MCDOWELL
HIGH SCHOOL

SCHEDULING GUIDE
2023-2024

Millcreek Township School District

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Guidance

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Mr. Scott Boyd, Guidance Counselor
Mrs. Pamela Dixon, Guidance Counselor
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Student Course Request

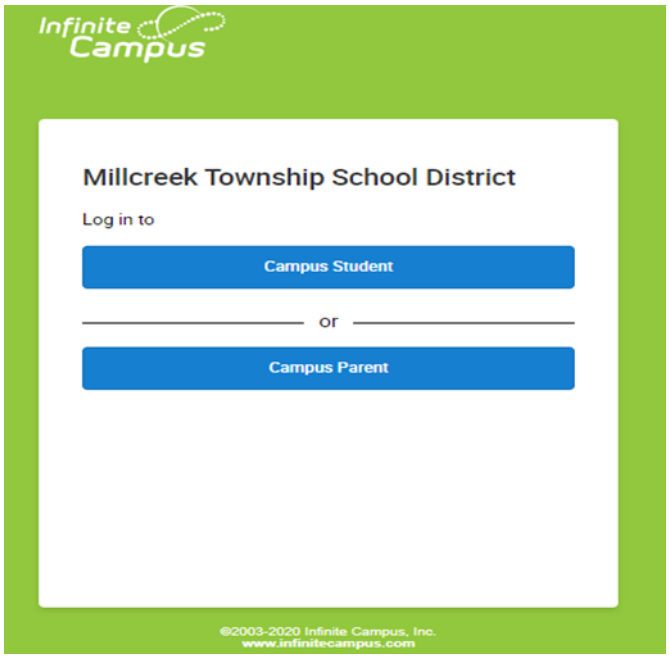
All students entering grades 9 through 12 will enter course requests for elective courses online using the Infinite Campus Portal.

All core courses (math, science, social studies, and language arts/English) will be recommended and scheduled for students by teachers and/or administrative staff based on grade level requirements and a student's academic achievement. These recommended courses can be revised and/or changed:

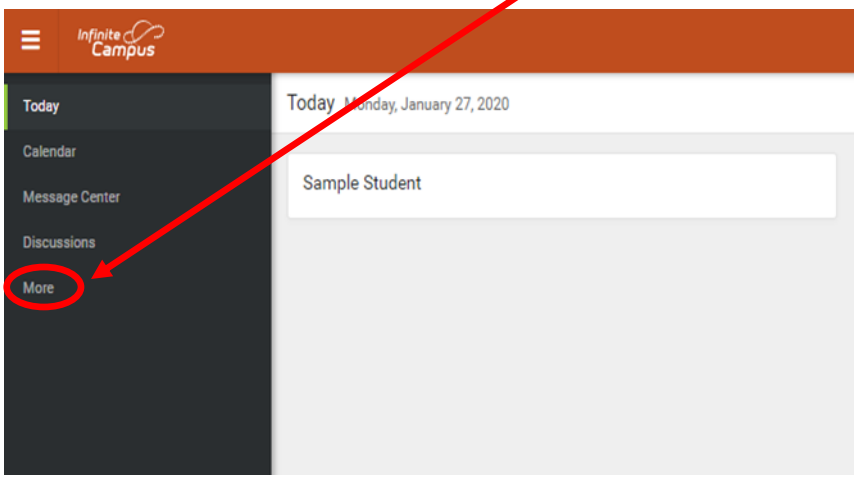
- after the initial draft of a student's schedule is received via the mail in July or August
- only through an appointment with the student's assigned guidance counselor

INSTRUCTIONS FOR SCHEDULING / REQUESTING COURSES

Go to the Infinite Campus (IC) Portal and select Campus Student.

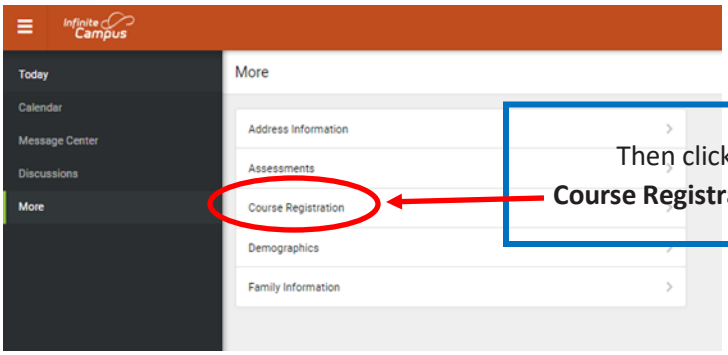


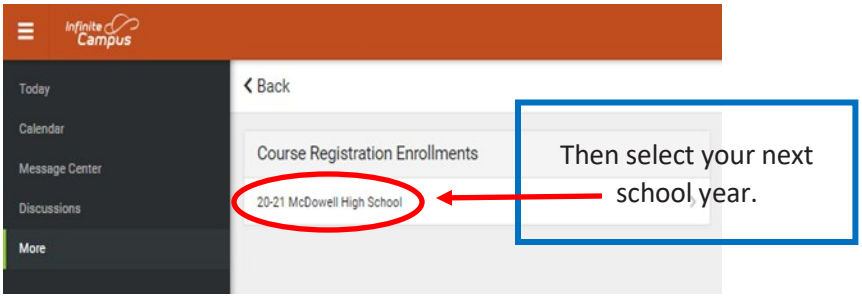
Once logged in, click on **More**.



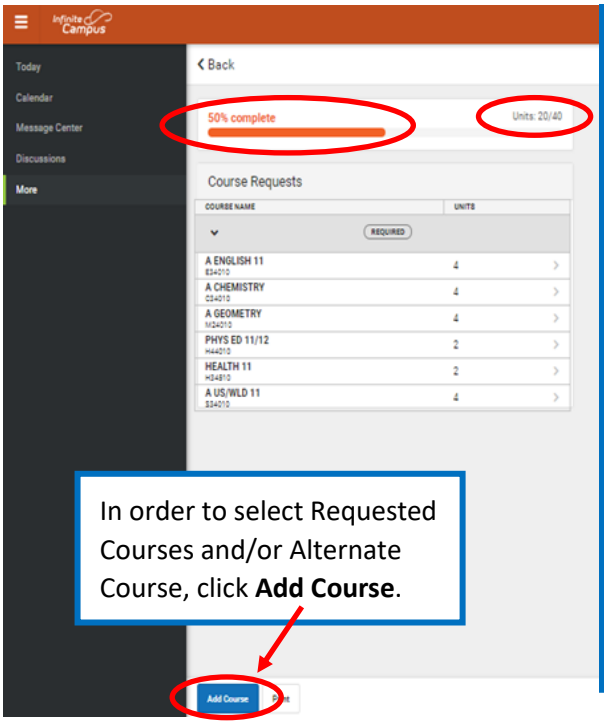
NOTES:

Student Course Request





Students will see their **Course Requests** with **Required Courses** entered, which have been previously selected by core teachers/administrators based upon demonstrated achievement, prerequisites, and departmental guidelines. Students cannot change Required Requests in IC. In this Course Registration Window, it shows total number of units out of the required number of units. Additionally, there is a Request Completion Bar indicating how complete your scheduling request is to date.



<u>Students are to select two types of elective options:</u>

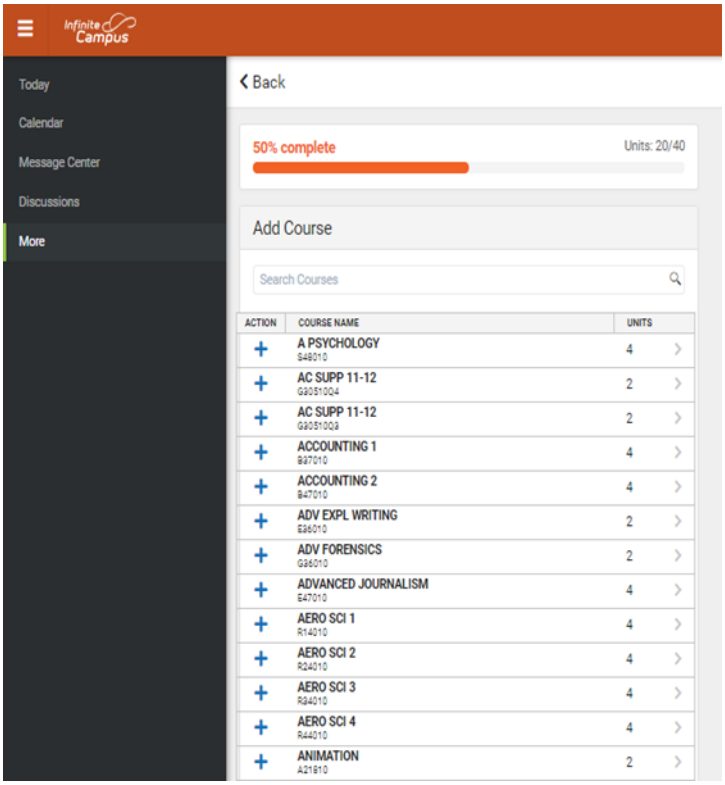
Requested Courses – are courses requested by students as their most preferred elective choices. Students continue to select Requested Courses until they have all units fill/100% is showing on the Completion Bar.

Alternate Courses – are courses selected by students as secondary selections if a Requested Courses is/are unavailable. It is recommended a student selects at least 3-4 alternates.

NOTES:

Student Course Request

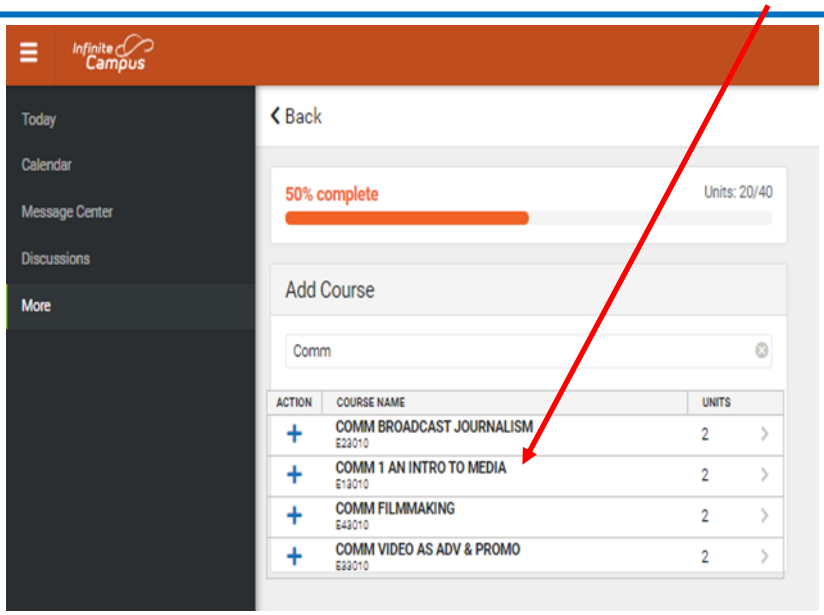
Once you click **Add Course,** a listing of all available electives will display.



Students can then search these elective offerings by:

1) Course Number (i.e. E23010)
2) Full or part of the course name (i.e. Communications or Comm)

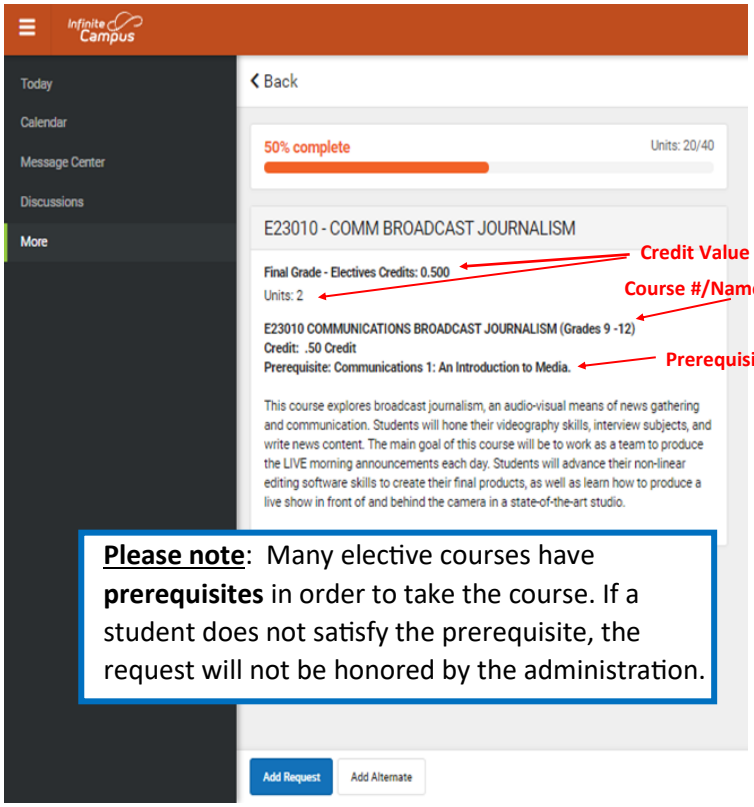
To review a course description, click on the course name of the elective.



NOTES:

Student Course Request

After you have reviewed the course description, if you do not want to add the course to your elective choices click **<Back**. If you do wish to add the course to your elective choices click either **Add Request** or **Add Alternate**.



