

McGUFFEY HIGH SCHOOL



2023 - 2024
ACADEMIC
HANDBOOK

Dear Parent/Guardian,

With the help of teachers and school counselors, students in grades 8 - 11 will begin choosing their courses for the upcoming 2023-2024 school year. Students should make their selections carefully, guided by their aptitudes, interests, future education goals, and career plans. To facilitate this process, the McGuffey High School administration has prepared this Academic Handbook for students and parents.

It is important for parents be involved in the scheduling process as it is a significant part of a student's future success beyond high school. Your contribution can assure that the partnership between the home and school will provide the best possible educational experience for your child.

Please review the course levels, prerequisites, and descriptions with your child. We have incorporated information provided by the Pennsylvania Department of Education on Career Pathways and Clusters (Page 10). This information is designed to match our course selections with a student's future career planning. Each of our high school courses has been aligned to a suggested career pathway(s) to provide insight on which courses will benefit their specific career interests. Please keep in mind that career planning is only one criteria for selecting courses, and students may select courses based on many other factors as well.

Our school counselors will meet with students to discuss the scheduling process and our high school faculty will be providing the necessary recommendations in their appropriate content area. Best wishes for continued success during the remainder of the 2022-2023 school year.

Mr. Mark J. Bonus
Principal

Mrs. Angela MacBeth
High School Counselor

Mr. Luke Healey
Assistant Principal

Mrs. Rita Ross
High School Counselor

At the back of this handbook are resources to facilitate 2023-2024 scheduling including:

A. Step by step directions in the Scheduling Process - Page 50

B. Directions on how to enter your course requests for the upcoming year into Powerschool - Page 51

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COURSE DESCRIPTIONS BY DEPARTMENT

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Curricula

The curricular offerings of the high school are the following:

- Advanced Placement
- Honors
- Academic
- WACTC Career and Technical Education Programs
- Penn Commercial Cosmetology Program
- McGuffey High School Career and Technical Education Programs

The Advanced Placement, Honors, and Academic Curriculum contain a course of study that has been developed to prepare the student for post-secondary education and future career opportunities. This curriculum includes English, Social Studies, Mathematics, and Science on a yearly basis.

The Career and Technical Curriculum offered at Western Area Career and Technology Center (WACTC) contains the following programs:

- Automation and Robotics Engineering Technology
- Automotive Mechanics
- Carpentry
- Collision Repair Technology
- Networking
- Cosmetology
- Culinary Arts
- Electrical Occupations
- Emergency and Protective Services
- Health Assistant
- Heating, Ventilation, and Air Conditioning
- Machine Shop
- Masonry
- Welding
- Sports Medicine

The Career and Technical Curriculum offered at Penn Commercial contains the following program:

- Cosmetology

The Career and Technical Curriculum is offered at McGuffey High School contains the following programs:

General Agriculture (CIP 01.0000) - An instructional program that generally describes the principles and practices of agricultural research and production and may prepare individuals to apply such knowledge and skills to the solution of practical agriculture problems. This program includes instruction in basic animal, plant, soil science and mechanization, animal husbandry, plant cultivation, soil conservation, and mechanical technology. Instruction may include an emphasis in aquaculture, hydroponics, food science and/or environmental science.

Agricultural Mechanization, General (CIP 01.0201) - An instructional program that prepares individuals in a general way to sell, select, and service agriculture or agribusiness technical equipment and facilities including computers, specialized software, power units, machinery, equipment, structures, and utilities. This program includes instruction in agriculture power units, the planning and selection of materials for the construction of agriculture facilities, safe mechanical practices associated with water conservation, erosion control, and data processing systems.

Engineering Technologies, (CIP 15.999) - This program prepares individuals to apply knowledge and skills in the engineering field. Instruction includes, but is not limited to safety, ethics, power, problem solving, teamwork, engineering graphics, automated systems, fundamental electronics, manufacturing systems as well as adhering to the STEM initiative.

Scheduling Procedures

1. All students are required to be registered for a minimum of 7.0 credits (each year) of academic course work.
2. Students in grades 9, 10, and 11 who have not yet scored Advanced/Proficient on any one of the three Pennsylvania Keystone Assessments will be required to complete remediation in that designated content area.
3. During the first five student days of the school year, a student may initiate a schedule change(s) in core subjects. A core subject is an English, Social Studies, Math or Science class taken to meet graduation requirements. Courses that are dropped through this process will not appear on the student's permanent record.
4. After the first five student days and during the first term of the school year, all courses that are dropped will be assigned a W/F for the final grade. This grade will appear on the student's transcript and will be factored in to his/her cumulative grade point average as an F.
5. After the first term of the school year, all dropped courses will be assigned an F for the final grade. This grade will appear on the student's transcript and will be factored in to his/her cumulative grade point average as an F.
6. During the first five student days of each semester, a student may only add offered courses in place of study halls. Course offerings may be limited based on student enrollment and scheduling requirements.
7. The last day to initiate changes in elective courses is **June 2, 2023**.
8. No requests for class period changes, teacher changes, or lunches will be accepted.
9. All classes are subject to cancellation based on student enrollment.
10. Incoming ninth grade students will not be scheduled for more than 7.0 credits unless parental permission is obtained by the Guidance Office.

Grading Policies

1. Grades will be determined according to the following percentages (unrounded).

90% - 100% = A
80% - 89% = B
70% - 79% = C
60% - 69% = D
59% - Below = F

2. All full year core courses (Social Studies, Math, English, Science) for grades 9-12 may include one end of semester exam for each semester. Each exam will count as a grade on the second or fourth term. The value of each semester exam will not exceed that of a major exam for that grading period. If the course requires these exams, the teacher(s) will inform students at the beginning of the school year.

3. All semester core courses (Social Studies, Math, English, Science) for grades 9-12 may include an end of semester exam. The end of semester exam will count as a grade on the second or fourth term. The value of the end of semester exam will not exceed that of a major exam for that grading period. If the course requires these exams, the teacher(s) will inform students at the beginning of the school year.

Full Year Courses (9-12)

Final course grades will be determined by adding the four term percentages together to obtain a total course percentage, then dividing that percentage by the number of terms (four). The resulting percentage will then utilize the grading scale listed above to determine the final grade for the course.

Semester Courses (9-12)

Final course grades will be determined by adding the two term percentages together to obtain a total course percentage, and then dividing that percentage by the number of terms (two). The resulting percentage will then utilize the grading scale listed above to determine the final grade for the course.

Incomplete Grades

(I) Incomplete = A student, whose report card is marked incomplete, has not completed the necessary assignments or assessments to receive a grade in that course for the nine-week grading period. All incomplete work must be made up within two (2) weeks after report cards have been issued. Any "I" grade which is not remedied within this two (2) week period will result in a student being given a zero (0) for those specific assignments or assessments. Exceptions can be made at the discretion of the principal in cases of extended illness. No incomplete grade (I) will be issued during the final grading period.

Withdrawal Grades

W/F = Recorded on the student's transcript and will be factored into cumulative grade point average as an F.

Grading Procedures

Grades will be determined by the following components:

Assessments	Homework Assignments	Class Participation	Class Projects
Class Attendance	In-Class Activities	Cooperation and Effort	Other unique to the course

High Honor Roll & Honor Roll

Honor rolls for the high school are prepared and posted at the close of each report period.

The Honor Roll is divided into two recognitions: **High Honor Roll** and **Honor Roll**. Honor rolls at the end of a grading period are determined by the quality point average as follows:

High Honors:	4.000 or above
Honors:	3.500 to 3.999

Quality points are numerical values assigned to grades earned in all subjects.

A failing mark in any subject area will result in not being placed on the Honor Roll.

Any mark below a "C" will result in not being placed on the "High" Honor Roll.

A student must be in good standing to be eligible for this recognition.

The following letter grade values (quality points) will be used to determine Grade Point Averages and Honor Roll eligibility:

A = 4
B = 3
C = 2
D = 1
F = 0

All Advanced Placement courses and specified Honors Courses in Grades 11 and 12 utilize the following letter grade values (quality points) to determine Grade Point Averages and Honor Roll eligibility:

A = 5
B = 4
C = 2
D = 1
F = 0

To determine a student's quality point average, the total number of quality points is divided by the number of attempted credit units.

All students must register for 7.0 credits per year.

A course, that is repeated, after having once been completed with a passing grade, appears twice on the student's record. The original grade shall be disregarded, and the grade earned when the class is repeated shall be used in determining the grade point average. The original grade will not be deleted from the student's record.

Grade Promotion and Retention

All ninth-grade students will be scheduled for a minimum of seven credits their freshman year.

The following credits will be needed to pass from one grade to the next:

To move to the 10th grade one must pass at least 6 credits.

To move to the 11th grade one must pass at least 13 credits.

To move to the 12th grade one must pass at least 20 credits.

Freshmen / WACTC

Ninth grade students must earn a minimum 2.0 GPA based on their Final Grades in order to be scheduled to attend WACTC the following year. Parents may request a meeting with the Principal to discuss WACTC placement if student does not meet the GPA threshold.

Advanced Standing for Middle School Students

Middle School students who are enrolled in specific high school courses (Algebra 1/ Spanish 1 /Introduction to Agriscience) can earn credits towards high school graduation based on the credit total for the course(s) taken. Grades earned by Middle School students in specific high school courses will be included in the student's high school GPA calculation at the end of their freshmen year.

Graduation Obligations / Culminating Graduation Project (CGP)

Graduation from McGuffey High School requires the successful completion of all academic requirements, the fulfilling of all financial obligations, student attendance at commencement, and the successful completion of a Culminating Graduation Project (CGP). As part of its strategic plan, the McGuffey School District has adopted a CGP as a formal requirement for graduation. The purpose of this project is to provide a series of experiences that will prepare students to succeed in future employment and to become positive contributors within their communities. Information on the Culminating Graduation Project is located on the school website.

Questions concerning the CGP should be directed to high school guidance office.

Advanced Placement Courses and AP Exams

Any student who enrolls in any Advanced Placement course at McGuffey High School will be required to take the AP Exam for that course during the testing window in May. There will be no cost to the student to participate in this exam. Students can access their scores online when they are released by The College Board. AP Exams are scored on a scale of 1 to 5. Most colleges and universities continue to award college credits for a score of 3 or higher on the AP Exam.

Dual Enrollment Program

Juniors and Seniors who meet eligibility requirements, may enroll in courses offered by specific colleges and universities that meet the graduation requirements of McGuffey High School and provide opportunities for college credit/advanced standing. Courses approved for Dual Enrollment are found on Pages 48-49 of the 2023-2024 McGuffey High School Academic Handbook.

University of Pittsburgh in the High School Program

Specific courses available at McGuffey High School provide opportunities for students to obtain credits towards graduation from McGuffey High School and advanced standing at the University of Pittsburgh. More information on "Pitt in the High School" for 2023 - 2024 can be found in the High School Guidance Office.

Academic Requirements for Graduation

1. Twenty-Six Credits or Fifteen and a Half Credits and Completion of a WACTC / PC Program.
2. Successfully completed a Culminating Graduation Project (CGP).
3. The meeting of all state requirements issued by the Pennsylvania Department of Education as necessary for students to graduate from high school in the Commonwealth of Pennsylvania.

Credit Requirements / Course Requirements

4	credits of English (English 9, 10, 11, 12)
4	credits of Mathematics (Algebra 1 and Geometry)
4	credits of Science (Biology)
4	credits of Social Studies (Civics, Law, World History, US History)
2	credits of Physical Education
1	credit of Information Systems
1	credit of Arts and Humanities
.5	credit of Health
5.5	credits of Electives
26	Credits Total

Credit Requirements / Course Requirements - WACTC and PC Students

4	credits of English (English 9, 10, 11, 12)
3*	credits of Mathematics (Algebra 1 and Geometry)
3	credits of Science (Biology)
2.5	credits of Social Studies (Civics/Law and US History)
.5	credit of Health
1.5	credits of Physical Education
<u>1</u>	<u>credit of Arts and Humanities or Information Systems or a combination of both</u>
15.5	Credits Total + Credits awarded by completion of a WACTC or PC Program.

*WACTC/PC Students who completed Algebra 1A must earn a minimum of 4.0 credits of Mathematics.

Typical WACTC /PC Student Course of Studies

Course schedule may be modified to accommodate graduation requirements.

