 07866
973-664-2313
yrivera@mhrd.org

Section 504
Stan Abromavage, Morris Knolls High School
50 Knoll Drive
Rockaway, NJ 07866
973-664-2211
sabromavage@mhrd.org

Affirmative Action Officer
Sonya Boyer, District
48 Knoll Drive
Rockaway, NJ 07866
973-664-2324
sboyer@mhrd.org