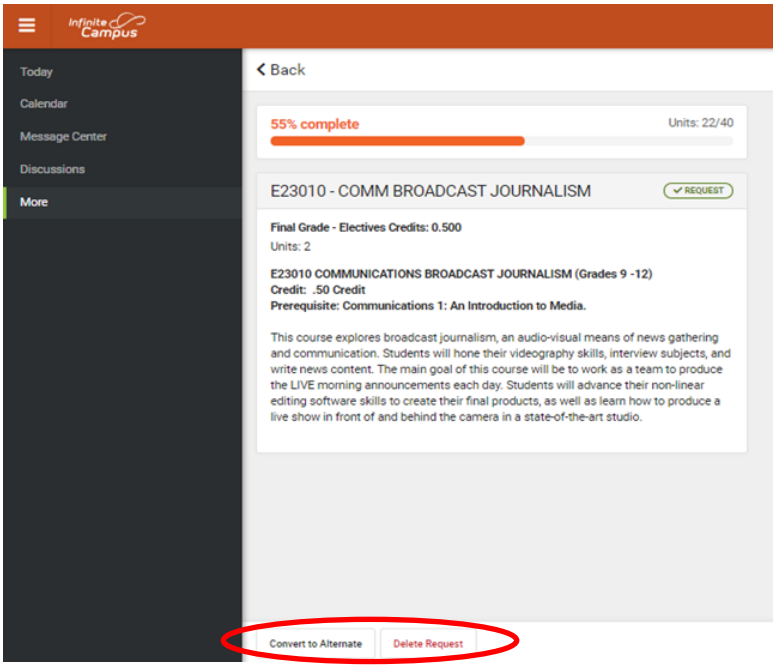
Credit Value & Units

Course #/Name & Grade

Prerequisite(s)

Please note: Many elective courses have **prerequisites** in order to take the course. If a student does not satisfy the prerequisite, the request will not be honored by the administration.

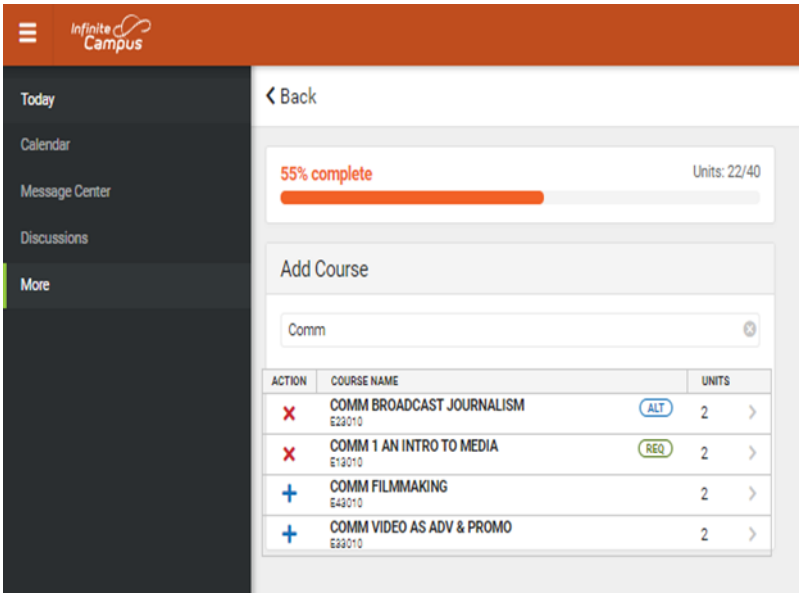
Once you select **Add Request**, if you would rather have the course be an Alternate Course click **Convert to Alternate** or if you wish, you can remove the course by clicking **Delete Request**.



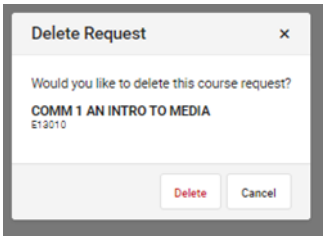
NOTES:

Student Course Request

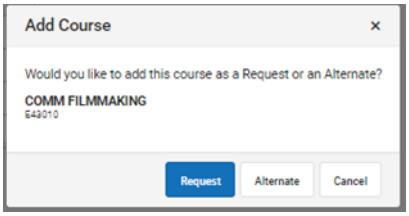
As you add courses, you will be able to see how you have identified them as either **REQ** or **ALT**. You can also click on ACTION for courses. If a course has been selected, Action will indicate an **X** if you wish to Delete the selection. If you know you want a course and you do not require the description, you can just click on the **+**.



If a course has been selected, then ACTION will indicate an **X**. Select **Delete** to remove.



You can select a course without viewing the description. Just click **+**, then select either **Request** or **Alternate**.

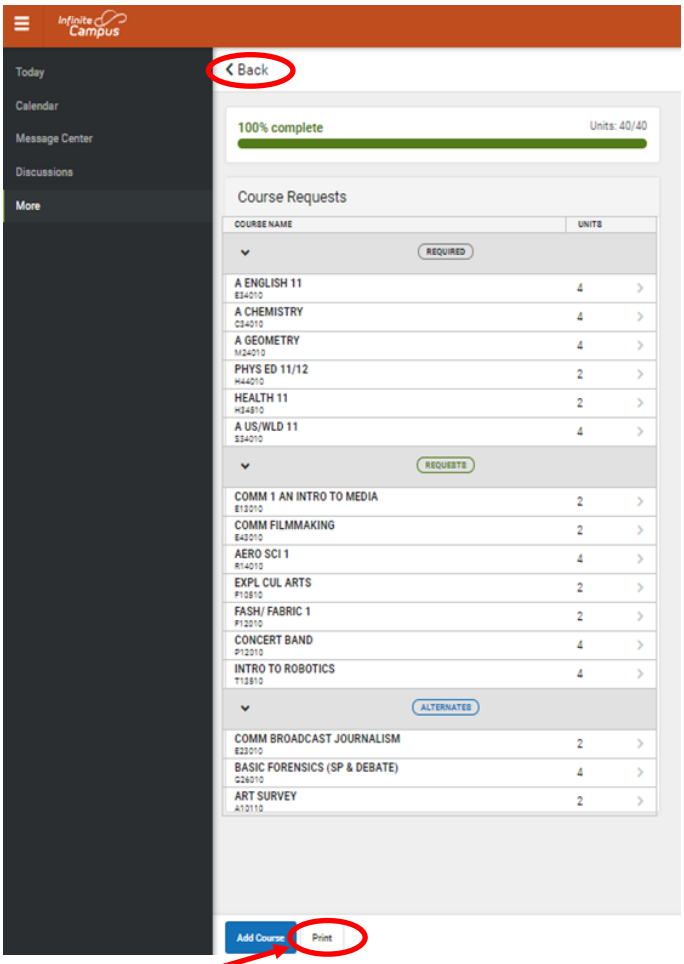


When **Request Courses** are filled (40/40 or 100% on the completion bar), you will only be able to add courses as **Alternate Courses**.

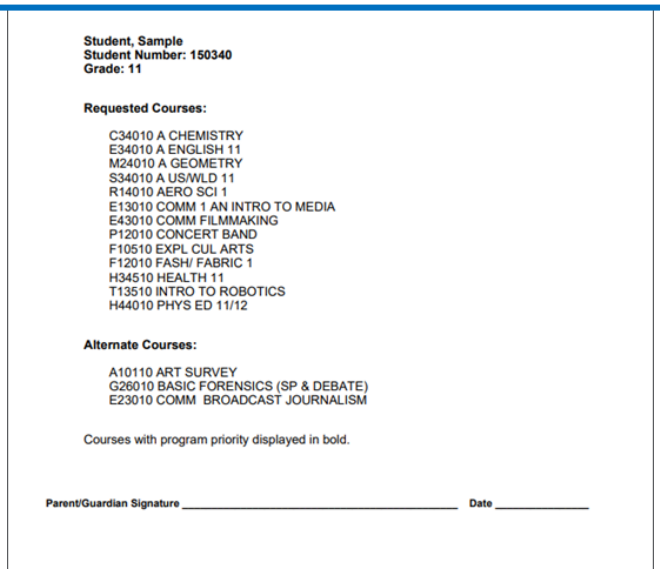
NOTES:

Student Course Request

When all Request and Alternate Courses are filled click **<Back** until you get to your full Course Requests, then select **Print**.



Once you select **Print**, a Course Request will be displayed. This Course Request should be printed and a parent/guardian signature provided to Guidance at a date to be determined.



Student, Sample
Student Number: 150340
Grade: 11

Requested Courses:

C34010 A CHEMISTRY
E34010 A ENGLISH 11
M24010 A GEOMETRY
S34010 A US/WLD 11
R14010 AERO SCI 1
E13010 COMM 1 AN INTRO TO MEDIA
E43010 COMM FILMMAKING
P12010 CONCERT BAND
F10510 EXPL CUL ARTS
F12010 FASH/ FABRIC 1
H34510 HEALTH 11
T13510 INTRO TO ROBOTICS
H44010 PHYS ED 11/12

Alternate Courses:

A10110 ART SURVEY
G26010 BASIC FORENSICS (SP & DEBATE)
E23010 COMM BROADCAST JOURNALISM

Courses with program priority displayed in bold.

Parent/Guardian Signature _____ **Date** _____

NOTES:

General Information

AIR FORCE JUNIOR ROTC

AFJROTC is open to all students. The program consists of up to four years of classroom instruction in Aerospace Science, leadership education, physical wellness, and drill and ceremony. Students are required to wear the uniform on a designated day of each week and conform to grooming and ROTC standards. Uniforms are supplied by the Air Force with no cost to the students.

ALTERNATE COURSE SELECTIONS

Each student can identify alternate elective courses in the event that scheduling conflicts make the original elective choices impossible to schedule. Students can select these alternate courses when registering through Infinite Campus.

ARTICULATION AGREEMENT

An articulation agreement is a contract between McDowell High School and a post-secondary institution that assures that the curricula of the two institutions are coordinated. This helps eliminate situations in which students are inadequately prepared for the courses they will experience in the post-secondary institution.

Although agreements vary, the articulation usually insures that a student, who has successfully completed the required sequence of courses, one or more of the following: 1) admission, 2) advanced standing, and 3) credit waived. For specifics, see your counselor.

CLASS RANK PERCENTILE

The course multiplier value for each course is multiplied by the final grade point value. The total of these products is then divided by the total credits attempted. The value obtained is a total weighted point value from which class rank is calculated. An unweighted point average (GPA) is calculated based on a four (4) point scale. Weighted and unweighted GPA and weighted ***class rank percentile*** shall be entered on student records and on all transcripts where they will be available for the review by authorized persons.

COMMENCEMENT HONORS FOR SENIORS

The Latin Laude model will be used to recognize students' academic excellence at the conclusion of their high school career. A student's final cumulative GPA (weighted) will be used to determine the level of honor on the student's high school transcript and diploma and for academic recognition at commencement exercises. The three levels of academic honors are: Summa Cum Laude: "With Highest Distinction" - cumulative GPA average of 4.2 and above; Magna Cum Laude: "With Great Distinction" - cumulative GPA average of 3.850 to 4.199; and Cum Laude: "With Distinction" - cumulative GPA average of 3.410 to 3.849.

COMMUNITY SERVICE

This option is designed to provide students an opportunity to give something back to the community through voluntary service while at the same time registering this good work in their permanent record and transcript. The experience will help students acquire skills useful throughout life and learn about the significance of rendering aid to our community. Students who complete 60 hours of community service will receive 1/4 credit. Community service may begin at the completion of 8th grade. The credit does not count toward the graduation requirements.

COURSE (SCHEDULE) CHANGES

Course schedule changes must have counselor or administrator approval. Course schedule changes are available prior to the beginning of the school year. It is strongly recommended students make changes at this time. Student requests to change teachers will not be considered. No changes will be considered after the first week of the course. During the year a student may be withdrawn from a course for disciplinary reasons or at administrator discretion with a grade of WF.

COURSE LEVELS

Academic - Academic courses provide a challenging curriculum that prepares all students for college, career, or other post-high school training. Real life and hands-on experiences are emphasized, in addition to standard academic skills.

Academic courses have a course multiplier value = 1.0.

Honors - Honors courses are upper-level college preparatory courses. The content of these courses is more demanding than academic courses.

Honors courses have a course multiplier value = 1.10.

Advanced Placement® (AP®) - Advanced Placement® courses are introductory college-level courses teaching curricula specified by the Advanced Placement® Program of the College Board. It is an excellent opportunity for the ablest sophomores, juniors and seniors to pursue college-level studies and receive advanced placement®, credit, or both, in college, by achieving a specified score on an AP® Exam given in May. The fee for each Advanced Placement® exam is set by the College Board each year. The fee is typically under $100.00.

Students develop content mastery and critical thinking skills expected of college students through rigorous AP® courses. Students who enroll in AP® courses do so because they are motivated to challenge themselves beyond an honors level course. A key component of the AP® program is the AP® Exam. Students who participate in an AP® course will be required to take the AP® Exam for that course. Any student who is not committed to taking the AP® Exam should enroll in the honors level of the course. A deposit/payment may be required at the beginning of the academic year to ensure AP® Exam participation.

Advanced Placement® courses have a course multiplier value = 1.20.

General Information

Advanced Placement® Courses

Course	Credit
Biology	2.0
Calculus AB—Semester	1.0
Calculus AB—Yearlong	2.0
Calculus BC	1.0
Chemistry	2.0
Comparative Government & Politics	1.0
Computer Science A	1.0
Computer Science Principles	1.0
English Language and Composition 11	1.0
English Literature and Composition 12	1.0
Environmental Science	1.0
Human Geography	1.0
Macroeconomics	1.0
Physics 1	2.0
Physics C-Mechanics	1.0
Psychology	1.0
Research	2.0
Seminar	1.5
Statistics	1.0
Studio Art: Drawing	1.0
U.S. Government & Politics	1.0
U.S. History	1.0
World History: Modern	1.0

*See AP® Course Map on Page 15

COURSE MULTIPLIER VALUES

Course multiplier values are used to calculate a total weighted percentage for the purpose of class ranking. The multiplier values are as follows: Advanced Placement® Courses = 1.20, Honors Courses = 1.10, and Academic Courses = 1.0.