<u>Freshman Year</u>	<u>Sophomore Year</u>	<u>Junior Year</u>	<u>Senior Year</u>
English	English	English	English
Math	Math	Math	Science (1 Semester)
Science	Science	US History	Social Studies (1 Semester)
Social Studies	WACTC Program	WACTC Program	Physical Education (Full Year)
Health			WACTC Program
Physical Education			
Arts and Humanities			
Information Systems			

Art and Humanities Elective Courses

- Introduction to Art (#6010)
- Independent Art Studio (#6031)
- Fiber Art (#6032)
- Advanced Placement Drawing (#6030)
- Two Dimensional Materials (#6017)
- Sculpture / Three Dimensional Materials (#6019)
- High School Concert Choir (#6100)
- Freshman Girls' Choir (#6105)
- Senior Band (#6120/#6130)
- Jazz Studies (#6166)
- Beginning Guitar (#6175)
- Piano and Music Theory (#6185)
- French 1 (#6500)
- French 2 (#6502)
- French 3 (#6504)
- Advanced Placement French (#6508)
- Spanish 1 (#6540)
- Spanish 2 (#6542)
- Spanish 3 (#6544)
- Advanced Placement Spanish (#6548)
- Culinary Arts 1 (#6450)
- Culinary Arts 2 (#6451)
- Engineering Materials (#6771)
- Manufacturing Enterprise (#6773)
- Public Speaking (#6352)
- Bizarro World: Exploring Alternate Realities (#6353)
- Mythology (#6354)
- Creative Writing (#6348)
- Career Spanish (#6550)
- Floriculture and Landscape Design (#6819)
- Advanced Agricultural Construction (#6916)
- Introduction to HS Art (#6012)
- * *Introduction to Family and Consumer Science*
- * *Creative Sewing Technique (#6475)*
- * *Music Appreciation (#6145)*
- * *Music Theory 1 (#6155)*
- * *Music Theory 2 (#6165)*
- * *Beginning Piano (#6185)*
- * *Music Technology (#6195)*
- * *Metals and Alloys 1 (#6740)*
- * *Metals and Alloys 2 (#6742)*
- * *Wood Products 1 (#6750)*
- * *Wood Products 2 (#6752)*
- * *Sales and Promotion 2 (#6215)*
- * *Sports & Entertainment Management (#6292)*
- * *Introduction to Art (#6010)*

Information Systems Elective Courses

- Exploring Computer Science (#6380)
- Applied Computer Science (#6381)
- Microsoft Office / Google Applications (#6252)
- Game Design (#6355)
- Multimedia (#6335)
- AP Computer Science Principles (#6385)
- Video Production 1 (#6370)
- Video Production 2 (#6372)
- Intro to Communications Systems & Design (#6780)
- Introduction to Robotics and Automation (#6790)
- Robotics Applications (#6791)
- Graphic Design (#6782)
- Electrical and Electronic Control Systems (#6792)
- Engineering and Design Development (#6774)
- Student Technology Leaders (#6371)
- Introduction to Engineering Technology (#6770)
- Communication Engineering Design (#6783)
- Robotics and Automation Enterprise (#6793)
- Personal Finance (#6275)
- Supervised Agricultural Experience (#6850)
- * *Project Lead the Way (#6705)*
- * *Graphics (#6710)*
- * *Architectural Design (#6720)*
- * *Engineering and Design (#6730)*
- * *Robotics 1 (#6760)*
- * *Robotics 2 (#6762)*
- * *Accounting 2 (#6230)*

* *Courses no longer offered at McGuffey HS*

McGuffey High School Elective Course Offerings 2023-2024

(Course descriptions available by department)

ART

Introduction to HS Art (.50 Credit)
Two-Dimensional Materials (.50 Credit)
Sculpture & Three-Dimensional Materials (.50 Credit)
Fiber Art (.50 Credit)
AP Drawing (1.0 Credit)
Independent Art Studio (1.0 Credit)

MUSIC

Freshman Girls Choir (1.0 Credit)
High School Concert Choir (1.0 Credit)
Beginning Guitar (.50 Credit)
Jazz Studies (.50 Credit)
Senior Band (1.0 Credit)

BUSINESS

Sales & Promotion (.50 Credit)
Accounting (1.0 Credit)
Microsoft Office & Google Applications (.50 Credit)
Corporate America (1.0 Credit)
Personal Finance (.50 Credit)

COMPUTER SCIENCE

Exploring Computer Science (.50 Credit)
Game Design (.50 Credit)
Multimedia (.50 Credit)
Applied Computer Science (.50 Credit)
AP Computer Science Principles (1.0 Credit)

ENGLISH

Public Speaking (1.0 Credit)
Bizzaro World: Exploring Alternate Realities (.50 Credit)
Mythology (.50 Credit)
SAT/ACT Preparation Course (.50 Credit)
Creative Writing (.50 Credit)

FOREIGN LANGUAGE

French 1 (1.0 Credit)
French 2 (1.0 Credit)
Spanish 1 (1.0 Credit)
Spanish 2 (1.0 Credit)
Spanish 3 (1.0 Credit)
AP Spanish Language & Culture (1.0 Credit)
Career Spanish (.50 Credit)

FAMILY & CONSUMER SCIENCE

Future Ready (.50 Credit)
Culinary Arts 1 (.50 Credit)
Culinary Arts 2 (.50 Credit)
Baking for Special Occasions (.50 Credit)

HEALTH & PHYSICAL EDUCATION

Introduction to Personal Fitness (.50 Credit)
Adv Weight Training & Performance (.50 Credit)
Adventure Fitness (.50 Credit)

ENGINEERING TECHNOLOGY

Video Production 1 (1.0 Credit)
Video Production 2 (1.0 Credit)
Intro to Engineering Technology (1.0 Credit)
Engineering Materials (1.0 Credit)
Manufacturing Enterprise (1.0 Credit)
Engineering & Design Development (1.0 Credit)
Graphic Design (1.0 Credit)
Intro to Robotics & Automation (1.0 Credit)

AGRICULTURE EDUCATION (General)

Introduction to Agriscience (1.0 Credit)
Plant Science (1.0 Credit)
Greenhouse Production (1.0 Credit)
Animal Science (1.0 Credit)
Wildlife & Environ Conservation (1.0 Credit)
Floriculture & Landscape Design (1.0 Credit)

AGRICULTURE EDUCATION (Mechanics)

Introduction to Ag Mechanization (1.0 Credit)
Introduction to Welding (1.0 Credit)
Introduction to Ag Construction (1.0 Credit)
Advanced Agricultural Construction (1.0 Credit)
Advanced Agricultural Welding (1.0 Credit)
Ag Mechanization Capstone Course (1.0 Credit)

AGRICULTURE (General & Mechanics)

Senior Agricultural Leadership (1.0 Credit)
Supervised Agricultural Experience (1.0 Credit)

HIGHLANDER YEARBOOK (No Credit)

STUDENT TECH LEADER (No Credit)

Pennsylvania Career Pathway Descriptions and Clusters

Source: <https://www.pacareerzone.org/clusters>

I. Career Pathway: Arts and Communication

Designed to cultivate students' awareness, interpretation, application and production of visual, verbal, and written work.

Career Cluster(s)

Arts, A/V Technology, and Communication

II. Career Pathway: Business, Finance, and Information Technology

Designed to prepare students for careers in the world of business, finance, and information systems.

Career Cluster(s)

Information Technology

Business and Administration

Finance and Insurance

Marketing, Sales, and Service

III. Career Pathway: Engineering and Industrial Technology

Designed to cultivate students' interest, awareness, and application to areas related to technologies necessary in the design, develop, install, & maintain physical systems.

Career Cluster(s)

Transportation, Distribution, Logistics

Manufacturing

Architecture and Construction

IV. Career Pathway: Human Services

Designed to cultivate students' interest, skills, and experience for employment in careers related to families, government, & human needs

Career Cluster(s)

Government and Public Administration

Education and Training

Human Services

Hospitality and Tourism

Law and Public Safety

V. Career Pathway: Science and Health

Designed to cultivate students' interest in life, physical and behavioral sciences. In addition, the planning, managing, and providing of therapeutic services, diagnostic services, health information and biochemistry research development.

Career Cluster(s)

Scientific Research and Engineering

Agriculture Food and Natural Resources

Health Science

ART

Introduction to HS Art - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6012 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Introduction to Art is a foundational course for students interested in exploring artistic media. The class surveys various materials and techniques ranging from historical art references to modern craft and design. Genres include drawing, painting, ceramics, sculpture, and fibers.

Two-Dimensional Materials - Open to grades 10, 11, and 12 - .5 credit value

Course #6017 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Two Dimensional Materials (Drawing, Painting, and Printmaking) is a course for students interested in developing skills in 2D art forms. A wide variety of drawing, painting, and printmaking materials will be explored, including charcoal, pencil, chalk/oil pastels, watercolors, acrylic oil paints, and various printmaking processes. Students will also develop the critical thinking strategies necessary to more thoroughly appreciate art and design concepts.

Sculpture and Three-Dimensional Materials - Open to grades 10, 11, and 12 - .5 credit value

Course #6019 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Sculpture and Three-Dimensional Materials is a course for students interested in developing artistic skills using 3D materials such as clay, plaster, and wood. Genres studied include: functional artwork, figurative work, abstraction, non-objective, Pop Art, and environmental installations. The field of Art History and the development of critical evaluative techniques will also play a primary role in this class.

Fiber Art - Open to grades 10, 11, and 12 - .5 credit value

Course #6032 - Suggested Career Pathway(s): Arts and Communication, Human Services, Science and Health

This class is an exploration of arts and crafts using fibers. Materials to be used are fabrics, yarns, threads, papers and other natural materials. Students will learn the basics of quilting, art quilting, embroidery, knitting and crochet, weaving, papermaking, and other projects. Considerations of the traditional craft will be compared to modern day practices.

Advanced Placement Drawing - Open to grades 11 and 12 - 1 credit value

Course #6030 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Prerequisites: Introduction to Art (#6010), Two-Dimensional Materials (#6017), Sculpture & Three-Dimensional Materials (#6019), and Fiber Art (#6032)

Develop your skills in drawing as you explore different media and approaches. You'll create artwork that reflects your own ideas and skills and what you've learned. Skills emphasized throughout the course include investigating the materials, processes, and ideas that artists and designers use, interpreting works of art and design, practicing, experimenting, and revising as you create your own work, and communicating your ideas about works of art and design. Students will be required to participate in the AP Assessment at the end of the course. This cost will be paid for by the district.

Independent Art Studio - Open to Grade 12 - 1 credit value

Course #6031 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Prerequisites: Introduction to Art (#6010), Two-Dimensional Materials (#6017), Sculpture & Three-Dimension Materials (#6019), Fiber Art (#6032), and Advanced Placement Drawing (#6030).

(Art Teacher Approval Required). A senior level course that is designed for the independent study of art based on student interest and teacher collaboration. Each student will submit an application to the instructor that identifies their areas of artistic interest, past art experiences, goals for skill acquisition, creative expression, and agreed upon learning objectives.

MUSIC

Freshman Girls' Choir - Open to grade 9 - 1 credit value

Course #6105 - **Suggested Career Pathway: Arts and Communication**

This class is for 9th grade girls who are either continuing their vocal development from middle school or singing in a choir for the first time. This class performs a varied repertoire of three-part treble music. Freshman Girls' Choir focuses on beginning sight-singing skills. Students sing at two mandatory performances per year along with two mandatory after school rehearsals prior to each concert. Grading is based on in-class singing tests, written quizzes, daily participation, and combined rehearsal concert attendance.

High School Concert Choir - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6100 - **Suggested Career Pathway: Arts and Communication**

The High School Concert Choir is a performance-oriented elective course consisting of boys in grades 9-12, and girls in grades 10-12. The course is focused on the development of student vocal skills and techniques (i.e., proper singing posture, breath support and embouchure), the development of music-reading skills (i.e., sight-singing), and the development of aural (ear-training) skills. Daily sight-singing practice and weekly sight-singing tests are routine, in addition to other assessments that measure the progress of individual student's musicianship skills. Ensemble skills include singing into the "choral sound" with proper tone, blend, balance, diction, and expression. A major focus of the course is the concert repertoire. Students perform a varied repertoire of sacred and secular choral music over the course of the school year. The choir performs a rehearsed concert repertoire at two mandatory evening concerts per academic year (December and May). Fundraising is an expectation of all students enrolled in this course.

Beginning Guitar - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6175 - - **Suggested Career Pathway: Arts and Communication**

This course will introduce the student of the basics of playing the guitar. Students will learn both strumming techniques and classical style of playing an acoustic guitar. Guitars are provided by the district.

Piano and Music Theory - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6185 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

This course will provide students with an opportunity to learn either beginning piano, or music theory, students will select this option at the beginning of the course. Piano will provide students with a basic understanding of how to play piano using digital synthesizers. Students will learn to read and play music, students will be able to pick much of the music they would like to play from both the classical and popular genres. Student choosing the theory option will learn the foundations for major and minor scales, melodic and harmonic intervals, chords and harmonic progressions.

Jazz Studies - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6166 - **Suggested Career Pathway: Arts and Communication**

Prerequisite: Student is currently enrolled in HS Band or HS Chorus

This performance course requires students to be currently enrolled in band or choir or have the teacher's permission. Students will conduct a survey of jazz as it relates to their performance area. This will include learning the basics of jazz harmonies, blues scales, chord changes, and various rhythm feels. Students should be prepared to practice or perform using various musical techniques.

(MUSIC continued on Page 13)

Senior Band - Open to grades 9, 10, 11 and 12 - 1 credit value
Course #6120 (WINDS) or Course #6130 (PERCUSSION)
Suggested Career Pathway: Arts and Communication

Prerequisites: Approval of the band director by audition. The band director has the final decision concerning instrumental selections and instrumental parts. Student attendance and participation at all performances and related activities is required.