COURSE PREREQUISITES

Some courses have prerequisites that must have been satisfactorily completed prior to enrollment. Those courses and their prerequisites are listed in the Course Description section on Infinite Campus.

COURSE REQUEST SUMMARY

Every student will be asked to print a completed Course Request Summary sheet once all required, requested and alternate courses sections have been entered. ***Required Course Section:*** core course teachers will select a student's next core course utilizing their knowledge of the student's achievement, ability as shown in class, and course prerequisites for a student. The administration will enter any grade level required courses. ***Requested Course Section:*** Students will enter their elective choices. ***Alternate Course Section:*** Students will enter their alternate course choices. It is suggested students should choose no less than 3 alternate courses. Alternate courses are defined as courses a student is willing to consider if any requested courses (electives) are not available. Once required, requested, and alternate courses sections are input, a completed Course Request Summary sheet should be printed and signed by a parent/guardian. This signed form will then be turned into the appropriate Guidance Office at a date to be determined. Each student will then be scheduled to meet with a guidance counselor to review the course selection summary and prepare a final course selection list that will be given to the student. These forms will be completed in conjunction with a "Personal Learning Plan" that will identify a Career Pathway as the basis of course selection. **Please note the Course Request Summary is not your student's final schedule, but rather the listing of courses most desired in next year's schedule for your student.**

DUAL ENROLLMENT PROGRAMS

This grouping of programs provides eligible students with the opportunity to enroll in college courses that are offered off- campus of McDowell High School. Students begin academic studies through a local university and earn college credits, while still completing a high school diploma. Credits earned may count toward high school elective credits or credit requirements for graduation. These college credits are offered to the high school student at a greatly reduced cost. General eligibility for the dual enrollment programs requires that seniors have an unweighted GPA of at least 3.25 and juniors have an unweighted GPA of at least 3.5.

Regional Choice Initiative (RCI):

Local colleges and universities (currently Gannon University, Mercyhurst University and Edinboro University of Pennsylvania) offer college courses that are mostly used to fulfill general education requirements and are taught by preferred university faculty. The site for the RCI program is the former skills center next to the Erie County Technical School. Currently, the district provides transportation to the RCI location. Classes offered may include such options as Introduction to Philosophy, Sociology, College Algebra, Environmental Science, Introduction to Psychology, College Writing Skills, and Foundations of Western Heritage. New courses and opportunities are expanded each year. Students register for this program in the spring of the previous year, scheduling courses for both semesters.

On-Campus College Program:

Each of the local universities offers high school students the opportunity to enroll in and attend courses on the college campus. These courses may meet during the school day or in the evenings, as well as the summer. Transportation and cost of the college course are the responsibility of the student. The following schools participate in the program:

- Edinboro University of Pennsylvania - Main Campus
- Gannon University
- Mercyhurst University
- Penn State Erie, The Behrend College: EXCEL Program

For each of these opportunities, students will need to complete an application and submit course fees after meeting with the guidance counselor at McDowell High School. Final acceptance into the program rests with the college to which the student has applied. See your guidance counselor in the guidance office for more information.

ELECTIVE COURSES

Elective courses may not be offered if enrollment does not justify the offering.

FAILED REQUIRED COURSES

Failed required courses should be made up in Summer School.

General Information

GRADUATION REQUIREMENTS

Graduation is based on the successful completion of required coursework.

To earn a diploma, students need to complete the required credits and Keystone/standardized state tests and/or competencies.

COURSE/PROJECT REQUIREMENTS	CREDITS
Mathematics	4.0
English	4.0
Social Studies	4.0
Science	3.5
Physical Education	2.0
Health	1.0
Electives	9.5
Total Credits	**28.0**

INDEPENDENT STUDY

Independent study is a program that is available for students who wish to pursue an in-depth study of a particular topic. Both teacher and student-designed programs are available and scheduled by half credit only. Students may earn a maximum of one credit per year for independent study. The course will be pass/fail and will not be included in class rank but will count as an elective credit for graduation. A PowerPoint presentation must be produced to explain your independent study project. **The Independent Study Program is only available to students who formally apply and are approved.** Contact the Guidance Office for further information.

KEYSTONE EXAMS

The Keystone Exams are end-of-course assessments designed to assess proficiency in selected core subject areas (e.g., Literature, Algebra 1, Biology). A student's schedule determines when s/he participates in the Keystone Exams. There will be two assessment windows during the academic school year. **Beginning with the class of 2022, students must demonstrate proficiency on the Literature, Algebra 1, and Biology Keystone Exams to graduate. Please contact your students guidance counselor for more specific information regarding Keystone Exams and graduation requirements.**

NCAA

The NCAA, or National Collegiate Athletic Association, is the athletics governing body for more than 1,280 colleges, universities, conferences, and organizations. They develop the rules and guidelines for athletics eligibility and athletics competition for each of the three NCAA divisions. One of the differences among the three divisions (Division I, Division II, Division III) is that colleges and universities in Division I and II may offer athletic scholarships, while Division III colleges and universities may not. The NCAA Eligibility Center will certify the academic and amateur credentials of all college-bound student-athletics who wish to compete in NCAA Division I or II athletics in college. The NCAA determines eligibility through a review of the student's high school courses and test scores (ACT or SAT). The high school courses must be core courses. A core course is defined and approved by the NCAA and must be an academic course in one of these areas: English, mathematics (Algebra I or higher), natural/physical science, social science, or foreign language. It must also be considered a four-year college preparatory course, and be at or above the regular academic level. NCAA Division I and II require 16 core courses. As a student-athlete, this means that one must carefully plan the sequence of courses that are taken in high school in order to meet eligibility requirements.

More information can be found by accessing the Eligibility Center's resource page on their website:

http://www. eligibilitycenter.org.

*Please see pages 59-62 for detailed NCAA information.

PROMOTION

To be promoted from ninth grade to tenth grade, a student is required to have a minimum of 5 credits. Students must earn 12 credits to be promoted from grade 10 to grade 11. To be promoted from eleventh grade to twelfth grade, a student must have a minimum of 20 credits.

SCHOOL SERVICE

This program is for students who assist office personnel or act as library aides. A pass/fail grade is given to the student and will be noted on the transcript, but no credit is earned.

SPECIAL EDUCATION SERVICES

There is a continuum of services available to students with disabilities, based on a student's IEP, including adapted and modified curriculum, aide support, collaborative instruction and self-contained services. Please contact the Guidance Office at the school if you or your parents have questions about scheduling.

STEM CERTIFICATE (Science, Technology, Engineering, and Math)

The MTSD Science, Technology, Engineering, and Math (STEM) Certificate recognizes students who have demonstrated their success as critical thinkers and problem-solvers and are prepared to reach their fullest potential in a STEM field. Through their coursework and extra-curricular activities, STEM-certificated students have dedicated themselves to preparing for the challenges of a dynamic world. Interested students should see their guidance counselor.

WELLNESS/PHYSICAL EDUCATION

All students are required to take a wellness/physical education course each year. All 9th graders are required to take Aquatics. Grades 10-12 must select one wellness/physical education requirement.

McDowell STEM Certificate Program

The MTSD Science, Technology, Engineering, and Math (STEM) certificate recognizes students who have demonstrated their success as a critical thinker and problem solver and are prepared to reach their fullest potential in a STEM-related field. Through their coursework and extracurricular activities, STEM-certificated students have dedicated themselves to preparing for the challenges of a dynamic world. Students completing these tasks will receive STEM certification in conjunction with their diploma from McDowell upon graduation.

Requirements = Coursework A or B plus STEM Category 1 and Category 2

Coursework A-
CAREER & TECHNICAL SCHOOL STUDIES:
ECTS students involved in any of the identified labs earning a B- or better. **I will be completing one of the programs at ECTS.** (Any ECTS students completing these programs automatically qualify.)

One program earning a B- or better
____Automotive Technology
____Computer Networking
____Computer Programming
____Drafting & Design Engineering
____Electrical Engineering
____Graphic Media Design and Print
____Health Assistant
____Metal Fabrication
____Precision Machining

Coursework B -
DIVERSE HIGH SCHOOL STEM COURSES:
McDowell students, not attending ECTS, must earn a B– or better in at least 4 separate areas within this category to qualify for STEM.

Advanced Business/Computer Science
One or more earning a B- or better
____AP® Computer Science A
____AP® Computer Science Principles
____Computer Applications: Manipulate It
____Computer Science 1
____Computer Science 2
____Entrepreneurship
____Game Development & Programming
____Web Design 1
____Web Design 2-Mobile App Dev

Advanced Creativity and Innovation
One or more earning a B- or better
____Advanced Video Production
____Animation
____Comm.: Broadcast Journalism
____Digital Photography
____Digital Technology in Art
____Graphics

Advanced English
One or more earning a B- or better
____Advanced Exploring Writing
____Honors or AP® English 11
____Honors or AP® English 12

Advanced Math
One or more earning a B- or better
____AP® Calculus AB
____AP® Calculus BC
____AP® Statistics
____Honors Algebra 2
____Honors Calculus
____Honors PreCalc/Trig
____Honors Probability & Statistics

Advanced Science
One or more earning a B- or better
____Aero Science 2
____AP® Biology
____AP® Chemistry
____AP® Environmental Science
____AP® Physics 1
____AP® Physics C—Mechanic
____CSI Forensic Science
____Honors Anatomy & Physiology
____Honors Chemistry
____Mechanical Science
____Honors Organic Chemistry
____Honors Physics

Advanced Technology
One or more earning a B- or better
____Advanced Computer Design & Mfg.
____Architectural Design
____CNC Manufacturing
____Energy and Power Technology
____Graphics Technology 2
____Introduction to Applied Engineering
____Metal Technology 2
____Robotics 2
____Wood Technology 3
____Wood Technology 4

Global Awareness/Citizenship
One or more earning a B- or better
____AP® Comparative Govt. & Politics
____AP® Human Geography
____AP® Psychology
____AP® U.S. Government & Politics
____Hon. French 3, German 3, or Spanish 3
____Hon. French 4, German 4, or Spanish 4
____Honors Spanish 5
____International Business and Ethics
____Justice Education

STEM Category 1 & Category 2 -
Students must be able to check both categories to qualify and complete the required verification forms. Category 2 requires at least two approved STEM activities which are indicated on the STEM Approved Activities page.

Category 1: STEM related and preapproved work experiences
____AP® Research
____Independent Study related to STEM fields
____Internship
____McDowell Manufacturing
____Part-time employment in a STEM-related job
____STEM Camp or After School Program
____Two pre-approved STEM Field Trip Options
____Volunteer Work

Category 2: STEM related and approved extracurricular activity during high school. Students must be involved in at least 2 approved activities prior to graduation. This can be either 2 consecutive years of the same activity or 1 year in 2 different activities. See STEM Approved Activities page for more details.
____Astronomy Club
____Computer Science Club
____Cyber Patriot (ROTC)
____FIRST Robotics
____Garden Club
____Geo-Excursion
____LECOM LESA
____Math Club
____PJAS
____Sports Medicine Club
____St. Vincent Health Explorers
____TEAMS
____United States Academic Decathlon
____Other:_____

Note: Students must meet with Guidance before the 2nd semester of their Senior year to verify all requirements completed.

STEM—APPROVED ACTIVITIES

SCIENCE—TECHNOLOGY—ENGINEERING—MATH

Students who wish to earn a STEM certificate must meet a number of requirements as listed below (coursework—scheduling time, job shadowing, internship, or summer camp, and two or more STEM activities prior to graduation). Current activities which are STEM approved are listed on this page.

ASTRONOMY CLUB

Mr. Caldwell—MIHS caldwell@mtsd.org

Astronomy Club is a great club for anyone with interest in space and the stars. We will talk about astronomical concepts including planets, stars, black holes, and galaxies in a different way than the classroom. We will have presentations, activities, discussions, and hands-on learning.

COMPUTER SCIENCE CLUB

Mr. Palmer—McD palmer@mtsd.org

The Computer Science Club provides an environment for students interested in the field of computer science to further explore their knowledge with peers at McDowell. Annual projects completed by the Computer Science Club are designed to better the community and grow members' knowledge of computer science.

CYBER PATRIOT (ROTC)

Chief Holmes—MIHS holmes@mtsd.org

Air Force Association's (AFA) Cyber Patriot is the nation's premier youth cyber education program, featuring the National Youth Cyber Defense Competition. The competition is open to all high schools and middle schools in the nation, as well as all JROTC units, Civil Air Patrol or cadet squadrons, and Naval Sea Cadets Corps units. Students learn the importance of cybersecurity and skills that can be valuable in cyber careers. Registration of teams occurs in early October and online rounds occur through the winter months. The National Finals Competition occurs in Washington D.C. in March. If teams do not qualify for the national level, then they compete at a state and regional recognition rounds.

FIRST ROBOTICS (For Inspiration and Recognition of Science and Technology)

Mr. Bucholtz—McD bucholtz@mtsd.org

This is a varsity sport for the mind, FIRST Robotics Competition combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and time limits, teams of 25 students or more are challenged to raise funds, design a team "brand", hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. It's as close to "real-world engineering" as a student can get. Volunteer professional mentors lend their time and talents to guide each team.

GARDEN CLUB

Mrs. Taylor—MIHS jtaylor@mtsd.org

The Garden Club will continue to develop and maintain the flower garden outside the Little Theatre, focusing on pollinator plants. We will meet to plan and to work in the greenhouse planting seeds and propagating plants during the colder months. There will be opportunities to complete service hours after school and during the summer to maintain the garden. Students may choose to attend tutorial meetings, after school work sessions or both.

GEO-EXCURSION CLUB

Mr. Caldwell—MIHS caldwell@mtsd.org

The Geo-Excursion Club will travel to a national park. This multi-day trip focuses on investigating the geologic features and processes that are exhibited in the park. The students will tour and hike in the park to see some of the park's famous features.

LESA

LESA (LECOM Emerging Scholars Academy) is the next generation high school mentoring program offered by LECOM. This week-long course in the summer aims to familiarize high school juniors and seniors with healthcare opportunities. See your guidance counselor for more information.

MCDOWELL MATH CLUB

Ms. Testa—McD testa@mtsd.org

This club is for students that enjoy doing math and want to look at the history of mathematicians, higher level math problems and how they relate to what we do in math class, math activities for all levels (k-12), and math competitions.

PJAS: Pennsylvania Junior Academy of Science

Mrs. Allaman—MIHS allaman@mtsd.org

Students research a science topic, design an experiment, and analyze the results; they then present their results at a regional competition at Penn State Behrend in March. They may move on to the state competition in May. Students must sign up in September to register on time.

SPORTS MEDICINE

Ms. Kelly Bruce—McD bruce@mtsd.org

Students learn about CPR, First-Aid, catastrophic injury management, concussion management, injury prevention, acute injury care, basic rehabilitation exercises, hydration, field/ court game and practice set up. Students do travel with some teams to away games. In addition to working with McDowell teams, there are opportunities to visit and shadow various settings including PT/ Sports Medicine Clinics, Orthopedic Surgeon's offices, and even observe Orthopedic Surgeries. Also, coordinate campus visits to colleges and university Sport Medicine and Athletic Training programs. The SAT's come to the Athletic Training Room located below Paul Goll Gymnasium on a daily basis to assist with each day's activities.

ST. VINCENT HEALTH EXPLORERS (Age 15+)

Partnering with French Creek Council, St. Vincent provides representatives who are willing to meet with students once a month (evening hours) to have an in-depth interaction with representatives from all areas within the organization. By exposing students to the many types of health professions, this encourages students to find out exactly what they may or may not like for a future job, thus avoiding unnecessary education expenses. It also is a stepping stone for becoming involved in our summer Jr. Volunteer Program—which actually has resulted in some high school job placements. See your guidance counselor for more information about the program.

TEAMS (Test of Engineering Aptitude, Mathematics, and Science)

Mr. Bucholtz—McD bucholtz@mtsd.org

This is an annual competition for high school students designed to help them discover their potential for engineering. During this one-day competition, students apply math and science knowledge in practical, creative ways to solve real-world engineering challenges.

USAD (United States Academic Decathlon)

Mr. Andrzejczak—McD
andrzejczak@mtsd.org

USAD was formerly known as ASL and is the country's premier academic competition. USAD competitions test your knowledge of the information found in economics, art, music, language and literature, **math**, **science**, and social science research packets with a common theme. Each Packet is over 150 pages. Each Decathlete spends hours looking over the research, studying, creating personal study guides, playing review games, and finally competing against schools from across the state and country.

Focused Study Programs

CENTER FOR THE PERFORMING ARTS

The Millcreek School District Center for the Performing Arts has the most comprehensive course of study in Northwest Pennsylvania for students interested in music, drama, and dance. Numerous instrumental ensembles include a marching band, jazz band, two concert bands, orchestra, and a wind ensemble for students interested in playing one or more instruments. Choral ensembles include two concert choirs, a mixed chorus, and a vocal ensemble. Performing Arts courses are offered for students who are interested in drama, musical theatre, and technical theatre. In addition, several levels of dance classes are provided in a variety of disciplines. Elective courses in piano and guitar are available for students who wish to learn theory and fundamental music skills while playing an instrument.

Certification

Students who successfully complete the following course selection and performance requirements will receive a Performing Arts Certificate upon graduation. Students must complete:

- Minimum of three years involvement with Performance Arts curriculum
- Minimum of six credits in Performance Arts courses
- Performs a minimum of three major productions (performer, technical, or musician)
- Work in a minimum of two community productions (community theatre, church productions, etc.)
- Member of the International Thespian Society
- Recommended by Performance Arts Department

Center for Performing Arts Certificate Course Sequence

Certificate Plan	Grade 9	Grade 10	Grade 11	Grade 12
3 YEAR		□ Performing Arts 1 □ Ensemble * □ PE Dance	□ Performing Arts 2 □ Ensemble * □ PE Dance □ Music Theory or Music History (11 or 12)	□ Performing Arts 3 □ Ensemble * □ PE Dance □ Popular Dance
4 YEAR	□ Performing Arts 1 □ Ensemble * □ PE Dance	□ Performing Arts 2 □ Ensemble * □ PE Dance	□ Performing Arts 3 □ Ensemble * □ PE Dance □ Music Theory or Music History (11 or 12)	□ Performing Arts 4 □ Ensemble *

**Students may select more than one ensemble.*

There are many options available to the students who choose a three or four-year plan. Students interested in pursuing a career in musical theatre should consider courses in dance. If you have already studied dance for several years, we recommend that you audition for the advanced dance electives.

EDUCATION PROFESSION PATHWAY CERTIFICATE PROGRAM

A career pathway program targeting students who are interested in pursuing a degree in education or a career working with children.

The goal of this program is to provide direct instruction related to the early childhood education field. Students will learn through hands-on experiences and internship opportunities in various educational settings to better prepare for future educational and career opportunities.

Students who successfully complete the program will be awarded an Education Profession Pathway Certificate at graduation from Millcreek Township School District, as well as the possibility to earn college credits from partnering Universities.*

*Certain requirements must be met

Required Courses (4.5 Credits)

Education Profession Level 1 (1.0)
Education Profession Level 2 (1.0)
Education Profession Level 3 (1.0)
Career Exploration (0.5)
Internship (1.0)

Focused Study Programs

ERIE COUNTY TECHNICAL SCHOOL (ECTS)

Erie County Technical School (ECTS) offers a wide variety of career, trade, and technical opportunities leading to career or collegiate study, or directly to employment. Students entering grades 10 through 12 may attend ECTS for a half-day, and take their remaining academics at McDowell. Students may apply to programs of interest by completing an application through the Guidance Office.

To be eligible, all 9th-grade students must pass their academic and elective courses or complete them in summer school. Programs are designed to be completed in 3 years (grades 10, 11, and 12). For each successful year, students will earn four (4) credits toward graduation. Senior students who have attained the appropriate skills level are afforded the opportunity to participate in Co-Op Programs that provide valuable work experience with on the job training and the opportunity to earn money. Students within many programs have the opportunity to earn post-high school credits due to established articulation agreements with several colleges and trade/ technical schools. These schools may offer preferred admission, award credit(s), and/or advanced standing to students who have successfully completed the technical program.

Recommended Course Sequence

Grade 9	Grade 10	Grade 11	Grade 12
▪ English ▪ World Geography ▪ Math ▪ Earth/Space Science ▪ Aquatics ▪ Health ▪ Electives (2.5 Credits)	▪ English ▪ World History ▪ Math ▪ Biology ▪ Physical Education * ▪ Technical Program - AM	▪ English ▪ U.S. History ▪ Math/Science * ▪ Health ▪ Physical Education ▪ Technical Program - PM	▪ English ▪ U.S. Government/Economics ▪ Math/Science * ▪ Elective (1 credit) ▪ Physical Education ▪ Technical Program - PM

*Graduation requirements will be modified for ECTS students.

MCDOWELL MANUFACTURING ACADEMY

The goal of this program is to provide employment opportunities for students graduating high school or students entering a technical training program. Students who successfully complete the program will be awarded a Manufacturing Academy Certificate at graduation along with their OSHA 10 hour Safety Certification Card.

Required Courses (4.0 Credits)

Personal Finance & Business Calculations (1.0)	Career Exploration (0.5)
Foundations of Technology Design and Engineering (1.0)	Internship (0.5)
CNC Manufacturing (1.0)	**OSHA Training Certification (Tutorial)

Elective Courses (1.5 Credits)

Materials Manufacturing: Wood Technology 1 (1.0)	Materials Manufacturing: Metal Technology 1 (0.5)
Materials Manufacturing: Wood Technology 2 (1.0)	Materials Manufacturing: Metal Technology 2 (0.5)
Surviving and Thriving Adulthood (0.5)	Introduction to Robotics (1.0)
Digital Technology and Art (0.5)	Internship (Additional 0.5)
Introduction to Applied Engineering (1.0) - (12th grade only)	Conceptual Physics (1.0)

ADVANCED PLACEMENT® (AP®) COURSES

Taking AP® is a sign that you are up for the most rigorous classes your high school has to offer. Taking an AP® course builds the skills you will need throughout your college years. By taking an AP® course and scoring successfully on the related AP® Exam, you can save on college expenses.

For more information on Advanced Placement® courses, visit the College Board site:

https://apstudent.collegeboard.org/exploreap

Focused Study Programs

MCDOWELL HONORS COLLEGE OF LEADERSHIP AND SERVICE

Selection for the McDowell Honors College of Leadership and Service is based on an application process and thorough review of each student's academic record. The mission of the Honors College is to provide the most dedicated high-achieving students with a small learning community that provides a structure for superior performance, leadership experiences, and community service opportunities. Honors College students demonstrate a commitment to a pursuit of rigorous and challenging coursework, a commitment to physical and mental health through exercise and a drug-free lifestyle, and a participation in a variety of school-based and community-based activities.

Students accepted into the program will be placed in common homerooms, led by Honors College Advisors. Advisors will serve as mentors to students as they guide them through the students' independent service projects, monitor their accumulation of community service hours, and ensure proper completion of Honors College program requirements. This mentoring relationship assists the students in making decisions about choosing a college and setting goals for professional careers of interest.

For more information about the Honors College program, visit http://www.mtsd.org/district/activities-programs/honors-college

Honors College Scheduling Requirements:

- 9th/10th must enroll in three honors level courses
- 11th/12th must enroll in four honors level and/or AP® courses
- All students must take at least three AP® courses by graduation
- Must complete three (3) credits of a world language

DISTINCTIVE SCHOLAR PROGRAM

The Distinctive Scholar Program (DSP) is a more selective and rigorous pathway for students of high ability and motivation encompassing current Honors College requirements plus additional requirements including specific courses, service hours, and mentorships. Students who meet the criteria will receive an invitation to apply for the program.

Distinctive Scholar Program Scheduling Requirements:

- Full enrollment in all honors and/or AP® courses
- AP® Seminar & AP® Research courses
- At least four additional AP® courses
- Work towards Capstone Diploma
- Must complete at least three (3) credits of a world language

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AP® CAPSTONE

According to College Board, AP® Capstone is a College Board program that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. It cultivates curious, independent, and collaborative scholars and prepares them to make logical evidence-based decisions.

AP® Capstone is comprised of two AP® courses—AP® Seminar and AP® Research—and is designed to complement and enhance the discipline-specific study in other AP® courses. Students typically take AP® Seminar in grade 10 or 11, followed by AP® Research. Students who earn scores of 3 or higher in AP® Seminar and AP® Research and on four additional AP® Exams of their choosing receive the AP® Capstone Diploma™. Students who earn scores of 3 or higher in AP® Seminar and AP® Research, but not on four additional AP® Exams receive the AP® Seminar and Research Certificate™. Additional info may be retrieved from http://advancesinap.collegeboard.org/ap-capstone.

AP® Seminar Overview

AP® Seminar is a foundational course that engages students in cross-curricular conversations where they can explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research students and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. They synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision so they can craft and communicate evidence-based arguments.

AP® Research Overview

AP® Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong investigation to address a research question.

In the AP® Research course, students further develop the skills acquired in the AP® Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio.

Advanced Placement®

Course Map

	Sophomore	Junior	Senior
1st Semester	Computer Science Principles* Human Geography* Psychology* Statistics* World History: Modern*	Calculus AB* Computer Science A* Computer Science Principles* English Language and Composition* Environmental Science* Human Geography* Psychology* Statistics* Studio Drawing U.S. Government & Politics*	Calculus AB* Computer Science A* Computer Science Principles* English Literature and Composition* Environmental Science* Human Geography* Macroeconomics Psychology* Statistics* Studio Art: Drawing U.S. Government & Politics*
2nd Semester	Computer Science Principles* Seminar* Statistics* World History: Modern*	Calculus BC* Comparative Government* Computer Science A* Computer Science Principles* English Language and Composition* Physics C-Mechanics* Statistics* U.S. History *	Calculus BC* Comparative Government* Computer Science A* Computer Science Principles* English Literature and Composition* Macroeconomics Physics C-Mechanics* Statistics* U.S. History *
3 Quarters or Full Year	Chemistry* Seminar*	Biology* Chemistry* Physics 1* Research* Seminar*	Biology* Chemistry* Physics 1* Research*

Seminar and Research are required for McDowell's Distinctive Scholars Program and the AP® Capstone Diploma. Select courses may be available for freshmen on a case by case basis.
*** Denotes courses that also count toward McDowell's STEM Certificate.**

Aerospace Science (AFJROTC)

Course Number	Course Name	Grade Level	Credit
R14010	Aerospace Science 1	9	1.00
R24010	Aerospace Science 2	10	1.00
R34010	Aerospace Science 3	11-12	1.00
R44010	Aerospace Science 4	11-12	1.00

Business

Course Number	Course Name	Grade Level	Credit
B11510	Computer Applications: Digital, Design & Publications	9-12	.50
B12010	Introduction to Business	9-12	.50
B21510	Computer Applications: Manipulate It	9-12	.50
B26010	Sports & Entertainment Marketing	10-12	.50
B37010	Accounting 1	10-12	1.00
B47010	Accounting 2	10-12	1.00
B48010	Personal Finance & Business Calculations	10-12	1.00
B48510	International Business and Ethics	10-12	.50
B49010	Business Law	10-12	.50
B49510	Entrepreneurship	10-12	.50