The senior band is an instrumental, performance-oriented elective course consisting of marching band and concert band. Participation in the marching band is mandatory for all members of the senior band in grades 9-12, except for those students participating in activities covered under the interscholastic athletic policy for fall activities. The marching band begins practices in late June, two days a week. A two-week band camp is scheduled each year the last week of July or the first week of August. Attendance at band camp is mandatory for all regular members of the senior band. The director makes exceptions, only in extreme situations. A job is not an extreme situation. The marching band participates local parades, football games, pep rallies, band competitions, community related functions, and a major trip every other year. Concert band is a class that meets daily during the school year. The band performs concerts during the year. Performances are mandatory and are included as part of grading. Students will receive a failing grade for the marking period if a performance is missed without prior permission (in only extreme situations) from the director.

BUSINESS

Sales & Promotion - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6205 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Human Services

Students who took Sales & Promotion 1 or Sales & Promotion 2 should not register for this course. This course will focus on marketing ourselves as individuals by developing communication skills, attitudes, values, and time management. It will also focus on the nine functions of marketing, careers in marketing, advertising, free enterprise, business and social responsibility. Activities include cooperative learning, product invention, target market collage, internet activities, evaluating commercials and much more.

Accounting - Open to grades 10, 11, and 12 - 1 credit value

Course #6220 - Suggested Career Pathway(s): Business/Finance/Information Technology, Engineering and Industrial Technology, Human Services

Students are introduced to basic accounting and business finance. This course completes an accounting cycle using general and special journals. Students learn to journalize, post in the general and subsidiary ledgers, and complete various financial statements. An accounting simulation is completed at the end of the year. This class prepares students for entry-level positions and further study in college accounting.

Microsoft Office and Google Applications - Open to grades 9, 10, 11 and 12 - .5 credit value

Course #6252 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Human Services

Students will work towards mastery level skills in keyboarding and the following Microsoft Products: Word, Excel, Publisher, & PowerPoint. Students will also master the skills necessary to run the most popular applications in the Google Suite including: Docs, Sheets, Slides, & Images. Upon completion of this course, the students will be able to format and produce office documents, build & input data into spreadsheets, apply formulas to create authentic business reports, apply various tools to create professional presentations, and customize designs for real world applications.

Corporate America - Open to grades 11 and 12 - 1 credit value

Course #6270 - Suggested Career Pathway: Business/Finance/Information Technology

This class is a survey of the corporate world. Units covered include Business Law, Marketing, Management, and Career Opportunities. Instruction is given by discussion, class projects, videos, and interviews with business professionals.

Personal Finance - Open to grades 10, 11, and 12. - .5 credit value

Course #6292 - Suggested Career Pathway: Business/Finance/Information Technology

Are you at a loss about managing money and making good financial decisions? If you are interested in a course that will prepare you for important topics such as banking, credit, insurance, budgeting, taxes, and making good consumer decisions, Personal Finance is the course for you. This is a semester course designed to help students understand the impact of individual choices on occupational goals, managing money, and being a smart consumer. This course will provide a strong foundational understanding for making informed personal financial decisions now and in your future.

COMPUTER SCIENCE

Exploring Computer Science - Open to grades 9, 10, 11, and 12- .5 credit value

Course #6380 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology

An introductory course for students who want to become familiar with varying aspects of computing including keyboarding, coding with Python programming language, the creation of complex graphs and visuals, and mastery of the Google Suite. Students will gain experience in creating and understanding Internet protocols and security, design visual representations of data and game development, and master all that is Google and the functionality found in the Google Suite. Students will be able to gain Level 1 Google Certification during this course.

Game Design - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6355 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology

Students who have previously taken Game Development 1 should not register for this course. This course will introduce students to game design and development of 2D and 3D games using the Unity Game Engine. Students will apply previous knowledge to gain an understanding of the C# programming language and use / apply math and logic skills to solve problems. Students will learn the techniques used by professionals to design and build 2D and 3D games. It is recommended to have some understanding of computer programming before taking this class.

Multimedia - Open to grades 9, 10, 11, and 12- .5 credit value

Course #6335 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology, Human Services

Students who have previously taken Multimedia Applications 1 should not register for this course. In this course, the students will become familiar with digital media to include the creation and manipulation of images, animations and web design. We will use the Adobe suite of programs of Photoshop, Flash, and Dreamweaver to create a portfolio of projects with graphic design items such as logos, collages, magazine covers, and posters. Students will create sprites, stick figures and backgrounds to create complex animated digital scenes

Applied Computer Science - Open to grades 9, 10, 11, and 12- .5 credit value

Course #6381 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology

This course introduces students to the foundational concepts of circuit board programming and coding using Python and/or C programming languages. In this hands-on project-based class, students will use microcontroller boards such as Raspberry PI, Adafruit Metros, and Circuit Playground to build different projects that can incorporate LEDS, lights, robots, remote controlled items, and Servos. It is recommended that students have some knowledge of computer programming before taking this class.

Advanced Placement Computer Science Principles - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6385 - Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology

Prerequisite: Algebra 1 or Algebra 1A

This course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational thinking skills to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. This course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, work individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and world. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

ENGLISH

Advanced English 9 - Open to grade 9 - 1 credit value

Course #1100 - **All Career Pathways**

Prerequisite: Final grade of A/B in ELA 8.

This course is designed for those students who desire to be challenged beyond what is required of the average college-bound student. This class encompasses reading comprehension and appreciation in world literature and focuses on a study of literary genre: short story; novel, drama, and poetry. Works studied may include Shakespeare's *Romeo and Juliet*, Homer's *The Odyssey*, and George Orwell's *Animal Farm*. Great emphasis is given to in-depth interpretation of these significant works of literature. Students will learn the thesis format for writing papers of these significant works of literature. Students will learn the thesis format for writing papers about literature and vocabulary building also will be stressed. Summer and independent reading is also required.

English 9 Academic - Open to grade 9 - 1 credit value

Course #1110 - **All Career Pathways**

This course is designed to provide students with a foundation in 21st-Century communication skills that will enable all students to succeed in high school and beyond. Study focuses on the transition in performance expectations from middle school to high school. Students will develop critical reading skills by reading a variety of literary genres including nonfiction, short story, novel, drama, and poetry. Process writing instruction emphasizes composition from paragraphs to cohesive essays. Students also further develop understanding of grammar, from parts of speech, sentence structure, and general usage to commas and end punctuation. Independent reading is required.

Advanced English 10 - Open to grade 10 - 1 credit value

Course #1200 - **All Career Pathways**

Prerequisite: Final grade of A/B in Advanced English 9 or English 9 Academic.

This course is designed for students who need to be challenged beyond what is required for the average college-bound student. This class encompasses reading comprehension and appreciation in world literature with a particular focus on a variety of classic and contemporary short stories, dramas, novels, poems, and nonfiction texts. Independent reading and project-based learning activities will be required. The writing process is an integral part of this course. Students will study grammar as their writing and speaking deficiencies are recognized throughout the text. Vocabulary development is ongoing throughout all literature units.

English 10 Academic - Open to grade 10 - 1 credit value

Course #1210 - **All Career Pathways**

This course builds on the 21st-Century communication skills students develop as freshmen. The course consists of four major units: the short story, poetry, drama, and the novel. Students will practice both critical reading and process writing as they work to become proficient in understanding and responding appropriately to a variety of texts. Students also read and evaluate nonfiction. The class focuses on building interpretive skills through examination of literature and literary terminology, vocabulary development, and creative and expository writing. Independent reading is required.

(ENGLISH continued on Page 17 & 18)

Advanced Placement English Language and Composition - Open to Grade 11 - 1 credit value

Course # 1320 - **All Career Pathways**

Prerequisite: Final grade of A/B in Advanced English 10 or English 10 Academic.

The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytic and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

English 11 Academic - Open to grade 11 - 1 credit value

Course #1310 - **All Career Pathways**

This course is designed to provide students with an understanding of the major periods of American literature and higher-level composition skills. Students will study poetry, short stories, essays and other nonfiction pieces, and the novel. Students will further develop their skills in critical reading, analysis, and inference. In addition to writing-to-learn activities, students will compose a personal essay, various literary analyses, and a research paper. Independent reading is required.

Advanced Placement English Literature and Composition - Open to grade 12 - 1 credit value

Course # 1400 - **All Career Pathways**

Prerequisites: Final grade of A/B in English 11 Academic or A/B/C in AP Language and Composition.

The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

English 12 Academic - Open to grade 12 - 1 credit value

Course #1410 - **All Career Pathways**

This course is designed to refine communication skills developed in high school for success in higher education or the world of work. Students will read and analyze a variety of works, both fiction and nonfiction, with emphasis on British and world literature. Students also will write critical, analytical, persuasive, and informational pieces, with instruction on form and process. Career skills including research, writing resumes and application forms and letters, and interviewing techniques also are taught. Independent reading is required.

Public Speaking - Open to grades 10, 11, and 12 - 1 credit value

Course #6352 - **Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology, Human Services, Science and Health**

This course does not fulfill an English requirement. In this course students overcome their fear of public speaking while increasing their self-esteem. They learn how to address a large audience, debate issues before their peers, interview with confidence and deliver dramatic readings. Also included in this course is a mini unit on broadcasting. Requirements include a successful completion (60% performance level) of a variety of speaking activities.

(ENGLISH continued on Page 18)

Bizarro World: Exploring Alternate Realities - Open to grades 11 and 12 - .5 credit value

Course #6353 - Suggested Career Pathway: Arts and Communication

This course **does not fulfill an English requirement**. Imagine a world in the not-too-distant future where nothing is as it seems. On the surface, this world maintains the illusion of perfection. But under the surface, dark forces work to oppress freedom and control society. These are the worlds explored by dystopian literature, in which authors use alternate realities to shine spotlights on troubling issues in our own world. In this course, we will read works by authors such as George Orwell, Margaret Atwood, Stephen King, and Kurt Vonnegut, among others. Students will write short critical analyses, engage in open and debate-style discussions, and complete projects related to the genre. Independent reading is a requirement for this course.

Mythology - Open to grades 11 and 12 - .5 credit value

Course #6354 - Suggested Career Pathway: Arts and Communication

This course **does not fulfill an English requirement**. The students taking this course will embark on fast-paced journey through Egyptian, Greek, Roman, Norse, Indonesian, and North American mythology. Students will interpret mythic metaphors, symbols, and analogies. Students will identify and discuss the cultures that produced the myths and recognize modern allusions to ancient myths. Students will be expected to compare and contrast significant characters, events, symbols, and actions (called motifs) with similar events in another myth. Students will discover what myths have to do with our lives today and how humanity has been influenced by mythology.

SAT /ACT Preparation Course - Open to students in grades 11 and 12 - .5 credit value

Course #6395

This course **does not fulfill an English requirement**. This course helps college bound students prepare for both the verbal and mathematics sections of college entrance examinations like the Scholastic Aptitude Test (SAT) and the American College Test (ACT). Nine weeks will be devoted to each area: verbal and mathematics. Students will learn and practice strategies for and approaches to answering the various types of questions in each section. The course will cover critical reading and writing on the verbal sections and equations, percentages, radicals, and other principles of algebra, geometry, and trigonometry on the mathematics section. Students will track their academic progress through sample tests and other online resources.

Creative Writing - Open to Grades 10, 11, and 12 - .5 credit value

Course #6348 - All Career Pathways

This course **does not fulfill an English credit requirement**. Creative Writing allows students to develop their writing skills, self-expression, and own voice through a variety of written activities. They will develop their technique through writing in a variety of genres (short stories, personal essays, biography, poetry) and analyzing published text. Students will be expected to write daily, keep a personal journal, participate in classroom discussions, and engage in the writing process including drafting and editing their pieces.

Reading Prep - Open to Grade 11 - .25 credit value

Course #1001 - All Career Pathways

This course **does not fulfill an English requirement**. May be required for students who have not yet scored proficient on the Pennsylvania State Assessment (Keystone Literature). This course is designed to increase student achievement in critical reading. It will address content in the following areas: comprehension, vocabulary usage, interpretation and analysis of literary elements and devices, interpretation and analysis of persuasive techniques, interpretation and analysis of text organizational skills, overall critical reading skills, and interpretation and analysis of fictional and nonfictional text. Other topics covered include test-taking strategies and responding to open-ended questions.

FOREIGN LANGUAGE

French 1 - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6500 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

The primary goal of this class is a basic understanding of communication in the French language. This course utilizes an online content delivery curriculum that is supported by a faculty member. Skill development and acquisition of French in the present tense is emphasized as well as elements of French culture and society.

French 2 - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6502 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Prerequisite: Final grade of C or higher in French 1.

The primary goal of this class is an emerging understanding of communication in the French language. This course utilizes an online content delivery curriculum that is supported by a faculty member. Skill development and acquisition of French in the present and past tense is emphasized as well as elements of French culture and society.

French 3 - Open to grades 10, 11, and 12 - 1 credit value

Course #6504 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Final grade of C in French 2.

Vocabulary and grammar are expanded and reading and writing skills are increased. This course utilizes an online content delivery curriculum that is supported by a faculty member. Skill development and acquisition of French in the present tense, imperfect, conditional, and future tenses will be introduced, along with elements of French culture and society.

AP French Language and Culture - Open to grade 11 and 12 - 1 credit value

Course #6508 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Final grade of B in French 3.

AP French Language and Culture emphasizes the use of language for active communication. Students will acquire proficiencies that expand their cognitive and analytical skills and will develop the ability to understand spoken French in various contexts. Students will also express themselves in French coherently, resourcefully, and with reasonable fluency and accuracy through various interpersonal, interpretive, and presentational activities. The class will be conducted in French and will focus on six themes of content: Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. Students will explore culture in both contemporary and historical contexts in order to develop an awareness and appreciation of Francophone practices and perspectives. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

(FOREIGN LANGUAGE continued on Page 20)

Spanish 1 - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6540 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Students are expected to speak, understand, read, and write in Spanish. Proper pronunciation is stressed. Vocabulary and expressions deal with everyday situations such as classroom activities, describing family, friends and surroundings, weather, likes, dislikes, telling time, etc. The present tense is taught along with other grammar. Cultural lessons are taught when appropriate.

Spanish 2 - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6542 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Prerequisite: Final grade of C or higher in Spanish 1. Students are responsible for all vocabulary and expressions from Spanish I. Spanish 2 includes vocabulary dealing with situations students might encounter such as talking on the telephone, ordering food in a restaurant, going shopping, and asking for directions. New verb forms include the present progressive, informal commands, the preterit, the future, and the present perfect.

Spanish 3 - Open to grades 10, 11, and 12 - 1 credit value

Course #6544 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Prerequisite: Final grade of C or higher in Spanish 2. Students are responsible for all vocabulary expressions, pronunciation, and grammar from levels 1 and 2. Spanish 3 is a more in-depth study of the language and its structure. More grammar is introduced, and all grammar is put to use. Students are expected to speak, understand, read, and write on a more advanced level. Cultural lessons are incorporated into the lessons on a regular basis.

AP Spanish Literature and Culture - Open to grade 11 and 12 students - 1 credit value

Course #6552 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Prerequisite: Final grade of B or higher in Spanish 3. This course is equivalent to a college level introductory survey course of literature written in Spanish. Students continue to develop their interpretive, interpersonal, and presentational skills in Spanish language as well as critical reading and analytical writing as they explore short stories, novels, plays, essays, and poetry from Spain, Latin America, and U.S. Hispanic authors. Students will be required to take the AP Assessment at the end of the course. Cost of the assessment will be paid for by the district.

Career Spanish - Open to grades 11 and 12 - .50 credit value

Course #6550 - **Suggested Career Pathway(s): Arts and Communication, Human Services**

Prerequisite: Final grade of C or higher in Spanish 3. As our society becomes more diverse, the opportunities for those who can communicate in multiple languages is a valuable advantage. This course will build your fluency in Spanish for the modern workplace/workspace to facilitate basic communication with employees or clients whose native language is Spanish. Emphasis is placed on oral communication and specific vocabulary used within multiple business or professional contexts. This course will primarily focus on written and verbal exercises that build your ability to communicate and process information effectively daily.

Any student moving into the McGuffey School District who has not had the opportunity to take French 1 or Spanish 1 in Grade 8 due to the fact that their former school district did not offer French 1 or Spanish 1 as a Grade 8 course, and who has been determined to be advanced in French or Spanish upon the recommendation of their current French or Spanish teacher will be permitted to take the Final Exam for the next French or Spanish course in the course sequence. If the student receives a 90% or higher on the written and oral final exam, they are exempt from taking the next course in the course sequence and can take the succeeding French or Spanish course. If the student scores below 90%, the student will need to follow the regular course sequence. Maximum placement for French is French 3.

FAMILY AND CONSUMER SCIENCE

Future Ready - Open to grades 11 and 12 - .5 credit value

Course #6405 - **Suggested Career Pathway(s): Arts and Communication, Human Services, Science and Health**

This course focuses on students becoming more independent, responsible, and prepared to make future college, career, and employment decisions through a process of personal exploration. The course incorporates the career research resources found in Career Cruising and other online sources including: interest surveys, career pathway activities and research, interviewing skills, and current information on occupational statistics. The course will also incorporate financial skill building in areas such as budgeting, banking, insurance, and credit. Guest speakers, class projects, and simulations will be utilized throughout the course.

Child Care and Development - Open to grades 11 and 12 - .5 credit value

Course #6425 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Students interested in learning more about children are encouraged to take this class. The course will prepare the student for the care of children from infancy through age 5. Students will learn about proper nutrition, growth patterns, and selection of clothing, toys, furniture and other equipment. Active learning experiences involving children will be incorporated into this class.

Culinary Arts 1 - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6450 - **Suggested Career Pathway(s): Arts and Communication, Human Services, Science and Health**

This interactive and hands on course builds the skills of those who are interested in food preparation including classic and contemporary culinary techniques. We will focus on planning nutritious and delicious meals, following and modifying recipes, the creative use of natural ingredients including herbs and spices, and the proper use of kitchen utensils and appliances. You will enjoy trying new foods and practicing your cooking techniques in the multiple cooking lab experiences.

Culinary Arts 2 - Open to grades 10, 11, and 12 - .5 credit value

Course #6451 - **Suggested Career Pathway(s): Arts and Communication, Human Services, Science and Health**

Prerequisite: Culinary Arts 1

This course builds off the foundational cooking & preparation skills learned in Culinary Arts 1. The preparation and presentation of more complex and upscale food recipes will be the focus of this course. Students will fine tune their culinary skills to include the plating and garnishing of meals for events and entertaining others. Students will also compete in exciting “chopped” competitions and other “food war” competitions that take their skills to the next level. This is the perfect course to refine your skills and try something new in the kitchen.

Baking for Special Occasions - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6455 - **Suggested Career Pathway(s): Arts and Communication, Human Services, Science and Health**

This course will cater to the student who enjoys baking and using creativity. Imagine making mouth watering desserts, freshly baked cinnamon rolls, yeast breads, picture perfect pies, fancy cookies, and beautifully decorated cakes. Students will learn how to make all of these plus more. Cooking labs will take place two to three days per week.

MATHEMATICS

Algebra 1 - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #2100 - **All Career Pathways**

This course will focus on the basics of Algebra and lead students to master skills using linear equations, inequalities, simplifying polynomials, and factoring. Areas of Algebra will incorporate real world applications. Some aspects will include cooperative and collaborative learning, mathematical modeling, and the use of scientific calculators and graphing calculators.

Algebra 1AA- Open by teacher recommendation only to grades 9, 10, and 11 - 1 credit value

Course #2105 - **All Career Pathways**

This course will focus on mastering the fundamental skills of Algebra 1. It will address content in the following areas: order of operations, functions, linear equations, one/two variable inequalities, and systems of equations. Real world applications of Algebra will be incorporated into the course content and lesson design. Cooperative and collaborative learning, mathematical modeling, and the use of scientific calculators and graphing calculators will be emphasized. Algebra 1B (#2106) will be taken as the next course in the sequence to complete the Algebra 1 high school graduation requirement.

Honors Geometry - Open to grades 9 and 10 - 1 credit value

Course #2200 - **All Career Pathways**

Prerequisites: Final grade of A/B in Algebra 1 with the recommendation of the Algebra 1 teacher.

The course begins with the basic elements of logic and then proceeds to the study of Euclidean geometry. Emphasis is placed upon carefully worded definitions and theorems, postulates, and methods for proving theorems. The material is covered in greater depth with more detail given to proofs.

Geometry - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #2210 - **All Career Pathways**

Prerequisites: Algebra 1 or Algebra 1A.

Students will find a deeper understanding of geometric concepts by using a variety of methods including collaborative learning, computers, and real-world applications. The geometric problems will enable students to relate prior experiences to expand their mathematical knowledge. Some topics will include Triangle Congruence and Similarity, Parallel and Perpendicular lines, Properties of Polygons, and Right Triangles.

Honors Algebra 2 - Open to grades 10 and 11 - 1 credit value

Course #2130 - **All Career Pathways**

Prerequisites: Final grade of A/B in Honors Geometry/Geometry with the recommendation of the Geometry teacher.

This class is a rigorous, in-depth study of natural and whole numbers, integers, rationals, irrationals, real and imaginary numbers, the laws of integer exponents, operations on polynomials, memorization of perfect squares and cubes, the 10 algebraic methods of factoring, applications of factoring, solution to all 2nd degree equations and some higher-order polynomial equations, the rational root theorem, remainder/factor theorem, the process of synthetic division, solutions with real and imaginary roots, the properties of irrationals, solving radical equations, memorization of and implementation of the quadratic formula, imaginary and complex numbers, real-numbered exponents, logarithms.

Algebra 2 - Open to grades 10, 11, and 12 - 1 credit value

Course #2140 - **All Career Pathways**

Prerequisites: Algebra 1 or Algebra 1A and Geometry.

This course covers the laws of exponents and negative exponents, systems of equations and inequalities, operations on and multiplication of polynomials, factoring, uses of factoring solving 2nd degree equations, rational and irrational numbers, operations on irrationals, solving radical equations, the quadratic formula, and real-numbered exponents.

(MATHEMATICS continued on Page 23 & 24)

Honors Trigonometry/Precalculus - Open to grades 11 and 12 - 1 credit value

Course #2300 - Suggested Career Pathway(s): Business, Finance, and Information Technology, Engineering and Industrial Technology, Science and Health

Prerequisites: Final grade of A/B in Honors Algebra 2 /Algebra 2 with the recommendation of the Algebra 2 teacher.

This course is especially designed and intended for only those students who will be continuing into higher mathematics as a high-school senior and on into collegiate calculus. Part one covers an exhaustive study of Trigonometry. Part two covers linear and polynomial functions, the binomial theorem, analytic geometry, sequences, series, limits, and infinite limits, and exponential and natural logarithmic functions. This material, collectively known as Precalculus, is designed to prepare the student for studying calculus in college. Students are required to complete summer assignments.

Trigonometry/Precalculus - Open to grades 11 and 12 - 1 credit value

Course #2310 - Suggested Career Pathway(s): Business, Finance, and Information Technology, Engineering and Industrial Technology, Science and Health

Prerequisites: Final grade of A/B/C in Algebra 2.

Part one is an exhaustive study of Trigonometry and covers approximately one semester. Part two presents this variety of Precalculus topics: Linear, Polynomial and Non-Linear Functions, the Binomial Theorem, Analytic Geometry and the Conic Sections, Sequences and Series, Limits and Infinite Limits.

Business Mathematics - Open to grades 10, 11, and 12 - 1 credit value

Course #2410 - All Career Pathways

Prerequisites: Algebra 1 or Algebra 1A and Geometry.

This course consists of a basic review of fractions, decimals, and percents. These skills will be utilized in a detailed study of banking, payroll, borrowing and investing, interest, and operations associated with business functions. This course also contains a Microsoft Excel component using formulas for different business functions.

Applied Mathematics - Open to grades 11 and 12 - 1 credit value

Course #2420 - All Career Pathways

Prerequisites: Algebra 1 or Algebra 1A and Geometry.

This emphasis of this course is the application of mathematical concepts in various career settings and to increase a student's ability to solve problems utilizing mathematic principles. By harnessing the power of mathematical models, simulations, and technology, students will investigate career fields such as construction using geometry, hypotheses testing using statistical analyses, modeling regressions in algebra, and game study using probability and algorithms. By exploring the practical side of mathematics, students will grow in their ability to apply algebraic, geometric, statistical concepts in new and innovative ways.

Advanced Placement Calculus AB - Open to grade 12 - 1 credit value

Course #2330 - Suggested Career Pathway(s): Business, Finance, and Information Technology, Engineering and Industrial Technology, Science and Health

Prerequisites: Final grade of A/B in Honors Trigonometry/Precalculus or Trigonometry/Precalculus with the recommendation of the Trigonometry/Precalculus teacher.

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Advanced Placement Statistics - Open to Grades 11 and 12 - 1 credit value

Course #2446 - Suggested Career Pathway(s): Business, Finance, and Information Technology, Engineering and Industrial Technology, Science and Health, Human Services

Prerequisite: Final grade of A/B in Honors Algebra 2 or Algebra 2.

AP Statistics is a course in statistics that introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Probability is a mathematical approach to the study of chance occurrences, while statistics is a study of organizing, graphing, and interpreting data. Topics covered in this class will include, but not limited to, the nature of probability and statistics, frequency distributions and graphs, data description, probability and counting rules, discrete probability and normal distributions, as well as confidence intervals, hypothesis testing, correlation and regression, chi-square and analysis of variance. The ultimate goal is to enable students to be wise users and more critical consumers of statistical material. Students who successfully complete the course and exam may receive credit, advanced placement or both for a one-semester introductory college statistics course. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

SAT /ACT Preparation Course - Open to students in grades 11 and 12 - .5 credit value

Course #6395

This course does not fulfill a Mathematics requirement. This course helps college bound students prepare for both the verbal and mathematics sections of college entrance examinations like the Scholastic Aptitude Test (SAT) and the American College Test (ACT). Nine weeks will be devoted to each area: verbal and mathematics. Students will learn and practice strategies for and approaches to answering the various types of questions in each section. The course will cover critical reading and writing on the verbal sections and equations, percentages, radicals, and other principles of algebra, geometry, and trigonometry on the mathematics section. Students will track their academic progress through sample tests and other online resources.