Center for the Performing Arts

Course Number	Course Name	Grade Level	Credit
P11010	Guitar	9-12	.50
P11510	Piano	9-12	.50
P12010	Concert Band	9-12	1.00
P14110	Mixed Chorus	9-12	1.00
P16010	Performing Arts 1	9-12	1.00
P23010	Jazz Band	9-12	1.00
P24010	Wind Ensemble	9-12	1.00
P25010	Orchestra	9-12	1.00
P26010	Performing Arts 2	10-12	1.00
P27510	Music Theory/Music History	11-12	1.00
P28010	Popular Dance	10-12	.50
P34510	Vocal Ensemble	11-12	1.00
P36010	Performing Arts 3	11-12	1.00
P46010	Performing Arts 4	12	1.00
P50030	Arts Dual Enrollment	11-12	1.00
H17010	PE Dance	9-12	.50

Computer Science

Course Number	Course Name	Grade Level	Credit
D12510	Computer Science 1	9-12	.50
D16010	Smart Manufacturing	9-12	.50
D21010	Web Design 1	10-12	.50
D22010	Web Design 2—Mobile App Development	10-12	.50
D22510	Computer Science 2	9-12	.50
D23010	Game Development and Programming	9-12	.50
D32530	AP® Computer Science Principles	10-12	1.00
D33030	AP® Computer Science A	10-12	1.00
D50030	Technology Dual Enrollment	11-12	1.00

English Language Arts

Course Number	Course Name	Grade Level	Credit
E10010	Literacy	9-12	1.00
E11010	English Language and Culture	9-12	2.00
E12010	Film Appreciation	9-12	.50
E12210	Disney: The Happiest Elective on Earth	9-12	.50
E12610**	Fantasy and Science Fiction Literature	9-12	.50
E13010	Introduction to Media	9-12	.50
E13210**	Holocaust and Jewish Literature	9-12	.50
E13610	Marvel, DC, and Beyond	9-12	.50
E14010**	Academic English 9	9	1.00
E14020**	Honors English 9	9	1.00
E16110**	Debate on Current Events	9-12	.50
E16210**	Public Speaking	9-12	.50
E23010	Sports and News Broadcast Journalism	9-12	.50
E24010**	Academic English 10	10	1.00
E24020**	Honors English 10	10	1.00
E26010**	Creative Writing	9-12	.50
E31010	Expanding English Language and Culture	9-12	2.00
E33510	Advanced Video Production	9-12	.50
E34010**	Academic English 11	11	1.00
E34020**	Honors English 11	11	1.00
E34410	Independent Research Project	11-12	.50
E34610**	Short Stories	10-12	.50
E35530**	AP® English Language and Composition 11	11	1.00
E36010**	Advanced Exploring Writing	10-12	.50
E36310**	Advanced Forensics—Speech & Debate	10-12	.50
E37510**	Journalism 1	9-12	.50
E38010**	Young Adult Literature	9-12	.50
E44010**	Academic English 12	12	1.00
E44020**	Honors English 12	12	1.00
E45530**	AP® English Literature and Composition 12	12	1.00
E47010Q	Advanced Journalism	9-12	.50
E47010	Advanced Journalism	9-12	1.00
E50030	English Dual Enrollment	11-12	1.00

**NCAA APPROVED COURSE

Family & Consumer Sciences

Course Number	Course Name	Grade Level	Credit
F10510	Exploring Culinary Arts	9-12	.50
F10810	Lifetime Nutrition	9-12	.50
F11210	Creative Cooking	9-12	.50
F11610	Baking & Pastry Arts	9-12	.50
F12010	Fashion & Fabrics 1	9-12	.50
F21610	Baking and Pastry Arts 2	10-12	.50
F22010	Fashion & Fabrics 2	9-12	.50
F23010	Education Profession Level 1	9-12	1.00
F27010	Career Exploration	10-12	.50
F32010	Fabric Entrepreneurship	10-12	1.00
F33010	Education Profession Level 2	10-12	1.00
F34010	Surviving and Thriving Adulthood	11-12	.50
F43010	Education Profession Level 3	11-12	1.00

General Electives

Course Number	Course Name	Grade Level	Credit
G11010E	ELL Academic Support	9-12	.50
G14010	United States Academic Decathlon	9-12	1.00
G17010	Social Skills	9-10	1.00
G17410	Decision Making 1	9-10	.50
G17610	Daily Living	9-10	1.00
G17710	Work Skills	9-10	1.00
G24030**	AP® Seminar	10-11	1.50
G29110	Independent Study	9-10	.50
G30510	Academic Support	11-12	.50
G33510	Current Events	11-12	.50
G37010	Social Skills	11-12	1.00
G37410	Decision Making 2	11-12	.50
G37610	Daily Living	11-12	1.00
G37710	Work Skills	11-12	1.00
G39110	Independent Study	11-12	.50
G44030**	AP® Research	12	2.00
G44510	United States Academic Decathlon	12	.50
G48510	Internship/Job Shadowing	11-12	.50
G48610	Internship McDowell Manufacturing	11-12	.50

**NCAA APPROVED COURSE

Mathematics

Course Number	Course Name	Grade Level	Credit
M11010	Math	9-12	1.00
M12010**	Math 1	9	1.00
M13910A**	Academic Algebra 1 Part A	9	1.00
M133910B**	Academic Algebra 1 Part B	9-10	1.00
M14010**	Academic Algebra 1	9	1.00
M22010**	Math 2	10	1.00
M24010**	Academic Geometry	10	1.00
M24020**	Honors Geometry	9-10	1.00
M32010**	Math 3	11	1.00
M33610	Academic Algebra 2 (180)	10-12	2.00
M34010**	Academic Algebra 2	9-12	1.00
M34020**	Honors Algebra 2	10-12	1.00
M42010	Consumer Mathematics	12	1.00
M45010**	Academic Trigonometry/Algebra 3	10-12	1.00
M46020**	Honors Pre-Calculus/Trigonometry	10-12	1.00
M50030	Mathematics Dual Enrollment	11-12	1.00
M56020**	Honors Calculus	11-12	1.00
M56030S**	AP® Calculus AB—Semester	11-12	1.00
M56030Y**	AP® Calculus AB—Yearlong	11-12	2.00
M57010**	Probability and Statistics	11-12	1.00
M57020**	Honors Probability and Statistics	11-12	1.00
M57030**	AP® Statistics	10-12	1.00
M58030**	AP® Calculus BC	11-12	1.00

****NCAA APPROVED COURSE**

Science

Course Number	Course Name	Grade Level	Credit
C10010	Science	9-12	1.00
C12010**	Applied Earth and Space Science	9	1.00
C14010**	Academic Earth and Space Science	9	1.00
C14020**	Honors Earth and Space Science	9	1.00
C22010**	Applied Biology	10	1.00
C24010**	Academic Biology	10	1.00
C24020**	Honors Biology	10	1.00
C25030**	AP® Biology	11-12	2.00
C27010	Issues in Earth and Space Science	10-12	.50
C28010**	CSI Forensic Science	11-12	.50
C31010**	Science in the Community	11-12	1.00
C32010**	Applied Chemistry	11	1.00
C33010**	Mechanical Science	11-12	1.00
C33510**	Conservation Science	11-12	.50
C34010**	Academic Chemistry	11	1.00
C34020**	Honors Chemistry	11	1.00
C34030**	AP® Chemistry	10-11	2.00
C34220**	Honors Chemistry 2	11-12	.50
C36020**	Honors Anatomy & Physiology	11-12	1.00
C37010**	Environmental Issues	10-12	.50
C37030**	AP® Environmental Science	10-12	1.00
C43010**	Conceptual Physics	12	1.00
C44010**	Academic Physics	12	1.00
C44020**	Honors Physics	12	1.00
C44030**	AP® Physics 1	11-12	2.00
C45020**	Honors Organic Chemistry	11-12	.50
C47010	General Science	12	.50
C50030	Science Dual Enrollment	11-12	1.00
C54030**	AP® Physics C—Mechanics	11-12	1.00

**NCAA APPROVED COURSE

Social Studies

Course Number	Course Name	Grade Level	Credit
S10010	Social Studies	9-12	1.00
S14110**	Academic World Geography	9	1.00
S14120**	Honors World Geography	9	1.00
S18010	Positive Psychology	9-12	.50
S23510**	Current Issues	9-10	.50
S23710**	Introduction to Criminal Justice	9-12	.50
S24110**	Academic World History 10	10	1.00
S24120**	Honors World History 10	10	1.00
S24130**	AP® World History: Modern	10-12	1.00
S25030**	AP® Human Geography	10-12	1.00
S28010**	Justice Education	9-12	.50
S29010**	Constitutional Law	10-12	.50
S33010**	Contemporary Issues	11-12	.50
S34110**	Academic U.S. History 11	11	1.00
S34120**	Honors U.S. History 11	11	1.00
S34130**	AP® U.S. History	11-12	1.00
S44010**	Academic U.S. Government 12	12	.50
S44020**	Honors U.S. Government 12	12	.50
S45530**	AP® U.S. Government and Politics	10-12	1.00
S46010**	Academic Economics 12	12	.50
S46020**	Honors Economics 12	12	.50
S46030**	AP® Macroeconomics	12	1.00
S48010**	Academic Psychology	11-12	1.00
S48020**	Honors Psychology	11-12	1.00
S48030**	AP® Psychology	10-12	1.00
S50030	Social Studies Dual Enrollment	11-12	1.00
S55530**	AP® Comparative Government and Politics	11-12	1.00

****NCAA APPROVED COURSE**

Technology Education

Course Number	Course Name	Grade Level	Credit
T11110	Materials Manufacturing: Wood Technology 1	9-12	1.00
T12010	Foundations of Technology Design and Engineering	9-12	1.00
T13510	Intro to Robotics	9-12	1.00
T15010	Materials Manufacturing: Metal Technology 1	9-12	.50
T21110	Materials Manufacturing: Wood Technology 2	9-12	1.00
T21510	Home Maintenance	9-12	.50
T22110	Architectural Design	10-12	1.00
T23510	Robotics 2	10-12	1.00
T25010	Materials Manufacturing: Metal Technology 2	9-12	.50
T31110	Materials Manufacturing: Wood Technology 3	10-12	1.00
T32110	Advanced Computer Design and Manufacturing	11-12	1.00
T36010	Graphics Technology 1	11-12	.50
T41010	CNC Manufacturing	12	1.00
T41110	Materials Manufacturing: Wood Technology 4	11-12	1.00
T46010	Graphics Technology 2	11-12	.50
T47510	Introduction to Applied Engineering	12	1.00

Visual Arts Department

Course Number	Course Name	Grade Level	Credit
A10110	Art Survey	9-12	.50
A13010	Ceramics 1	9-12	.50
A14010	Drawing 1	9-12	.50
A15010	Digital Technology in Art	9-12	.50
A16010	Interior Design 1	9-12	.50
A17010	Painting 1	9-12	.50
A18010	Sculpture	9-12	.50
A21310	Graphic Arts	9-12	.50
A21610	Digital Photography	9-12	.50
A21810	Animation	9-12	.50
A23010	Ceramics 2	9-12	.50
A23510	Mixed Media	9-12	.50
A24010	Drawing 2	9-12	.50
A27010	Painting 2	9-12	.50
A33010	Ceramics 3	10-12	.50
A34010	Drawing 3	10-12	.50
A36010	Interior Design 2	9-12	.50
A44030	AP® Studio Art: Drawing	10-12	1.00

Wellness

Course Number	Course Name	Grade Level	Credit
H14010	Aquatics	9	.50
H14210	Aquatics II	10-12	.50
H14510	Health 9	9	.50
H15010	Advanced Team Sports	9-10	.50
H17010	PE Dance	9-12	.50
H23110	Personal Fitness	9-10	.50
H24010	Physical Education 10	10	.50
H33010	Weight Training	9-12	.50
H33110	Personal Fitness	11-12	.50
H34510	Health 11	11	.50
H35010	Advanced Team Sports	11-12	.50
H44010	Physical Education 11/12	11-12	.50
H48010	Introduction to Health Sciences	12	.50

World Language

Course Number	Course Name	Grade Level	Credit
W14010**	French 1	9-12	1.00
W15010**	German 1	9-12	1.00
W17010**	Spanish 1	9-12	1.00
W24010**	French 2	9-12	1.00
W24510**	French Culture	10-12	.50
W25010**	German 2	9-12	1.00
W25510**	German Culture	10-12	.50
W27010**	Spanish 2	9-12	1.00
W27510**	Spanish Culture	10-12	.50
W34020**	Honors French 3	9-12	1.00
W35020**	Honors German 3	9-12	1.00
W37020**	Honors Spanish 3	9-12	1.00
W44020**	Honors French 4	9-12	1.00
W45020**	Honors German 4	9-12	1.00
W47020**	Honors Spanish 4	9-12	1.00
W50030	Foreign Language Dual Enrollment	9-12	1.00
W57020**	Honors Spanish 5	9-12	1.00

****NCAA APPROVED COURSE**

Erie County Technical School

AM	PM	PM	Course Name	Grade Level	Credit
			COMMUNICATION CLUSTER		
V22010	V32010	V42010	Art and Design for Business	10-12	4.00
V26510	V36510	V46510	Graphic Media and Design	10-12	4.00
V22510	V32510	V42510	Computer Programming	10-12	4.00
V29210	V39210	V49210	Computer Networking	10-12	4.00
			CONSTRUCTION CLUSTER		
V23010	V33010	V43010	Construction Trades	10-12	4.00
V26010	V36010	V46010	Facility Maintenance Technologies	10-12	4.00
			HUMAN SERVICES CLUSTER		
V23510	V33510	V43510	Cosmetology	10-12	4.00
V24010	V34010	V44010	Culinary, Baking, and Pastry Arts	10-12	4.00
V21510	V31510	V41510	Early Childhood Education	10-12	4.00
V27010	V37010	V47010	Health Assistant	10-12	4.00
V29610	V39610	V49610	Hospitality Management and Tourism	10-12	4.00
V27210	V37210	V47210	Sports Therapy and Exercise Science	10-12	4.00
			MANUFACTURING CLUSTER		
V24510	V34510	V44510	Drafting and Design Engineering	10-12	4.00
V25010	V35010	V45010	Electrical Engineering	10-12	4.00
V27510	V37510	V47510	Metal Fabrication	10-12	4.00
V28010	V38010	V48010	Precision Machining	10-12	4.00
			TRANSPORTATION CLUSTER		
V20510	V30510	V40510	Automotive Body Repair	10-12	4.00
V21010	V31010	V41010	Automotive Technologies	10-12	4.00

Aerospace Science (AFJROTC)

R14010 **AEROSPACE SCIENCE 1**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **THE ABILITY TO PARTICIPATE IN MARCHING AND PHYSICAL WELLNESS/PT**
OTHER INFO: **SEE ADDITIONAL REQUIREMENTS**

This course is open to all students who have the ability to participate in physical wellness, marching maneuvers, and carry a minimum overall 2.0 grade point average. Aerospace Science is divided into categories with Aerospace Science comprising 40% of the curriculum, Leadership Education 40%, and 20% is made up of physical wellness/ PT. The first year is a history course designed to acquaint the students with the historical development of flight and the role of the military in history. The leadership portion develops leadership skills and acquaints students with life skills such as discipline, leadership, citizenship, customs, and courtesies. Further leadership training encompasses communication skills, management studies, and basic marching skills. Students are exposed to numerous field trips and competitive drill meets. Aerospace Science is a pathway of civilian/ military career exploration into the many different occupations that are available. Careers will be discussed and guest speakers will be invited in to speak of career opportunities.

R24010 **AEROSPACE SCIENCE 2**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **THE ABILITY TO PARTICIPATE IN MARCHING AND PHYSICAL WELLNESS/PT AND MUST HAVE PASSED AS-1**
OTHER INFO: **SEE ADDITIONAL REQUIREMENTS**

This course is open to all students who have successfully completed Aerospace Science 1 and its requirements. Aerospace Science is divided into categories with Aerospace Science comprising 40% of the curriculum, Leadership Education 40%, and 20% is made up of physical wellness/PT. This year is a science course designed to acquaint the students with the Aerospace environment; the human requirements of flight, principles of aircraft flight, and principles of navigation. **The leadership portion of the class stresses communication life skills and career opportunities.** Written and oral communication requirements compliment academic materials. Cadet Corps activities include holding positions of greater responsibility in the planning and execution of Corps projects. Aerospace Science is a pathway of civilian/military career exploration into the many different occupations that are available. Careers will be discussed and guest speakers will be invited to speak of career opportunities.

R34010 **AEROSPACE SCIENCE 3**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **THE ABILITY TO PARTICIPATE IN MARCHING AND PHYSICAL WELLNESS/PT AND MUST HAVE PASSED AS-2 (SCIENCE CREDIT AWARDED IF REQUESTED)**
OTHER INFO: **SEE ADDITIONAL REQUIREMENTS**

This course is open to all Junior and Senior students with prior approval from JROTC staff. JROTC prefers successful AS-1 and AS-2 completion; however, staff will evaluate admittance on a case-by-case basis. Aerospace Science is divided into categories with Aerospace Science comprising 40% of the curriculum, Leadership Education 40%, and 20% is made up of physical wellness/PT. The academic subject of this course is Global and Cultural Studies. Leadership classes stress communication and personal development and include actual experience in commanding the Cadet Corps and serving in support command and staff positions. The cadets assist in the planning and supervising of all cadet activities, physical wellness, and drill. Numerous community service opportunities and field trips enhance the classroom experience. **One science credit may be awarded to students who successfully complete 3 credits of Aerospace Science.** Aerospace Science continues to be a pathway of career exploration into the many different occupations that are available. Careers will be discussed and guest speakers will be invited to speak of career opportunities.

R44010 **AEROSPACE SCIENCE 4**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **THE ABILITY TO PARTICIPATE IN MARCHING, PHYSICAL WELLNESS/PT, AND TEACHER RECOMMENDATION**
OTHER INFO: **SEE ADDITIONAL REQUIREMENTS**

This course is open to all Junior and Senior students with prior approval from JROTC staff. JROTC prefers successful AS-1 and AS-2 completion; however, staff will evaluate admittance on a case-by-case basis. Aerospace Science is divided into categories with Aerospace Science comprising 40% of the curriculum, Leadership Education 40%, and 20% is made up of physical wellness/PT. The academic subject of this course is Global and Cultural Studies. Leadership classes stress communication and personal development and include actual experience in commanding the Cadet Corps and serving in support command and staff positions. The cadets assist in the planning and supervising of all cadet activities, physical wellness, and drill. Numerous community service opportunities and field trips enhance the classroom experience. Aerospace Science continues to be a pathway of career exploration into the many different occupations that are available. Careers will be discussed and guest speakers will be invited to speak of career opportunities. **One science credit may be awarded to students who successfully complete 3 credits of Aerospace Science.**

ADDITIONAL REQUIREMENTS:

CADETS ARE REQUIRED TO PARTICIPATE IN THE HOMECOMING PARADE, MCDOWELL DRILL COMPETITION, DINING-OUT, AND THE ANNUAL SUPERINTENDENT'S REVIEW. CADETS MUST, AT ALL TIMES, MAINTAIN ACCEPTABLE PERSONAL APPEARANCE AND HIGH ACADEMIC STANDARDS. THIS INCLUDES WEARING THE JROTC UNIFORM AND PARTICIPATING IN FOUR COMMUNITY SERVICE EVENTS PER QUARTER. THREE INCIDENCES OF IN-SCHOOL SUSPENSION (ISS) OR OUT-OF-SCHOOL SUSPENSION (OSS) MAY RESULT IN INVOLUNTARY DISMISSAL FROM JROTC. IF DISMISSED FROM OR RECEIVING A FINAL GRADE OF "F", STUDENTS CANNOT RE-ENROLL IN ANY JROTC CLASS. FAILURE TO WEAR THE UNIFORM WILL RESULT IN A CONTRACT VIOLATION AND COULD LEAD TO INVOLUNTARY DISMISSAL FROM JROTC. FAILURE IN ANY MIHS/MHS CLASSES PRECLUDES INVOLVEMENT IN ANY OUT-OF SCHOOL FIELD TRIPS. FAILURE TO TURN IN ASSIGNED JROTC PROJECTS WILL RESULT IN A CONTRACT VIOLATION AND COULD LEAD TO INVOLUNTARY DISMISSAL FROM JROTC.

THE GOALS OF THE WELLNESS PROGRAM ARE TO:

1. CREATE AN INDIVIDUALIZED TRAINING PROGRAM BASED ON NATIONAL STANDARDS BY AGE AND GENDER.
2. IDENTIFY AREAS OF IMPROVEMENTS FOR EACH CADET.
3. INCORPORATE A PHYSICAL TRAINING PROGRAM TO REACH GOALS.

Business

B11510 COMPUTER APPLICATIONS: DIGITAL DESIGN & PUBLICATIONS (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course will integrate the desktop publishing, word processing, and graphic capabilities of the personal computer. In this class, students will produce and design professional publication documents such as announcements, fliers, posters, certificates, brochures, menus, catalogs, newsletters, newspapers, and reports. Students will also create and design a professional web page using web page editing software. Proper digital citizenship will be stressed throughout each project during the course.

B12010 INTRODUCTION TO BUSINESS (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is designed to introduce students to basic business and economic principles through a hands-on exploratory approach. Students will read a variety of texts for vocabulary development and acquisitions and use the internet to research. Concepts that are integrated throughout the course include entrepreneurship, international business, management, marketing, accounting, economics, the stock market, and career exploration. Specific computer applications will be incorporated into a variety of classroom projects.

B21510 COMPUTER APPLICATIONS: MANIPULATE IT (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course will integrate spreadsheet, database, and presentation software for the management of data. Students will explore how to manage data in a variety of network settings, such as in a Cloud, network, or single user computer throughout the course. Students will use database software to create, maintain, and manipulate large data files. Construction of formulas, various functions, and "If Statements" will be taught utilizing spreadsheet software. Students will manipulate graphs, charts, images, sounds and video, along with the data from spreadsheets and databases to be included in digital presentations. This course is an excellent way to develop those needed computer skills that will set you apart from others!

B26010 SPORTS AND ENTERTAINMENT MARKETING (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course will focus on the real-world business perspective by using examples from the marketing world to illustrate features, concepts, and activities. Sports and Entertainment Marketing is an exciting and competitive business in the world today and students will recognize its relevance due to the local pro sports teams and theaters. It is our hope to create partnerships with those entities to allow students to work directly with them and learn hands-on. Concentration will be on basic principles of marketing and economics, including demographics and the marketing mix, with special emphasis on sports and entertainment marketing. Literacy and research skills will be improved as students read a variety of texts and articles and use the internet to search for marketing ideas to complete class projects.

B37010 ACCOUNTING 1 (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
The complete accounting cycle is presented by means of specific principles and situations. Accounting theory and concepts will be applied to maintain journals, ledgers, and formulating fundamental financial statements including a Balance Sheet, Income Statement, and Trial Balance. Students will study payroll accounting and multiple journals in a manual system as well as an automated system. Directed practice through carefully planned projects and problems provides the student opportunities to perform accounting tasks commonly found in business. In addition, students will complete a program from the IRS on understanding taxes.

B47010 ACCOUNTING 2 (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: ACCOUNTING 1 WITH A "C" OR HIGHER
This course is a continuation of the study of accounting through financial statements. This one-credit elective course is offered to students who have successfully completed Accounting 1 with a "C" or higher. Topics include long-term receivables and payables, inventory, fixed assets, accruals, and equity (i.e. common stock, dividends, earnings per share, and additional paid-in capital). The course will then focus on specialized accounting procedures relating to departmentalized accounting, internal controls, and managerial and cost accounting systems. Throughout the course, automated accounting procedures are emphasized.

B48010 PERSONAL FINANCE & BUSINESS CALCULATIONS (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This course provides a basic understanding of personal and business money management to make effective consumer decisions. Students use technology, both calculators and computers, to explore and study personal applications of money management and business transactions. Topics will include wages, taxes, fringe benefits, personal banking, loans, and credit cards. Additionally, personal asset ownership, insurance, and investments will be addressed. These concepts will be integrated and reinforced through a virtual business simulation. These activities will provide a fundamental understanding of making informed financial decisions leading to financial independence.

B48510 INTERNATIONAL BUSINESS AND ETHICS (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This one-term course provides content and activities for understanding the role, factors, and impact of engaging in a global business environment. Course topics include international business communications, environment, ethics, finance, management, marketing, and import/export trading. A major requirement of the course includes a simulated project whereby students will choose a country with which to do business. Students will use literacy and research skills to become familiar with significant aspects of the country such as their culture, economy, customers, and business etiquette. Students will then choose a product and develop a marketing plan based on the needs and wants of that country. These activities provide the foundation for becoming an informed participant in the global economy.

B49010 BUSINESS LAW (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course involves the principles of law that apply to daily living. It includes the study of legal rights and duties concerning torts and crimes, contracts, and insurance. Class activities include discussion of current events as they relate to the law, debates on current legal issues, research and reports on various related legal topics, a mock trial, and reading, analyzing, and discussing court cases followed by a trip to the Erie County Court House and Prison.

B49510 ENTREPRENEURSHIP (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course provides students with a hands-on opportunity to study the process of starting and running a business. Students will learn concepts such as forms of ownership, management, raising capital, financials, and analyzing their market and competition. These concepts will be integrated and reinforced through a Virtual Business simulation where students will start and run their own business. The course will conclude with a Virtual business competition and business plan presentation for their business simulation. Students will conduct market research and participate in a job shadowing experience.

Center for the Performing Arts

P11010 GUITAR (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Classroom guitar lessons will introduce the student to basic music theory, note reading, finger styles, strumming, and tablature playing. Background in music is not required. This course is an excellent choice for the beginning student. Guitars will be provided for a $20.00 user fee. Students may use their own acoustic guitars in lieu of the user fee.

P11510 PIANO (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course will introduce the student to basic piano skills. Musical background is not required. Students will learn to recognize and comprehend the symbols of music theory and to apply them to piano technique and application. Students will learn to play melodies and chords.

P12010 CONCERT BAND (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: PARTICIPATION MAY BE LIMITED BY AUDITION FOR SOME INSTRUMENTS
Concert band is designed for the instrumental students in grades 9, 10, 11, and 12 who wish to further develop and improve their skills by participation in an ensemble situation. Music is chosen to offer the students a wide range of literature from early periods of music to the present. Students will become more proficient on their individual instruments and develop their musicianship by concentrating on all aspects of music performance. Membership in band is required for all students who wish to participate in PMEA district, regional, and state festivals. There will be several evening performances that students will be required to attend.

P14110 MIXED CHORUS (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This class is open to any student who likes to sing and wants to improve their voice. Students will learn and practice proper vocal technique, basic music theory, and music terminology. We will practice sight singing and perform a wide variety of music styles throughout the semester. There will be two evening concerts during the semester that students are required to attend. In addition, students who play piano are encouraged to schedule chorus to assist as piano accompanists.

P16010 PERFORMING ARTS 1 (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
Performing Arts 1 is designed for students who either have an interest in music and theater or those who simply want to learn more about the art of musical performance. The class is separated into various sections, each taught by a certified instructor with a background in performing arts. The music section of the course, taught by a certified music teacher, emphasizes music history and music performing skills with a concentration in operetta, film music, stage music, and popular song, as well as music written for stylistic, mood, and movement interpretations. The drama section of the course is taught by an English certified teacher with a background in dramatic and comedic interpretation, monologue, and dialog presentations, as well as creative writing. The technical theater portion of the course is taught by an industrial arts instructor who has designed and created many sets for our CPA productions. This is an excellent course for students in all grades and provides an opportunity for students to ignite their creative thinking skills.