Math Prep - Open to grades 10 and 11 - .25 credit value

Course #2001 - All Career Pathways

This course does not fulfill a Mathematics requirement. May be required for students who have not yet scored proficient on the Pennsylvania State Assessment (Keystone Algebra 1). This course is designed to improve student achievement in mathematics. It will address content in the following areas: operations with real numbers and expressions, linear equations and inequalities, measurement, algebraic concepts, statistics, functions and coordinate geometry, and data analysis. Other topics covered include test-taking strategies, problem solving, proper use of a graphing calculator, and responding to open-ended questions.

PHYSICAL EDUCATION

Physical Education - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6620 Co-Ed High School Physical Education with Science Lab (LAB) - All Career Pathways

Course #6622 Co-Ed High School Physical Education without Science Lab - All Career Pathways

The physical education course is either a semester course that will meet every day for a semester (without LAB) or three consecutive days all year long (with LAB). The curriculum is designed to provide experiences for all students in promoting physical fitness, while encouraging students to develop and maintain a personal fitness level that is conducive to good physical health. The program will offer instruction in team sports, lifetime sports, games, dance, weight training, and aerobics. Students will receive a letter grade according to assessment of the following criteria: (A) fitness tests (B) written examinations (C) attendance (D) participation and conduct, and (E) course required appropriate attire.

Health - Open to grades 9, 10, 11, and 12 - .5 credit value

Course #6655 - All Career Pathways

This course is designed to provide an understanding and appreciation of health and wellness throughout a lifetime. Emphasis will be placed on prevention and high-risk behaviors. The course will concentrate on functions of various body systems, body systems and associated diseases, first aid and safety, and human growth and development, nutrition, mental wellness, drug/alcohol/tobacco awareness and prevention.

Introduction to Personal Fitness - Open to grades 11 and 12 - .5 credit value

Course #6665 - Suggested Career Pathway: Science and Health

This course fulfills a Physical Education requirement. This course is designed to introduce students to personal fitness and lifetime activities. Students will learn the basic fundamentals of strength training and aerobic fitness. With assistance from the instructor, students are encouraged to create a personalized fitness program. They will also have the opportunity to participate in lifetime activities such as tennis, fitness walking, aerobics, badminton, circuit training, Zumba, and yoga. This course may also be taken as an elective in addition to Physical Education 11 or Physical Education 12.

Advanced Weight Training and Performance - Open to grades 11 and 12 - .5 credit value

Course #6675 - Suggested Career Pathway: Science and Health

This course fulfills a Physical Education requirement. This course is designed to provide advanced training to highly motivated students that have prior knowledge in weight training and fitness. Students are encouraged to create and implement an individual weight training program, or to complete an approved alternative program. Students will also participate in speed/agility training. This course may also be taken as an elective in addition to Physical Education 11 or Physical Education 12.

Adventure Fitness - Open to grades 11 and 12 - .5 credit value

Course #6685 - Suggested Career Pathway: Science and Health

This course fulfills a Physical Education requirement. Adventure Fitness is designed to promote teamwork, leadership, self-expression, and problem solving through non-traditional forms of physical activity. Activities will focus on a variety of risk-taking, trust building, and cooperative challenges. Students will have the opportunity to participate in traditional adventure style activities such as hiking, trekking, rock climbing, orienteering, group challenges, and ropes courses. This course may also be taken as an elective in addition to Physical Education 11 or Physical Education 12.

ENGINEERING TECHNOLOGY

Video Production 1 - Open to grades 10, 11, and 12 - 1 credit value

Course #6370 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology, Human Services

This course is for students who wish to become knowledgeable in video production technology. Students will master techniques in pre-production, production and post-production. This includes scriptwriting, storyboarding, camera operation, shot composition, editing, graphics and sound. Students will apply this knowledge to create and critique various video projects throughout the year. Students will also participate in the television studio to produce the morning announcements.

Video Production 2 - Open to grades 11 and 12 - 1 credit value

Course #6372 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology, Human Services

Prerequisite: Video Production 1.

This course will apply the students' knowledge from Video Production 1 or Digital Design to create more advanced projects geared for television news production. In addition to participating in live studio broadcasts, students will also create motion graphics for the morning news and research various subjects as well as school and community events to produce professional segments. They will also shoot footage of school activities throughout the year to produce the senior video. Students who wish to pursue a career in journalism or television are encouraged to take this course.

Introduction to Engineering Technology - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6770 - Suggested Career Pathway(s): Arts and Communication, Business/Finance/Information Technology, Engineering and Industrial Technology

Through this introductory course students will develop critical thinking and problem-solving skills through the use of the design process. Students will be introduced to manufacturing processes, CAD, CNC programming, carpentry manufacturing, metal manufacturing, working safety in industry, and job skills training. Students will cover a broad range of skills that will prepare them for the manufacturing track in the Engineering Technologies/Technicians program.

Engineering Materials - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6771 - Suggested Career Pathway: Engineering and Industrial Technology

This introductory course deals with the use of various hand tools and machines related to the processing of different material used in industry. Students will produce various products/projects throughout the course. Various aspects of shop safety, machining and material manipulation will be explored, giving the student an insight into the major areas of engineering and manufacturing. Computer Aided Manufacturing (CAM) and utilization of CNC software and equipment will be introduced.

(ENGINEERING TECHNOLOGY continued on Pages 27, 28, & 29)

Manufacturing Enterprise - Open to grades 10, 11, and 12 - 1 credit value

Course #6773 - **Suggested Career Pathway: Engineering and Industrial Technology**

Prerequisite: Engineering Materials

This course offers a thorough review of Manufacturing and Design of various materials used in engineering and production. It deals with advanced aspects and operations of today's manufacturing industry. Students are introduced to Computer Aided Manufacturing (CAM) utilizing CNC machining equipment and software in a real-world production setting. This culminates in the design process and creation of products in a manufacturing enterprise environment. This closely parallels the applications and functions of a manufacturing situation.

Engineering and Design Development - Open to grade 12 - 1 credit value

Course #6774 - **Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology**

Suggested Prerequisites: Engineering Materials and Manufacturing Enterprise

This course is a senior level engineering design course that involves advanced 3D modeling and production. During the course students will create complete 3D parametric models utilizing the latest Autodesk software. Students will use various tools, machines, and software to create a Computer Numeric Control (CNC) design and utilize 3D printers to develop a functional product. Students will also explore career pathways related to engineering.

Introduction to Communication Systems and Design - Open to grade 9, 10, 11, and 12 - 1 credit value

Course #6780 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Through this introductory course students will develop critical thinking and problem-solving skills through the use of the design process. Students will be introduced to multiple communication skills through the use of Adobe Software, Presentation programs, 3D drawing software, and Graphics communication skills. Students will cover a broad range of skills that will prepare them for the Graphic Communication and Design track in the Engineering Technologies/Technicians program.

Digital Design - Open to grades 10, 11, and 12 - 1 credit value

Course #6781 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Introduction to Communication Systems and Design.

Through this course students will enhance their knowledge of the digital design process. Students will utilize digital SLR photography and videography alongside the Adobe Production Suite software to create and manipulate digital images and video to further develop their graphic communication skills. Students will utilize the latest SLR cameras and 4K video. Projects could include but are not limited to portraits, company logos, signs, flipbooks, and storyboards. This course will help students gain knowledge in marketing, graphic design, and communication skills.

(ENGINEERING TECHNOLOGY continued on Pages 28 & 29)

Graphic Design - Open to grades 10, 11, and 12 - 1 credit value

Course #6782 - **Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology**

Prerequisite: Introduction to Communication Systems and Design

Students will learn and apply fundamentals of various design software applications such as Illustrator and Photoshop. Students will also gain skills in image editing, drawing and graphic animation. Advertising and marketing projects coordinate technical skills with organization, management, communication, ethics and teamwork.

Communication Engineering Design - Open to grades 11 and 12 - 1 credit value

Course #6783 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Graphic Design or Digital Design

Course Description: This is a senior course that students will use all aspects of communication design skills including, but not limited to digital and graphic design. Students will develop a business model, create a business plan, and develop a mass-marketing design. Students will be exposed to careers related to graphic design, photography, and communication engineering.

Introduction to Robotics and Automation - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6790 - **Suggested Career Pathway(s): Arts and Communication, Engineering and Industrial Technology**

Through this introductory course students will develop critical thinking and problem-solving skills through the use of the design process. Students will be introduced to robotics, robotic programming, automation, and automation programming. Students will learn about robotics in our world, and how the different aspects of STEAM are all used in the field of robotics.

Robotics Applications - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6791 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Introduction to Robotics and Automation

This course will provide an introduction to the VEX Robotics Design System, students will get an overview of the different subsystems within the VEX system and how they interact together. Students will then put this knowledge into practice as they follow step-by-step directions to build a robot. Students will cover a broad range of skills that will prepare them for the manufacturing track in the Engineering. Technologies/Technicians program.

Electrical and Electronic Control Systems - Open to grades 10, 11, and 12 - 1 credit value

Course #6792 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Introduction to Robotics and Automation

This course is a foundation for entering careers and has a culture grounded in electronics. Students will gain hands on experience through this course, they will learn the basic theories and principles that are fundamental to electronics through the development of exciting class projects. Methods for accomplishing this will include the building of circuits through breadboarding, soldering, reading a digital multimeter, and utilizing electrical design software. Students will build engaging projects that help students to grasp basic electronic principles and elements.

(ENGINEERING TECHNOLOGY continued on Page 29)

Robotics and Automation Enterprise - Open to grades 11 and 12 - 1 credit value
Course #6793 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Course Description: Autodesk's VEX Robotics Curriculum is divided up into twelve primary units and one optional unit. In a flexible format, students learn about engineering and engineering problem solving. They will be given introductions to the VEX Robotics Design System and Autodesk® Inventor® while learning key STEM principles through a process that captures the excitement and engagement of robotics competition. (First Robotics is an educational robotics competition for high school age students). It provides these students with a unique, hands-on experience that allows them to discover the possibilities of a career in the manufacturing sector, and other science, technology, engineering, or math (S.T.E.A.M.) fields.

Introduction to Biotechnology - Open to grades 10, 11, and 12 - .5 credit value
Course #6798 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Course Description: Students will utilize the 7 major areas of biotechnology: Bioengineering, health care, cultivation of plants and animals, fuel and chemical production, waste management and treatment, materials applications, and regulation and safety. Students will complete modules of each major area of biotechnology from safety regulations to bioengineering which cover a broad range of components. Membership in Technology Student Association (TSA) is recommended but not required.

Advanced Biotechnology - Open to grades 11 and 12 - .5 credit value
Course #6799 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Prerequisite: Introduction to Biotechnology

Course Description: This course offers a systematic review of the 7 major areas of biotechnology. Students will be introduced to advanced biotechnologies where students will use the backwards design process to create a problem-based learning environment. This course will be heavily focused on the design process through the use of biotechnologies. Laboratories include Waste Management, Bio-Fuels, Hydroponics, Aquaponics, EKG, DNA Electrophoresis Analysis, Safety Regulation, and Physical Enhancement. Students also review employment opportunities and careers in the field of biotechnology.

SCIENCE

Biology - Open to grade 9 - 1.5 credit value

Course #3200 - **All Career Pathways**

This is a survey course of the science of genetics, environmental science and cell biology. Students will be expected to participate in indoor and outdoor labs to develop laboratory skills and techniques which will further their understanding of biological principles. Various projects such as model building and oral or poster presentations may be required activities along with tests, quizzes, homework assignments and lab reports. This course has a lab component that meets every three out of six days and is opposite the student's physical education course or study hall.

Physical Science - Open to grade 10 - 1 credit value

Course #3100 - **All Career Pathways**

Students in this science course will develop skills in inquiry, problem solving, critical thinking, and communications in the scientific fields of chemistry and physics with links to real world applications. The scope and sequence of the course will include developing an understanding of the structure of matter, the basic principles of force and motion, and the interactions of matter.

Chemistry - Open to grades 10, 11, and 12 - 1.5 credit value

Course #3300 - **All Career Pathways**

Prerequisites: Final Grade of A/B in Biology or Final Grade of C in Biology with recommendation of the Biology teacher.

This course will cover various topics of inorganic chemistry. The students will study the structure of atoms, chemical bonds, chemical reactions, and the properties of gases. Many of the mathematical procedures that are vital to chemistry will be covered. There will be extensive lab experience. This course has a lab component that meets every three out of six days and is opposite the student's physical education course or study hall.

Human Anatomy & Physiology - Open to grades 11 and 12 - 1 credit value

Course #3555 - **Suggested Career Pathway: Science and Health**

Prerequisite: Final grades of A / B / or C in Biology and Chemistry.

This course is an intensive survey of anatomical and physiological basic structures, functions and principles with the following units of study: Cells and Cellular Chemistry, Basic Anatomical Positions, Musculoskeletal System, Nervous System, Cardiovascular and Respiratory System, Digestive System, Lymphatic and Immune System, Endocrine System. Prospective students should have a genuine interest in learning about our interacting body and its systems. The course consists of a challenging, comprehensive, and fast pace approach to the material. Numerous labs are scheduled which reinforce course content, and develop science inquiry skills related to the course.

Organic Chemistry - Open to grades 11 and 12 - 1 credit value

Course #3322 - **Suggested Career Pathway: Science and Health**

Prerequisite: Final Grade of A/B in Chemistry or Final Grade of C in Chemistry with recommendation of the Chemistry teacher.