P23010 JAZZ BAND (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: INSTRUCTOR APPROVAL IS REQUIRED FOR COURSE ADMISSION
This course is open to highly skilled student instrumentalists who pass the required audition. Students will study jazz performance practices with a concentration on improvisation. Public performances will be a vital aspect of the curriculum.

P24010 WIND ENSEMBLE (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: INSTRUCTOR APPROVAL IS REQUIRED FOR COURSE ADMISSION
This course is for highly motivated wind instrumental students interested in playing more difficult music and being challenged on their instruments. Enrollment will be limited to forty-five students by audition only.

P25010 ORCHESTRA (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: STUDENTS MUST HAVE SOME PREVIOUS EXPERIENCE PLAYING AN ORCHESTRA INSTRUMENT, SUCH AS THE VIOLIN, VIOLA, CELLO, OR BASS.
The orchestra is designed to increase and encourage musical talent and offer string students an opportunity to express themselves in an ensemble situation. Music is chosen to offer the students a wide range of literature from early periods of music to the present. Students will become more proficient on their individual instruments and develop their musicianship by concentrating on all aspects of music performance. Membership in orchestra is required for all students who wish to participate in PMEA district, regional, and state festivals. There will be several evening performances that students will be required to attend.

P26010 PERFORMING ARTS 2 (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: SUCCESSFUL COMPLETION OF PERFORMING ARTS 1/RECOMMENDATION OF THE PERFORMING ARTS STAFF
The Performance Arts 2 class will enhance the skills they learn in Performing Arts 1 by working on a variety of musical enrichment activities and projects. Students will perform musical pieces and interject character development within the context of the songs. Students will learn and utilize skills in vocal production and will develop analytical skills in recognizing the musical and lyrical intent of the composer/lyricists. The class will perform their pieces throughout the year as well as work with the Performing Arts 3-4 in an annual dinner musical production. A variety of excellent group choral numbers will also be performed in this class.

P27510 MUSIC THEORY/MUSIC HISTORY (GRADES 11-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION BY CHORAL TEACHER
This course is designed for students who are interested in learning in-depth studies of music theory and history. Students will learn the concepts of music theory (types of scales, keys, intervals, modes, chords, rhythms, meters, species counterpoint), how music is composed (melody, harmonization rhythm), how to analyze various types of musical compositions, and conducting skills. Students will also work on original compositions. Students will also study the growth of Western Music from the Baroque through Contemporary periods of music. Those who take this course MUST have been in or currently be enrolled in one of the many music ensembles offered through the Center for the Performing Arts. Piano skills are encouraged.

P28010 POPULAR DANCE (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course emphasizes techniques and dance routines utilizing modern styles of dance. Flexibility and performance techniques are stressed in each class. The popular dance classes learn choreography to numerous songs each year, which are performed throughout the spring semester. This is an excellent course for increasing strength, flexibility, and dance skills. This course is an elective and does not fulfill the physical education requirements.

P34510 VOCAL ENSEMBLE (GRADES 11-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: AUDITION AND/OR DIRECTOR'S RECOMMENDATION
The Vocal Ensemble is a select group of approximately forty who are selected by audition. The Vocal Ensemble is a performance-oriented choral organization that will perform with the mixed chorus at the seasonal BACH TO ROCK concert and three mandatory evening concerts throughout the year. The chorus takes a bi-annual spring performance trip to New York City. In addition to these primary performances, the Vocal Ensemble will perform for various civic and community groups. Performances will be held during school and in the evenings. Students will be given continued instruction in proper vocal/choral technique and music theory. Students are required to attend all primary performances. Students who play the piano are encouraged to consider chorus to serve as piano accompanists.

P36010 PERFORMING ARTS 3 (GRADES 11-12)
P46010 PERFORMING ARTS 4 (GRADE 12)
CREDIT: 1.00 CREDIT
PREREQUISITE: MUST BE ACTIVE IN CPA PRODUCTIONS AND RECOMMENDED BY THE CPA DIRECTOR
This course is for students who have successfully completed the Performing Arts 2 course competencies and wish to pursue performing arts in some capacity behold graduation either as a major, a minor or for personal pleasure. Students will work on two musical productions which will be presented to the public: the *Sensational Seniors Musical Variety Show* as well as the *Annual Showcase/Dinner Musical Production*. The Showcase is the final musical project for the class which will be entirely coordinated by members of the class and will be performed for the public. Students will complete a Performing Arts music portfolio which they can take for college interviews or audition opportunities.

P50030 ARTS DUAL ENROLLMENT
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED
Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

H17010 PE DANCE (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
PE Dance class fulfills the student's physical education requirement **but does not fulfill the 9th-grade Aquatics requirement.** The PE Dance is divided into three disciplines: Ballet, Jazz, and Tap. Students in the course are then divided into beginner, intermediate, and advanced levels prior to beginning each discipline. Levels are determined by audition. The technique is stressed in each class and routines are choreographed for group recitals. This is an excellent course for any student (male or female) who wishes to study dance or is interested in the theater.

Computer Science

D12510 COMPUTER SCIENCE 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: ALGEBRA 1 WITH AT LEAST A "C" AVERAGE
Computer Science 1 is an elective course offered to students who are interested in learning about the foundational concepts of computer science and challenges them to explore how computing and technology impact the world. Additionally, students will investigate how computers represent all types of information and how the internet allows that information to be shared with people. Students will research and identify methods to store large and complex pieces of digital information in computers. Concepts introduced include variables, user input, text strings, Boolean expressions, and if-statements. Students will explore the fundamental topics of programming, algorithms, and abstraction while learning to programmatically design a digital scene.

D16010 SMART MANUFACTURING (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course would include Intro to Smart Manufacturing, Industrial Internet of Things, Python, AI and Machine Learning, Cybersecurity, and Careers in Smart Manufacturing. This would be done with collaboration and guidance from West Virginia University. Implementing their scalable curricula for Smart Manufacturing and using their models.

D21010 WEB DESIGN 1 (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course provides an introduction to creating web pages using HTML. It is designed for high school students who have completed a Computer Applications course. The course will begin with an introduction to the Internet and World Wide Web. Emphasis is then placed on design techniques used to produce effective web pages. The course will then proceed through the process of creating and editing a web page; creating a website with links; creating tables in a website and creating frames on a web page. A major requirement will entail the development of any original website that contains links to multiple web pages.

D22010 WEB DESIGN 2 - MOBILE APP DEVELOPMENT (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: WEB DESIGN 1 WITH AT LEAST A "C" AVERAGE
Web Design 2 - Mobile App Development will take what was learned in Web Design 1 to the next level by providing the advanced tools you need to create mobile apps that run on just about any smartphone or tablet. You will learn advanced features of HTML5 and CSS and will be introduced to jQuery and JavaScript to add interactivity to your site. Ultimately, you will design and build a mobile app that will be both attractive and effective.

D22510 COMPUTER SCIENCE 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: COMPUTER SCIENCE 1 WITH AT LEAST A "C" AVERAGE
Computer Science 2 is a continuation of the learning presented in Computer Science 1. Students will explore the technical, legal, and ethical questions from computers enabling the collection of data to the analysis and use of the data. Additionally, students will continue to develop their ability to program in the industry standard languages. Concepts introduced include arrays, functions, classes, and advanced structures. Students will also differentiate between list-processing and be introduced to advanced programming topics using Object Oriented Programming.

D23010 GAME DEVELOPMENT AND PROGRAMMING (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: RECOMMENDATION FROM COMPUTER SCIENCE 1 TEACHER
In this course, students will learn technical skills such as programming, graphic design, animation, testing and debugging relating game development and design. Skills taught will be transferable to other STEM* career paths. Game Development will begin with drag-n-drop programming and advance to more complex projects that involve writing code. The engineering problem-solving cycle plays a large role in integrating physics and math principles into game functionality.

D32530 AP® COMPUTER SCIENCE PRINCIPLES (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: ALGEBRA 1 WITH A "B" OR HIGHER
AP® Computer Science Principles introduces students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity, and how computing impacts our world. Students will develop the computational thinking skills needed to fully exploit the power of digital technology and help build a strong foundation in core programming and problem-solving.

- *Engaging Students New to Computer Science:* The course is designed to engage students from diverse backgrounds and those new to computing—and excite students with a curriculum that focuses on the core ideas that shape the landscape of computer science and its impact on our society.
- *Project-Based and Collaborative Learning Approach:* Using project-based lessons and materials throughout, students will work to address real-world problems and design solutions to put computational thinking into practice. These culminate in a capstone Performance Task project where students can demonstrate what they've learned—to become creators, instead of merely consumers, of the technology all around them.

Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.

D33030 AP® COMPUTER SCIENCE A (AP CSA) (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: AP® COMPUTER SCIENCE PRINCIPLES (3 OR BETTER ON AP® EXAM) AND ALGEBRA 2 (B OR BETTER)
This rigorous course introduces students to software engineering and object-oriented programming and design using the Java programming language. The curriculum covers a broad range of topics, including the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

D50030 TECHNOLOGY DUAL ENROLLMENT
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED
Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

**NCAA APPROVED COURSE

English Language Arts

E10010 **LITERACY (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION
OTHER INFO: CAN BE TAKEN MORE THAN ONCE
This course utilizes whole-class novels and independent student practice to bolster decoding, fluency, comprehension, grammar, and vocabulary abilities. Students are guided through large-group, small-group, and independent work. These literacy skills will be applied in real-life situations as students engage in career and vocational training in the community.

E11010 **ENGLISH LANGUAGE AND CULTURE (GRADES 9-12)**
CREDIT: 2.00 CREDIT
PREREQUISITE: N/A
This course is for students who are beginning their study of the English language. We will introduce the basics of English listening, speaking, reading, and writing for students who are new to the American school setting. You will explore culture and meaning-making across your languages as well as practical language skills for social and academic purposes.

E12010 **FILM APPRECIATION (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Come watch movies during school! Join us as we see how production teams put together frames, lights, sound, sets, and costumes. We won't be making our own movies, but we'll watch a range of genres to explore the basics of film studies.

E12210 **DISNEY: THE HAPPIEST ELECTIVE ON EARTH (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Experience a whole new world of Disney animation while revisiting old classics and new releases. You will take a look at the progression of Disney films from early movies to contemporary "live-action" remakes. What were the fairy tales that inspired the early films? How have Disney films represented or misrepresented people from around the world? What is it about Disney that makes so many of us keep coming back? Join us in this elective to find out!

E12610** **FANTASY AND SCIENCE FICTION LITERATURE (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Revolutionaries! Aliens! Adventurers! Magical creatures! Impressive technology! In this elective, we will discover fantastical landscapes, dystopian governments, and far-away worlds. We will read short stories, explore a few novels, and view films that help us define the fantasy and science fiction genres. See what the fantasy has to say about our current, everyday world and why these stories continue to be created and enjoyed.

E13010 **INTRODUCTION TO MEDIA (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Ever wonder how to take a GOOD picture with your smartphone WITHOUT a filter? Want to know how TikTok influencers create cool transitions? Dream of being a YouTuber? In this course, students explore the world of media by understanding the basic building blocks of what makes a video. The course starts with the basics of photography, then moves into how a video is actually made of moving pictures. Students will plan, write scripts, film with video cameras, and edit using basic video editing software.

E13210** **HOLOCAUST AND JEWISH LITERATURE (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
The Holocaust, as a genocidal event in the twentieth century, continues to draw attention and study. In this course, we will read nonfiction accounts and historical fiction to illuminate the horrors of antisemitism and the resistance to dictatorship. However, the Jewish experience is not limited to the 1930s and 1940s. This course will also consider contemporary literature by Jewish authors featuring Jewish characters that move beyond the Holocaust. This course would make a great extension of the Justice Education elective.

E13610 **MARVEL, DC, AND BEYOND (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
We will never be able to settle which comic universe is better, but we can try! Join us in sifting through illustrations, words, and movies to explore the world of comics, manga, and graphic novels. We will take a look at the history of this storytelling form and then jump into the many ways we now mix and match words and pictures to tell convincing stories. We will discuss and debate heroes, supervillains, adventure, and entertainment, and even explore how comics comment on the world we live in!

E14010** **ACADEMIC ENGLISH 9**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
English 9 develops literacy and communication strategies through the application of the Pennsylvania Core Standards for English Language Arts. Students will read a variety of fiction and nonfiction including an exploration of mythology and an introduction to the work of William Shakespeare. Writing will build on prior knowledge of grammar and composition with a concentration on style, focus, organization, and conventions of language. This course prepares students for career and college readiness.

E14020** **HONORS ENGLISH 9**
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION
English 9 develops literacy and communication strategies through the application of the Pennsylvania Core Standards for English Language Arts. Students will read a variety of fiction and nonfiction including an exploration of mythology and an introduction to the work of William Shakespeare. Writing will build on prior knowledge of grammar and composition with a concentration on style, focus, organization, and conventions of language. This course prepares students for career and college readiness. This course requires a higher level of independence with regard to critical thinking and reading.

E16110** **DEBATE ON CURRENT EVENTS (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Are you interested in what is happening in society? Do you enjoy politics and learning more about what other people think? This course helps you hone your speaking skills, helps you work on your persuasion skills, and allows you to become familiar with the aspects of debate. This class will help you become informed about the world and grow in an essential skill for future success: public speaking.
This course was formerly part of Basic Forensics (G26010). All students may take this course, even if you already took Basic Forensics. Basic Forensics is no longer offered as a one-credit course.

E16210** **PUBLIC SPEAKING (GRADES 9-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
This is one of the most important classes McDowell offers because an essential skill to future success is the ability to communicate well. This safe and non-controversial class will help you develop those skills and become more comfortable. You will analyze excellent speakers, read short pieces, and write our own speeches, preparing you well for high school, college, and the all-important job interview.
This course was formerly part of Basic Forensics (G26010). All students may take this course, even if you already took Basic Forensics. Basic Forensics is no longer offered as a one-credit course.