This course is designed to be a foundation course for college organic chemistry. There will be labs for the course. Emphasis of the course is on naming organic compounds, learning the properties of different classes of compounds and producing mechanisms to show reactions. The course will also discuss current event topics relating to organic chemistry when appropriate. Students will learn to evaluate and think critically about the chemical situations to produce answers instead of memorization. This is a good course for students planning on a career in any medical or health field as well as science careers. This course is also helpful for the AP Chemistry Exam.

(SCIENCE continued on Pages 31 & 32)

AP Chemistry - Open to grades 11 and 12 - 1.5 credit value

Course #3320 - **Suggested Career Pathway: Science and Health**

Prerequisites: Final Grade of A/B in Chemistry or Final Grade of C in Chemistry with the recommendation of the Chemistry teacher and completion or enrollment in Algebra 2.

The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. **LABORATORY REQUIREMENT:** This course requires that 25 percent of the instructional time provides students with opportunities to engage in laboratory investigations. This includes a minimum of 16 hands-on labs, at least six of which are inquiry based. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Physics 1 - Open to grades 11 and 12 - 1.5 credit value

Course #3400 - **All Career Pathways**

Prerequisites: Completion of Chemistry or Physical Science and Algebra 1.

Students will conduct field and laboratory investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students are required to apply mathematical laws to problem situations. Throughout the year students will cover a variety of topics that include: Laws of Motion (One Dimensional, Two Dimensional, circular, and simple harmonic); Conservation and Laws of Energy, Momentum, and Gravitation Forces; Thermodynamics; Characteristics and Behavior of Waves. This course provides students with a conceptual framework, factual knowledge, and analytical and scientific skills. This course has a lab component that meets every three out of six days and is opposite the student's physical education course or study hall.

Physics 2 - Open to grade 12 - 1 credit value

Course #3420 - **Suggested Career Pathway: Science and Health**

Prerequisite Final Grade of A/B in Physics 1 or Final Grade of C with the recommendation of the Physics 1 teacher.

This science course emphasizes laboratory techniques and data analysis. Students are required to apply mathematical laws to problem situations. Students will learn the historical development of classical and modern physics principles, as well as their derivation through laboratory investigation and mathematical modeling techniques. Topics include a review of Physics 1 and electromagnetism, radiation, subatomic and quantum physics. Students will learn how to use laboratory and computer equipment to collect, analyze, and present data.

AP Physics 1 - Open to grades 11 and 12 - 1.5 credit value

Course #3430 - **Suggested Career Pathway: Science and Health**

Prerequisites: Final grade of A/B in Chemistry or Final grade of C with the recommendation of the Chemistry teacher and completion or enrollment in Algebra 2.

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. **LABORATORY REQUIREMENT:** This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Survey of Life - Open to grades 11 and 12 - .5 credit value

Course #3250 - **All Career Pathways**

Prerequisites: Biology and Chemistry or Physical Science.

This course is designed to build upon the student's understanding of the biological processes found in animals, plants, and microorganisms by utilizing inquiry-based laboratory and investigative practices. We will explore the diversity found in unicellular and multicellular organisms, identify the differences between them, and examine their ability to obtain and use energy within their ecosystems. The role that human beings play in maintaining or altering these delicate life systems will also be explored and analyzed by the students. (**SCIENCE continued on Page 32**)

AP Biology - Open to grades 11 and 12 - 1.5 credit value

Course # 3570 - **Suggested Career Pathway: Science and Health**

Prerequisite: Final grade of A/B in Chemistry or final grade of C in Chemistry with the recommendation of the Chemistry teacher.

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes – energy and communication, genetics, information transfer, ecology, and interactions. **LABORATORY REQUIREMENT:** This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Forensic Science - Open to grades 11 and 12 - .5 credit value

Course #3575 - **All Career Pathways**

Prerequisites: Biology and Chemistry or Physical Science.

Students will apply previously learned scientific concepts and inquiry-based laboratory skills from previous Chemistry, Physical Science, and Biology courses to understand how technology and science are actively being incorporated into law enforcement investigations. Through hands-on experiments, students will build competencies on the use of laboratory equipment and the practices used for the processing of physical evidence and interpreting the data. Students will also gain an understanding of the history of forensic science and how it has evolved over time as technology has advanced.

Environmental Science 1 - Open to grades 11 and 12 - .5 credit value

Course #3525 - **All Career Pathways**

Prerequisite: Biology and Chemistry or Physical Science.

This semester course will deal with the following: Ecosystems and human activities on ecosystems; categorizing and analyzing watersheds and wetlands in Pennsylvania; threatened, endangered and extinct species in Pennsylvania and the United States; and humans and their affect on the environment- acid rain, pollution, global warming. Students will spend time collecting research and presenting their findings on these topics.

Environmental Science 2 - Open to grades 11 and 12 - .5 credit value

Course #3535 - **All Career Pathways**

Prerequisite: Biology and Chemistry or Physical Science.

This semester course will deal with the following: Renewable and nonrenewable resources – uses and availability; solid waste management practices; environmental health issues – pollutants, air quality; agricultural practices with an emphasis on biotechnology; integrated pest management systems; and environmental laws and regulations. Students will spend time collecting research and presenting their findings on these topics.

Science Prep – Open to grade 10 and 11 – .25 credit value

Course #3003 - **All Career Pathways**

This course does not fulfill a Science requirement. May be required for students who have not yet scored proficient on the Pennsylvania State Assessment (Keystone Biology). This course is designated to improve student achievement in science. It will address content in the following areas: basic biological principles, the chemical basis for life, bioenergetics theory, homeostasis, cell growth and reproduction, genetics, theory of evolution, and ecology. Other topics covered included test-taking strategies, problem solving, and responding to open-ended questions.

SOCIAL STUDIES

Civics - Open to grade 9 - .5 credit value

Course #5100 - **All Career Pathways**

This course provides an overview of democratic government in the United States including its traditions and origins. Included will be a study of the United States Constitution and its applications on all three levels of government (local, state, and federal).

Law and Society - Open to grade 9 - .5 credit value

Course # 5110 - **All Career Pathways**

This course will focus on the individual rights and responsibilities provided for by the United States Constitution. Students will also examine the relationship between the individual citizen and the laws that govern our society. Topics of study include: human rights, the criminal and civil justice system, and the ability to participate effectively as a citizen in our nation.

Honors World History - Open to grade 10 - 1 credit value

Course #5200 - **All Career Pathways**

Prerequisites: Final grades of A in Civics / Law or Final Grades of B in Civics / Law with the recommendation of the Civics and Law teacher(s).

This course is designed for high school students who wish to gain a deeper understanding of the historical development of human societies. An examination of the political, social, economic, and cultural trends as they have progressed through human civilizations will be examined. Outside readings and original source documents will be used to supplement the textbook for projects throughout the course.

World History - Open to grade 10 - 1 credit value

Course #5210 - **All Career Pathways**

This course will examine the development of human societies as they have progressed from ancient civilizations to the modern era. A broad overview of the political, social, economic, and cultural trends that have been dominant throughout history will be examined. Course requirements will include class projects and activities based on geographic study.

U.S. History - Open to grade 11 - 1 credit value

Course #5310 - **All Career Pathways**

This course is designed to allow students to understand the origins of the United States and the historical growth of our nation. The dominant political, social, economic, and cultural forces that have played a role in our nation's development will be examined. Course requirements will include in class and outside activities based on content.

(SOCIAL STUDIES continued on Pages 34 & 35)

Advanced Placement U.S. History - Open to grade 11 only - 1 credit value

Course # 5300 - Suggested Career Pathway(s): Arts and Communication, Human Services

Prerequisites: Final grade of A/B in Honors World History or World History with the recommendation of the World History teacher.

The AP U.S. History course focuses on the development of historical thinking skills (chronological reasoning, comparing and contextualizing, crafting historical arguments using historical evidence, and interpreting and synthesizing historical narrative) and the development of students' abilities to think conceptually about U.S. history from approximately 1491 to the present. Seven themes of equal importance – American and National Identity; Migration and Settlement; Politics and Power; Work, Exchange, and Technology; America in the World; Geography and the Environment; and Culture and Society – provide areas of historical inquiry for investigation throughout the course. These require students to reason historically about continuity and change over time and make comparisons among various historical developments in different times and places. The course also allows teachers flexibility across nine different periods of U.S. history to teach topics of their choice in depth. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Advanced Placement European History - Open to grade 12 only - 1 credit value

Course #5400 - Suggested Career Pathway(s): Arts and Communication, Human Services

Prerequisite: Final grade of A/B in AP U.S. History or U.S. History with the recommendation of the U.S. History teacher.

The AP European History course focuses on developing students' understanding of European history from approximately 1450 to the present. The course has students investigate the content of European history for significant events, individuals, developments, and processes in four historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction of Europe and the world; poverty and prosperity; objective knowledge and subjective visions; states and other institutions of power; and individual and society) that students explore throughout the course in order to make connections among historical developments in different times and places. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

Advanced Placement Psychology - Open to grade 12 only - 1 credit value

Course # 5455 - Suggested Career Pathway(s): Arts and Communication, Human Services

Prerequisite: Final grade of A/B in AP U.S. History or U.S. History with the recommendation of the U.S. History teacher.

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation, and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatments of psychological disorders, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, evaluate claims, and evidence, and effectively communicate ideas. Students will be required to take the AP Assessment at the end of the course. This cost will be paid for by the district.

(SOCIAL STUDIES continued on Page 35)

Economics - Open to grade 12 - .5 credit value

Course # 5415 - All Career Pathways

Economics will introduce students to basic concepts of Micro and Macro economics. These include, but are not limited to, supply and demand, the American economic system, understanding money, taxes, and savings, as well as business structure. Students will be able to understand these concepts and apply them to hands on activities. Students will be engaged in basic investment practice, including the stock market, as well as job searching and personal budgeting.

Psychology - Open to grade 12 - .5 credit value

Course #5435 - All Career Pathways

Psychology offers much promise in mankind's efforts to improve the quality of life. This course is for students continuing their education beyond high school. Areas of study include early childhood, learning theories, personality theories, and review of the major forces of psychology. Requirements: Each student must maintain a daily log and outside readings.

Sociology - Open to grade 12 - .5 credit value

Course #5445 - All Career Pathways

This course is designed to provide the student with an understanding of how societies function and how individuals behave within a social context. Topics of study include: social norms, values, social grouping, racism and prejudice, crime, and old age.

AGRICULTURAL EDUCATION

Introduction to Agriscience – Open to grade 9 and 10 – 1 credit value

Course # 6800 - **Suggested Career Pathway: Science and Health**

This course is an overview of present-day agriculture and natural resources. It addresses the most basic levels of agriscience for those students considering a career path in agriculture. Topics covered include: safety, careers in agriscience, leadership development, natural resources, plant science, and animal science. FFA membership is included in course enrollment and participation is required during class time.

Other requirements: A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Plant Science – Open to grades 9, 10, 11, and 12 – 1 credit value

Course #6816 - **Suggested Career Pathway: Science and Health**

Suggested prerequisite: Introduction to Agriscience

This course is a basic course in plant and soil science. Topics covered will include: basic botany, soil biology, plant growth requirements, plant propagation, trends in the horticulture industry and careers. Students will be introduced to greenhouse production, floriculture, and landscape design. This course will also include participation in academic FFA activities such as, career development events. FFA membership is included in the enrollment of this course. A Supervised Agriculture Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Greenhouse Production – Open to grades 10, 11, and 12 – 1 credit value

Course #6814 - **Suggested Career Pathway: Science and Health**

Suggested Prerequisite: Plant Science

This course will deal with greenhouse production and agricultural business. Topics covered will be greenhouse crop management, plant propagation, greenhouse pest management, and agricultural business management and analysis. Students will raise fall and spring greenhouse crops to sell to community members and manage the greenhouse as a business. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agricultural Education.

Introduction to Veterinary Science – Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6820 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

This course is an exploratory course in veterinary medicine intended for student planning a career path in animal science, biotechnology, veterinary assistant, veterinary technician, and veterinarian. The following topics will be presented: leadership development, safety, careers, basic cell biology, tissue types, body systems, nutrition, diseases, clinical practice and diagnostics. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technology Education for Agriculture Education.

(AGRICULTURAL EDUCATION continued on Pages 37, 38, 39, & 40)

Animal Science – Open to grades 9, 10, 11, and 12- 1 credit value

Course #6822 - **Suggested Career Pathway: Science and Health**

This course is for students with an interest in animal agriculture. Topics covered will include: career opportunities in animal science, safety in animal production, feeding and nutrition, genetics and animal reproduction, animal health, animal selection, and animal management practices. Species studied will include: beef cattle, dairy cattle, sheep, goats, and swine. Some alternative animals will be discussed. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technology Education for Agriculture Education.

Equine Science and Small Animal Science – Open to grades 10, 11, and 12 - 1 credit

Course #6824 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

This course is for students interested in a career path in animal sciences – especially in the equine and companion industries. The following equine topics are covered: safety, history and development of the horse, careers, breeds and classes of horses, anatomy of the horse, and other components of the horse industry. Small animal topics covered will include: breeds and classification, anatomy, and management of small animals. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technology Education for Agriculture Education.

Wildlife and Environmental Conservation - Open to grades 11 and 12 – 1 credit value

Course #6841 - **Suggested Career Pathway: Science and Health**

This is a course for those interested in careers in production agriculture, wildlife and/or fisheries management, forestry and other natural resource occupations. Studies include the following: soil, land management, water resources, fish & wildlife management, forestry, energy resources, and natural resource conservation. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Floriculture and Landscape Design - Open to grades 11 and 12 – 1 credit value

Course #6819 - **Suggested Career Pathway(s): Arts and Communication, Science and Health**

Prerequisite: Plant Science or Greenhouse Production

This course focuses both on the floral design and landscape design industries. Major units of study will include plant identification, care and handling of plants and flowers, principles of art as it applies to horticulture design, and the mechanics and implementation of design. Agribusiness units will be introduced in merchandising, advertising, sales, and operating a retail floral or landscape business. A Supervised Agriculture Experience project and record book must be maintained as required the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

(AGRICULTURAL EDUCATION continued on Pages 38, 39, & 40)

Advanced Veterinary Science - Open to grades 10, 11, and 12 - 1 credit value

Course #6846 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**

Suggested Prerequisite: Introduction to Veterinary Science (#6820)

This course is an advanced level course in veterinary medicine intended for a student planning a career path in animal science, biotechnology, veterinary assistant, veterinary technician, and veterinarian. The following topics will be covered: animal nutrition, animal management, parasites, disease, and advanced clinical practices. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technology Education for Agriculture Education.

Introduction to Agricultural Mechanization - Open to grades 9 and 10 - 1 credit value

Course #6900 - **Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health**

This course serves as the prerequisite course for all agriculture mechanics courses. Instruction includes both the safety and certification of equipment used in both metal and wood processes. Drafting and design of construction projects used today with the agricultural industry will be addressed. Students will also have the opportunity to take the OSHA CareerSafe Certification. FFA instruction and Supervised Agricultural Experience project development will be covered. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Introduction to Welding - Open to grades 10, 11, and 12 - 1 credit value

Course #6910 - **Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health**

Suggested Prerequisite: Introduction to Agricultural Mechanization

Introduction to Welding provides students with the opportunity to work with a variety of welding techniques in a safe atmosphere. Students will be working with the following pieces of equipment and will have basic skills in using gas and plasma cutters, MIG, TIG, SMAW, gas and spot welding. This class also offers FFA and Career Development Events as the events arise. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Introduction to Agricultural Construction - Open to grades 10, 11, and 12 - 1 credit value

Course #6912 - **Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health**

Introduction to Agriculture Construction offers an introductory set of skills needed for basic construction in the field. Students will gain experience in surveying, concrete and masonry, plumbing, basic electricity and wiring, and carpentry. Students will have the opportunity to fabricate small projects that build on these skills. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

(AGRICULTURAL EDUCATION continued on Pages 39 & 40)

Introduction to Small Gas Engines - Open to grades 10, 11, and 12 - .5 credit value
Course #6914 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**
Suggested Prerequisite: Introduction to Agricultural Mechanization

This course is for those students planning to follow a career path in agriculture mechanics, landscaping, forestry, parks and recreation, or production agriculture. This course will include: Basic four-cycle theory and operation, part and tool identification, safety in operation, basic troubleshooting and diagnostics, and general upkeep of equipment. Potential exists for Career Development Event participation in small engines. FFA membership is included in course enrollment and participation is required during class time. A supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Advanced Agricultural Construction - Open to grades 10, 11, and 12 - 1 credit value
Course #6916 - **Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health**
Suggested Prerequisite: Introduction to Agricultural Construction

Advanced Construction takes the basic knowledge of Agricultural Construction and applies in a more advanced setting. Students will submit project plans and a budget for individual projects and class projects that will be manufactured and sold to the community. Skills emphasized during the class include but are not limited to the following; customer relations, budgeting, project planning, and project plan implementation and construction. Projects vary by semester and quarter. FFA membership is included in course enrollment and participation is required during class time. A supervised Agricultural Experience record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Advanced Agricultural Welding - Open to grades 10, 11, and 12 - 1 credit value
Course #6918 - **Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health**
Prerequisite: Introduction to Welding

Advanced Welding refines the basic skills of Introduction to Welding and applies them into real life, practical scenarios. Students will submit project plans and a budget for individual projects and class projects that will be manufactured and sold to the community. Skills emphasized during the class include but are not limited to the following; customer relations, budgeting, project planning, and project plan implementation and construction. Projects vary by semester and quarter. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Advanced Engines - Open to grades 11 and 12 - .5 credit value
Course #6920 - **COURSE WILL NOT BE OFFERED IN 2023-2024 SCHOOL YEAR**
Prerequisite: Introduction to Small Gas Engines.

Advanced Engines takes the basic knowledge of Introduction to Small Gas Engines builds those skills with small diesel technology. Students will have the opportunity to restore personal small engine projects and community service projects. Skills emphasized during the class include but are not limited to the following; customer relations, budgeting, parts identification and ordering, and creating invoices for services rendered. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

(AGRICULTURAL EDUCATION continued on Page 40)

Senior Agricultural Leadership - Open to grade 12 - 1 credit value

Course #6860 - Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health, Arts and Communication

Suggested Prerequisite: Student must have taken a minimum of three agricultural credits prior and have maintained a Supervised Agricultural Experience Program for at least two years. Teacher permission required.

Senior Agriculture Leadership is a senior course designed as a cumulative experience in the general agriculture / agriculture mechanic program making this a mandatory course. All students will maintain a high-quality SAE program; complete the Keystone FFA Degree and Proficiency award application. Students will be able to develop capstone projects related to their interest in the agriculture programs. Students will complete assignments involving FFA activities; such as Career Development Event preparation, leadership development, and various projects. Students will engage in varied CDE's as well as attain the skills necessary to become successful leaders. FFA membership is included in the enrollment of this course.

Agricultural Mechanization Capstone Course- Open to Grade 12 - 1 credit value

Course #6930 - Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health, Arts and Communication

Suggested Prerequisite: Students must have previously taken a minimum of three agricultural credits and have maintained a Supervised Agricultural Experience (SAE) Program for at least two years.

This course is meant to enhance a student's career focus by applying the skills they have learned throughout the agriculture mechanics program. Opportunities to shadow local companies to enable real world hands-on learning experiences will be available. Students will also choose their focus from welding, custom fabrication, construction, custom construction production, small engines, custom small engine builds and development. Each student must create a business model based on their career focus area and expand it through skill-based projects that simulate real life entrepreneurship and enterprise. Projects vary by semester and quarter. FFA membership is included in course enrollment and participation is required during class time. A Supervised Agricultural Experience project and record book must be maintained as required by the Pennsylvania Department of Education, Bureau of Career and Technical Education for Agriculture Education.

Supervised Agriculture Experience - Open to grades 9, 10, 11, and 12 - 1 credit value

Course #6850 - Suggested Career Pathway(s): Engineering and Industrial Technology, Science and Health, Arts and Communication

Supervised Agriculture Experience (SAE) projects are designed to give students a chance to develop and apply agriculture knowledge and skills in real world experiences. Students must select and complete any of the National FFA Proficiency approved projects. Students are required to keep an accurate and updated Pennsylvania FFA Record Book. Throughout the SAE course, students must meet with the instructor once a week during homeroom, complete a minimum of 115 independent project hours, and participate in four project site visits.

Other requirements: Students must be enrolled in another Agricultural Education Course. All projects must be approved by the instructor prior to scheduling and a SAE Project Acceptance Form must be turned in with scheduling forms.

STUDENT ACTIVITIES & WORKSHOPS

Highlander Yearbook - Open to Grade 9, 10, 11, and 12. - No Credit Value
Course #6349

This workshop is for students who will be responsible for the publication of the Highlander yearbook. Students will be required to: oversee the production of the yearbook, photograph school/sports events, write body copy and captions, design layouts, and sell business ads which fund the yearbook. Students who take this workshop should be reliable, self-motivated, have good attendance, and be able to meet deadlines. This workshop is limited to no more than fifteen students.

Student Technology Leaders - Open to Grades 9, 10, 11, and 12 students who have applied to and have been approved by instructor. - No Credit Value
Course #6371 -

This will be used as an independent computer technology workshop for middle school and high school student technology leaders in grades 6-12. Students will be required to oversee and engage in technology issues for both the middle school and high school. These responsibilities will include but will not be limited to; middle/high school morning announcements, digital school projects, and designing/developing McGuffey School District website content. Students may also use this time to develop projects for computer related competitions such as App challenges, state computer fairs, and other related competitions. Students must apply to the instructor to be accepted into this workshop.

WESTERN AREA CAREER AND TECHNOLOGY CENTER PROGRAM DESCRIPTIONS

Auto Mechanics – Course # 706

The three-year Automotive Mechanics program is for tenth, eleventh, and twelfth grade students. This program will prepare students for employment in the auto repair industry working with engines, brakes, steering, suspension, engine performance, and electrical. The program will also assist in the diagnosis and repair of various drivability conditions, and routine vehicle maintenance.

Automation Robotics Engineering Technology – Course # 714

This three-year course focuses on all aspects of industrial and commercial machines and robotics and is designed to prepare students for work in industry or continued education in engineering-related fields. The program includes design activities and instruction in operation, set-up, maintenance, troubleshooting, and repair of machines and systems found in commercial, packaging, medical, and food production facilities where high tech equipment is used. Curriculum and instruction include the areas of Electricity, Electronics, Sensor Technology, Machine Operations and Maintenance, Industrial Electronics, Computer Machine Controls, Machine Repair, Motors and Control Applied Physics, Fluid Power, Mechanical Components, Schematic Interpretation and Quality Control. Students are trained on a wide variety of tools for preventative maintenance and construction of equipment.

Carpentry – Course # 710

This three-year program prepares tenth, eleventh, and twelfth graders for all phases of residential carpentry. The course is taught in sequence with the construction of a house. Site layout, footer layout and forming, rough framing, exterior finish and roofing, insulation, drywall, and interior finish are covered. Each unit is taught in conjunction with related safety, estimating, and blueprint reading. Completers achieve skills needed to attain employment as a Carpenter.

Collision Repair Technology – Course # 704

Through theory and related hands-on classroom instruction, students in this program will learn the latest techniques in five major topics. Instruction utilizes the I-Car curriculum, and numerous techniques and technologies are used to keep abreast of current industry trends and standards. PPG Envirobase systems are used throughout with an emphasis on waterborne systems.

Cosmetology – Course # 712

Cosmetology is a three-year course for tenth, eleventh, and twelfth grade students. The course will be operated by the Western ACTC under the regulations of the State Board of Cosmetology. Students with regular attendance will receive the required 1250 hours of training needed to take the State Board exams for licensing.

(WACTC PROGRAMS continued on Pages 43 & 44)

Culinary Arts / Baking - Course # 720

Instruction includes theory and applications related to food preparation, menu and banquet planning, food and beverage purchasing, quality control, cost analysis, safety, and sanitation. Students learn the safe and proper use of hand tools in the industry. Program components include Commercial Baking, Catering, Regional and International Foods, Meat Cutting, Cooking Methods, Nutrition, Safety, and Sanitation. Program completion qualifies students for positions in the food service industry or advanced study at a culinary institute or college. The culinary program includes hospitality coursework providing practical experiences in lodging management, office operation, leadership and management; marketing, food and beverage service; and operation of the physical plant.

Electrical Occupations - Course # 716

Tenth, eleventh, and twelfth grade students are prepared for employment in the fields of residential, commercial, and industrial wiring and the installation and maintenance of equipment including electrical service panels, lighting systems, communications systems and related equipment, PV (Photovoltaic) systems, and wind turbine systems.

Emergency and Protective Services - Course # 734

Western Area CTC emphasizes both theory and hands-on training for our Emergency & Protective Services students. This three-year program will prepare students for employment in the Emergency Protective industry upon graduation or can be an excellent stepping-stone for enrollment into post-secondary training. This program will provide basic firefighting and CPR/AED & First Responder skills; Hazmat awareness, and basic patrol duties.

Health Assistant - Course # 722

This course provides students with the entry-level knowledge and clinical skills necessary to enter the healthcare field in hospitals, surgical centers, rehabilitation facilities and a wide range of other healthcare settings. Students are provided with clinical experiences to enhance the learning experience and assist in the transition to employment. Core curriculum includes an Overview of Health Careers, Basic Anatomy and Physiology, Medical Terminology, Basic Nursing Skills, Infection Control Practices, Legal and Ethical Aspects of Health Care, Patient Care and Communication Skills. The program combines lectures, discussions and hands-on training in a state-of-the-industry lab and in clinical settings to develop the knowledge and skills necessary for a career in healthcare.

Heating, Ventilation, and Air Conditioning (HVAC) - Course # 702

Heating & Air Conditioning is a 3-year program that prepares tenth, eleventh, and twelfth grade students for employment to assist the mechanic in the servicing and installation of residential and commercial heating and cooling systems. Students are also prepared for the EPA certification exam for safe refrigerant handling.

(WACTC PROGRAMS continued on Page 44)

Machine Shop - Course # 724

This three-year course provides tenth, eleventh and twelfth graders the skills needed for entry into the Machining field through basic, hands-on machining practice on lathes, milling machines and grinders. Topics include set-up, tool selection and methods used on various materials such as steel, aluminum and brass. Computer-part programming and machine operation are also included in the training.

Masonry - Course # 726

This three-year instructional program prepares students in brick, block, stone, concrete, tuck pointing, and artificial stone construction. Students learn the types and sizes of masonry materials, various applications for materials, blueprint reading, masonry symbols, use of measuring instruments, leveling instruments, layout and design, bonds, hand tools, masonry equipment, mortar mixing, concrete mixing, estimation, practical problems in mathematics, preparation of material lists, masonry saw, tile saw, 14" dry cut saw, hammer drill, demolition, fireplaces, chimneys, barbecue fireplace, steps, walls, scaffold construction, etc.

Networking - Course # 738

This three-year program provides, tenth, eleventh and twelfth graders with hands-on, career-oriented e-learning solutions with an emphasis on practical experience to help students develop the fundamentals of PC Computer Technology, Networking and Security along with essential career skills. No prior knowledge of computers or networking technology is required. This program helps students prepare for entry-level information and communication technology (ICT) career opportunities leading to certifications such as Comp TIA A+, Comp TIA IT Fundamentals, Cisco CCENT, Comp TIA Network+ and Cisco CCNA.

Welding - Course # 728

This course prepares students for a career in Welding. The course has a high concentration of many welding applications, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), Flux cored Arc Welding (FCAW), Plasma Arc Cutting (PAC), Oxy-Acetylene Cutting Welding, (OAC), Oxy-Acetylene Welding (OAW) and Brazing (B) are taught throughout the program. Students are also taught welding safety, how to use different measuring devices, electrical principals grinding, the use of various hand tools, layout as it applies to fabrication, making a bill of materials and cost estimation, metallurgy, blueprint reading and welding symbols. Students will be given the opportunity to earn AWS and ASME welding certifications. All welding certifications will be done by a Certified Welding Inspector (CWI).

Rehabilitation Aide / Sports Medicine - Course # 766

The Rehabilitation Aide program will provide students with knowledge of pre-participation health and fitness assessments to design individual exercise and rehabilitation programs. Our goal is to provide an education that will encourage our students to continue their studies in fields such as athletic training, physical therapy, occupational therapy and other health and fitness related fields.

PENN COMMERCIAL PROGRAM DESCRIPTION

Cosmetology - Course # 770

The Toni & Guy Cosmetology Program focuses on our “Classics” curriculum including eleven cut and nine color techniques. Students graduate with a fundamental education in hairdressing, with experience in products, makeup, skincare, and an understanding of the salon experience. Students also learn how to further their professional careers in the future.

McGuffey SD Career and Technical Program Admissions Policy

This Admissions Policy is for the following Career and Technical Programs offered at McGuffey High School including:
General Agriculture (01.0000), Agricultural Mechanization (01.0201) and Engineering Technologies ((15.9999)

The Pennsylvania Department of Education approved Career and Technical Education Programs have an unlimited enrollment and allows all students to participate in classes that are detailed in the scope and sequence for each program. The McGuffey School District adds additional sections if warranted by student course selection.

Recruitment Program

The Career and Technical Programs (CTE) offered at McGuffey High School actively recruits students into our programs by engaging students throughout the district in school based and community based activities and outreach including: community based Future Farmers of America (FFA) events and programming, agricultural and STEAM programming and activities throughout the K - 12 curriculum, middle school participation in introductory CTE courses, promotion of programs during the course scheduling process (McLective Fair), and participation in academic and leadership activities including Career and Leadership Development Events (CDE) and First Robotics.

Selection and Placement Procedure

All students wish to enter Career and Technical Programs offered at McGuffey High School are welcomed and counselled on the courses they should select each year to complete the programming offered by each program.

Students that complete 50% of the scope and sequence must take the assessment provided by the National Occupational Competency Testing Institute (NOCTI) for that individual Career and Technical Program.

The McGuffey School District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities.

The following person has been designated to handle inquiries regarding the nondiscrimination policies:

Dr. Andrew Oberg, Superintendent
90 McGuffey Drive
Claysville, Pennsylvania 15323
(724) 948-3731
oberga@mcguffey.k12.pa.us

McGuffey SD CTE Program Course of Studies

General Agriculture Course of Studies (01.0000)

Introduction to AgriScience (#6800)



Introduction to Veterinary Science (#6820) or Animal Science (#6822) or Small Animal & Equine Science (#6824) or Wildlife & Environmental Conservation or (#6841)



Advanced Veterinary Science (#6846)



Senior Agricultural Leadership (#6860)



Supervised Agricultural Experience (#6850)

Applied Horticulture Course of Studies (01.0601)

Introduction to AgriScience (#6800)



Plant Science (#6816)



Greenhouse Production (#6814) or Floriculture and Landscape Design (#6819)



Senior Agricultural Leadership (#6860)



Supervised Agricultural Experience (#6850)

Agricultural Mechanics Course of Studies (01.0201)

Introduction to Agricultural Mechanization (#6900) or Introduction to AgriScience (#6800)



Introduction to Welding (#6910)



Introduction to Agricultural Construction (#6912)



Introduction to Small Gas Engines (#6914)



Advanced Agricultural Welding (#6918)



Advanced Agricultural Construction (#6916)



Advanced Engines (#6920)



Senior Agricultural Leadership (#6860)



Senior Agricultural Leadership (#6860)



Senior Agricultural Leadership (#6860)



Supervised Agricultural Experience (#6850)



Supervised Agricultural Experience (#6850)



Supervised Agricultural Experience (#6850)

Engineering Technologies Course of Studies (15.9999)

Introduction to Engineering Technology (#6770)



Engineering Materials (#6771)



Manufacturing Enterprise (#6778)



Engineering & Design Development (#6774) or Communication Engineering Design (#6788)

Engineering Technologies Course of Studies (15.9999)

Introduction to Communication Systems & Design (#6780)



Digital Design (#6781) or Graphic Design (#6782)



Electrical & Electronic Control Systems (#6792) or Robotics Applications (#6791)



Robotics and Automation Enterprise (#6793)

Engineering Technologies Course of Studies (15.9999)

Introduction to Robotics/Automation (#6790)



Introduction to Biotechnology (#6798)



Advanced Biotechnology (#6799)



Graphic Design (#6782)

2023 - 2024 Community College of Allegheny County Dual Enrollment Courses

(Based on 2023-2024 approval from CCAC)

<https://selfservice.ccac.edu/student/courses>

Social Sciences:

ANT 101	Introduction to Anthropology	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)
ECO 103	Principles of Microeconomics	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)
PHL 101	Introduction to Philosophy	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)
POL 101	Introduction to Political Science	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)
PSY 101	Introduction to Psychology	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)
SOC 101	Introduction to Sociology	(3 CCAC Credits / 1 McGuffey HS Social Studies Credit)

Science:

CHM 201	Organic Chemistry 1	(4 CCAC Credits / 1 McGuffey HS Science Credit)
CHM 202	Organic Chemistry 2	(4 CCAC Credits / 1 McGuffey HS Science Credit)
PHY 142	Physics II	(4 CCAC Credits / 1 McGuffey HS Science Credit)
PHS 107	Introductory Astronomy	(3 CCAC Credits / 1 McGuffey HS Science Credit)
BIO 107	Pharmacology	(3 CCAC Credits / 1 McGuffey HS Science Credit)

Literature:

ENG 101	English Composition 1	(3 CCAC Credits / 1 McGuffey HS English Credit)
ENG 102	English Composition 2	(3 CCAC Credits / 1 McGuffey HS English Credit)

Mathematics:

MAT 111	College Algebra	(3 CCAC Credits / 1 McGuffey HS Mathematics Credit)
MAT 142	Pre-Calculus	(4 CCAC Credits / 1 McGuffey HS Mathematics Credit)
MAT 201	Calculus I	(4 CCAC Credits / 1 McGuffey HS Mathematics Credit)
MAT 202	Calculus 2	(4 CCAC Credits / 1 McGuffey HS Mathematics Credit)
MAT 220	Business Calculus	(4 CCAC Credits / 1 McGuffey HS Mathematics Credit)

Art and Languages:

THE 101	Introduction to Theatre	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
JRN 101	Introduction to Journalism	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
JRN 103	Introduction to Mass Media	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
MUS 160	American Popular Music	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
ART 106	Art Appreciation	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
ART 113	Graphic Communications	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
ASL 101	Elementary American Sign Language 1	(4 CCAC Credits / 1 McGuffey HS Elective Credit)
ASL 102	Elementary American Sign Language 2	(4 CCAC Credits / 1 McGuffey HS Elective Credit)
FRE 101	Elementary French 1	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
FRE 102	Elementary French 2	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
DAT 119	Python 1 Computer Science	(3 CCAC Credits / 1 McGuffey HS Elective Credit)
DAT 129	Python 2 Computer Science	(3 CCAC Credits / 1 McGuffey HS Elective Credit)

2023 - 2024 McGuffey High School / University of Valley Forge Dual Enrollment Courses

(Based on 2023-2024 approval from UVF)

<https://valleyforge.edu/admissions/dual-enrollment/>

Social Sciences:

PSY 223 Introduction to Psychology (3 UVF Credits / 1 McGuffey HS Credit)
HIS 233 United States History (3 UVF Credits / 1 McGuffey HS Credit)

Science:

SCI 123 General Biology (3 UVF Credits / 1 McGuffey HS Credit)

Literature:

ENG 123 College Writing and Research (3 UVF Credits / 1 McGuffey HS Credit)

* Prerequisite may be required by the University of Valley Forge

Mathematics:

* MTH 123 Quantitative Reasoning (3 UVF Credits / 1 McGuffey HS Credit)

* Prerequisite may be required by the University of Valley Forge

McGuffey High School Scheduling Directions 2023-2024

FIRST:

Carefully review Pages 1 - 9 of the 2023-2024 Academic Handbook.

SECOND:

Carefully review the McGuffey High School graduation requirements found on Page 7.

THIRD:

Go to the McGuffey High School website and select the “Guidance Office” Link. Select “2023-2024 High School Scheduling” Link. **Select the Scheduling Worksheet for the class you will be in next year.** Read the directions and enter the information on the Scheduling Worksheet. Make sure you have selected courses that you are required to take per the graduation requirements. Be sure to review your course selections with your parent or guardian.

FOURTH:

Some course requests require your current teacher’s recommendation and signature. Please meet with your current teacher and obtain their signature on your Scheduling Worksheet. If the teacher does not approve, you will be contacted by your School Counselor to select another course.

FIFTH:

After your Scheduling Worksheet is complete, carefully follow the directions to enter your 2023-2024 courses online into Powerschool using the directions on Page 51.

SIXTH:

After you have entered your course requests into Powerschool, turn in your Scheduling Worksheet to Mrs. Jodi Fletcher in the High School Office by March 7, 2023.

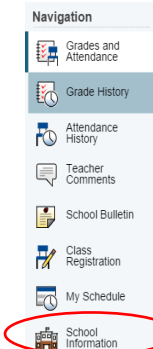
QUESTIONS:

Students Last Name A - K / Mrs. Angela MacBeth / macbethaa@mcguffey.k12.pa.us

Students Last Name L - Z / Mrs. Rita Ross / rossr@mcguffey.k12.pa.ud

PowerSchool - Student Online Course Selection Procedures

- 1) Go to: <http://mcguffey.powerschool.com/public/>
- 2) Log into PowerSchool using your PowerSchool username and password.
- 3) Click on the Class Registration Menu on the left side of the page.




a) The courses you will see will allow you to “request a seat in this class.” Courses that are required for your grade level have already been requested for you.

b) Please refer to the prerequisites listed for some courses when requesting courses.

Course Name	Number	Course Description	Credits	Prerequisite Note	Alerts
AP BIOLOGY	3570		1.5	BIOLOGY - FG A CHEMISTRY - FG B OR BETTER	

Course Name	Number	Course Description	Credits	Prerequisite Note	Alerts
AP BIOLOGY	3570		1.5	BIOLOGY - FG A CHEMISTRY - FG B OR BETTER	



- 4) To choose a course, click the pencil in the top right-hand corner of the requirement box. 
 - a. Select at least one course in each area by checking the box next to the desired course.





<input checked="" type="checkbox"/>	AP ENGLISH LITERATURE & COMPOSITION	1400
<input type="checkbox"/>	ENGLISH 12 ACADEMIC	1410

- b. Select elective(s) based upon how many additional credits you may need. (Remember the credit value of electives vary by course).

- 5) Once you have made all of your course selections click “Okay” at the bottom of the window.



- 6) The courses you have selected will show up in the middle of the screen and the red exclamation point (at the right of the window) will turn into a green check mark.  

- 7) Repeat steps 4 through 6 for each section of the scheduling request screen until each section has the correct number of courses and all red exclamation points   turn to green checks  .

- 8) The number of credits are tallied for you at the bottom of the screen as you select courses. Be sure not to have less than **7** credits or more than **8** credits per year prior to submitting your requests.

Requires between 7 and 8 credit hours.
Requesting 0 credit hours.

- 9) Click "Submit" at the bottom of the screen to complete the online scheduling request process.

- 10) To review your course selections, click on the link at the top of the screen that says: “View Course Request”.

Scheduling Notes