E23010 **SPORTS AND NEWS BROADCAST JOURNALISM (GRADES 9-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
Do you like to ask people about their opinions on sports and news events? Do you watch ESPN "Sports Center" and find yourself talking about sports like you're an announcer at a game? Or perhaps you dreamed of being a reporter on "CCN10" when you were younger. This course explores video broadcast journalism, where students write stories like they are a news/sports anchor while working as a team to produce a live broadcast television-style program. Students use video cameras, microphones, and basic video editing software to create a finished production to share with the McDowell audience.

E24010** **ACADEMIC ENGLISH 10**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**
English 10 fosters academic literacy and communication skills through the Pennsylvania Core Standards for English Language Arts. Students will read and analyze a variety of texts—fiction and nonfiction, short and extended pieces, poetry and drama—and explore the impact of propaganda. The development of student writing will concentrate on style, focus, organization, and conventions of language. This course prepares students for career and college readiness, as assessed at the end of the course through the Pennsylvania Literature Keystone Exam.

E24020** **HONORS ENGLISH 10**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" AVERAGE IN 9TH GRADE HONORS ENGLISH AND/OR TEACHER RECOMMENDATION**
English 10 fosters academic literacy and communication skills through the Pennsylvania Core Standards for English Language Arts. Students will read and analyze a variety of texts—fiction and nonfiction, short and extended pieces, poetry and drama—and explore the impact of propaganda. The development of student writing will concentrate on style, focus, organization, and conventions of language. This course prepares students for career and college readiness, as assessed at the end of the course through the Pennsylvania Literature Keystone Exam. This course requires a higher level of independence with regard to critical thinking and reading.

E26010** **CREATIVE WRITING (GRADES 9-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
If you like writing poetry, short stories, or even essays, this course will help keep you on the "write track" in a low-risk classroom environment. You'll explore fiction, nonfiction, and poetry, and perhaps even get a piece or two of yours published! This course prepares students for careers in various areas of writing.

E31010 **EXPANDING ENGLISH LANGUAGE AND CULTURE (GRADES 9-12)**
CREDIT: **2.00 CREDIT**
PREREQUISITE: **N/A**
This course will expand on the foundations you learned in English Language and Culture. You will progress in proficiency in English listening, speaking, reading, and writing. Utilizing your home language(s) and English, you will explore meaning-making and expression. Our class will preview, revisit, and practice concepts from your other English Language Arts course. ACCESS test: here we come!

E33510 **ADVANCED VIDEO PRODUCTION (GRADES 9-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **INTRODUCTION TO MEDIA OR SPORTS AND NEWS BROADCAST JOURNALISM**
OTHER INFO: **CAN BE TAKEN MORE THAN ONCE**

"Lights! Camera! ACTION!" Students in this course expand on the videography skills learned in Introduction to Media or Sports/News Broadcast Journalism to become directors and filmmakers of short films and promotional videos. For all projects, students write scripts, shoot video using unique film techniques, and edit video using advanced editing software (e.g., Adobe Premiere). The projects give students lots of opportunities for creativity and teamwork.

E34010** **ACADEMIC ENGLISH 11**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**
Academic English 11 continues the development of the skills needed to show competency in the Pennsylvania Core Standards for English Language Arts of reading, writing, speaking, and listening. Students will read both the fiction and nonfiction of American writers. The improvement of research and writing skills is fostered through composition and vocabulary study. Students develop the literacy skills necessary for post-secondary experiences.

E34020** **HONORS ENGLISH 11**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" AVERAGE IN 10TH GRADE HONORS ENGLISH AND/OR A TEACHER RECOMMENDATION**
This is a course for the advanced English student. It is designed to utilize basic skills in language structure, to promote library research, and to develop the skills of expository writing. Representative works of American literature are studied.

E34410 **INDEPENDENT RESEARCH PROJECT (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
An independent research project involves rigorous investigation into an area of your choosing. Through carefully selected steps, students will identify a research question and prepare a written and oral presentation of their findings. The steps will vary by subject but may include analyzing advanced data, reading peer-reviewed research papers, speaking to mentors in the field, and possibly even designing and running their own experiment.

E34610** **SHORT STORIES (GRADES 10-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **GRADE 10 STUDENTS WILL NEED AN ELA TEACHER RECOMMENDATION**
Short stories were created for busy people! What started publishing chapters from a novel in magazines quickly became a genre of its own: the short story. In this class, we will study how a single day, or even an hour, can completely change a character's life.

E35530** **AP® ENGLISH LANGUAGE AND COMPOSITION 11 (GRADE 11)**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" AVERAGE IN 10TH GRADE HONORS ENGLISH AND/OR A RECOMMENDATION FROM THE 10TH GRADE HONORS ENGLISH TEACHER

This language and composition introductory college course follows the College Board AP® curriculum in order to prepare students to take the AP® Exam in May. Emphasis on and practice of various modes of writing is central to the course. This course is designed for college-bound students who have a superior command of composition and grammar skills. Students read several texts critically, examining both rhetorical structure and content, with emphasis on understanding how authors use language to convey meaning. **Some works of literature studied in the AP® English 11 course are read in the summer preceding the AP® English course. Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

E36010** **ADVANCED EXPLORING WRITING (GRADES 10-12)**
CREDIT: .50 CREDIT
PREREQUISITE: ADMISSION TO ADVANCED EXPLORING WRITING IS GAINED BY ACHIEVING A GRADE OF "B" OR BETTER IN HONORS ENGLISH OR A RECOMMENDATION FROM THE 10TH OR 11TH GRADE ACADEMIC TEACHER

Do you believe in the power of words? Do you want to search for and write about topics that are of interest to YOU instead of an assignment? Then come to Advanced Exploring Writing and find out what separates people who write from writers.

E36310** **ADVANCED FORENSICS—SPEECH & DEBATE (GRADES 10-12)**
CREDIT: .50 CREDIT
PREREQUISITE: BASIC FORENSICS

A fear of public speaking can ruin your life. Studies show that his fear can lead to you being stuck in that dead-end job forever. If you want to increase your chance at SUCCESS, take Advanced Forensics and lead the way!

E37510** **JOURNALISM 1 (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A

Anyone who wants to expand their writing ability beyond a TDA, constructed response, or a 5-paragraph essay should try Journalism 1. Here, students learn to become a newspaper and magazine writer with the potential to see their names in print in a McDowell publication! Students get to choose their own topics in the areas of opinion, news, feature, or sports writing. Students research, interview, write, revise and publish their stories on a deadline.

E38010** **YOUNG ADULT LITERATURE (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A

The goal of the Young Adult Literature course is for students to see themselves in the novels they read, analyze how authors craft character identities, build empathy for the world they interact in, and, ultimately, grow within their own identities. Students will read a wide variety of current YA novels that focus on identity/coming of age. The class will largely be structured through independent reading time, inquiry discussions, and project-based activities.

E44010** **ACADEMIC ENGLISH 12**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A

Academic English 12 focuses on the mastery of the Pennsylvania Core Standards for English Language Arts of reading, writing, speaking, and listening. Literacy skills in both print and non-print media are developed. Students will read representative selections of English literature. The composition component of the course is directed toward both expository and research writing. Vocabulary study supplements both the reading and writing components of the course. Emphasis on written and spoken communication skills provides opportunities to prepare for post-secondary experiences.

E44020** **HONORS ENGLISH 12**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" AVERAGE FROM 11TH GRADE HONORS ENGLISH AND/OR A RECOMMENDATION FROM THE 11TH GRADE HONORS ENGLISH TEACHER

This is a course for the advanced English student. It includes expository writing assignments that focus on text knowledge and critical analysis of representative works from various genres and periods. Course activities focus on the use of critical standards for evaluation of the writer's craft and interpretation of the text. Additionally, the research paper project encourages the advanced English student to develop skills in research, organization, writing, editing, documentation, and ethical use of source material.

E45530** **AP® ENGLISH LITERATURE AND COMPOSITION 12 (GRADE 12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" AVERAGE IN AP® ENGLISH LANGUAGE AND COMPOSITION 11 AND/OR A RECOMMENDATION FROM THE 11TH GRADE TEACHER

This AP® course follows the College Board Advanced Placement® curriculum and prepares students to take the Advanced Placement® Exam in May. This course develops specific analytical approaches to literature. The course includes an emphasis on various types of writing based upon a college text on composition. In addition to reading from various genres, students will concentrate on literary devices in the specific works studied utilizing meta-cognitive tools for reading. This concentration involves taking at least four AP® practice exams with the intention of preparing students to take the AP® Exam. Students are required to write 2 essays per quarter of 500 words or 5 paragraphs based on the works covered during that quarter. Additional in-class assignments include written reflections, journals, text summaries, and research based upon the cognitive dimension. **Some works of literature studied in the AP® English 12 course are read in the summer preceding the AP® English course. Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

E50030 **ENGLISH DUAL ENROLLMENT**
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED

Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

E47010Q **ADVANCED JOURNALISM (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: JOURNALISM 1 OR SPORTS AND NEWS BROADCAST JOURNALISM
OTHER INFO: CAN BE TAKEN MORE THAN ONCE

E47010 **ADVANCED JOURNALISM (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: JOURNALISM 1 OR SPORTS AND NEWS BROADCAST JOURNALISM
OTHER INFO: CAN BE TAKEN MORE THAN ONCE

Come to work in a real newsroom where everyone works toward one goal: publication! Whether you are going to continue writing the opinion, news, or feature stories you learned in Journalism 1 or choose to make more video stories like you did in Sports/News Broadcast Journalism, you will help inform the Millcreek community through various McDowell Media outlets. Some students choose to expand their journalistic knowledge into other media-related jobs like copyediting, photography, magazine design, or podcasting. Students are encouraged to explore their own areas of interest and work independently while understanding what the McDowell audience needs to know and bring that together as a team.

Family and Consumer Sciences

F10510 EXPLORING CULINARY ARTS (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Exploring Culinary Arts is an introductory course in foods and nutrition. Students will have the opportunity to cook in each unit, as well as participate in food preparation demonstrations and various classroom activities. Units will include Safety & Sanitation, Kitchen Tools & Techniques, Kitchen Appliances, Microwave Cooking, Basic Nutrition, Menu Planning, and Grocery Shopping.

F10810 LIFETIME NUTRITION (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Lifetime Nutrition is a course based on a wide range of cooking experiences. Students will have the opportunity to learn and practice culinary techniques from all food groups, including grains, fruits, vegetables, dairy, eggs, and proteins. Special diets for health concerns will also be addressed in this course.

F11210 CREATIVE COOKING (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Creative Cooking is a culinary course focusing on advanced cooking techniques and ingredients. Students will prepare recipes from the following units: Meats, Poultry, Beans, Soups, Stocks, Sauces, Spices and Herbs, Salads and Dressings, Casseroles, Appetizers, Party Planning, and Entertaining.

F11610 BAKING & PASTRY ARTS (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is designed to enhance the students' knowledge of baking techniques and ingredients. They will have the opportunity to explore the creative aspects of baking to include the following units: Breads, Cakes and Cake Decorating, Pies, Pastries, Cookies, and Candies.

F12010 FASHION & FABRICS 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is designed to introduce the student to the world of fashion and clothing construction techniques. Students will be able to apply the principles of design to fashion and fabrics while completing a variety of sewing projects.

F21610 BAKING AND PASTRY ARTS 2 (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: "B" OR BETTER IN BAKING AND PASTRY ARTS
Baking and Pastry Arts 2 is an upper-level course that provides in-depth work in various baked goods and confections, which require skills, techniques, and knowledge from Baking and Pastry Arts. Each unit will focus on a specific skill in baking and the student's ability to use that skill successfully and creatively to make, create, and/or modify a variety of baked and dessert products. Students will learn how to apply the principles of baking to produce quality products while focusing on visual appeal, taste, texture, and nutritional content. Students will be tasked researching baked goods to create their own recipes to achieve desired outcomes, including nutritional aspects. The students will be equipped to prepare a variety of baked goods and varying degrees of difficulty for a variety of occasions in their lives.

F22010 FASHION & FABRICS 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: FASHION & FABRICS 1
This course is offered to students who successfully completed Fashion and Fabrics 1. The students will advance their sewing skills while applying a creative approach to the world of fashion. Students will expand their skills on the conventional sewing machine and become proficient on the serger and embroidery machines.

F23010 EDUCATION PROFESSION LEVEL 1 (GRADES 9-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: CLEARANCES REQUIRED
This course is designed to help students prepare for a career in early childhood education or to simply learn more about children in general. The curriculum teaches techniques to guide children through a variety of daily experiences in safe, educational ways. Success in working with children begins by understanding children. This course begins with an overview of the physical, intellectual, social, and emotional characteristics of young children. The curriculum goes on to teach practical techniques for guiding children as one establishes rules and handles daily routines. In addition, students will learn techniques for keeping children safe, healthy, and nourished, as well as learning to provide experiences and lessons that build children's enthusiasm for learning. Also, students will spend time observing and doing fieldwork in our on-site preschool. **Please note, there are student fees required for this course. See guidance for details.**

F27010 CAREER EXPLORATION (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course guides students through an informed career decision-making process, which includes several self-awareness experiences, and directs them through career research, post-secondary education research, and a budget and lifestyle component. Students research careers they are interested in, and they complete a final exam project that incorporates the career choice as well as other course experiences and information. It is recommended this course be taken during the 10th and 11th grade year.

F32010 FABRIC ENTREPRENEURSHIP (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: FASHION & FABRICS 1 & 2
This class allows students to further develop their skills and techniques related to clothing construction. Students will continue to complete various projects and performance tasks while furthering their construction skills. Emphasis will be placed on concepts and skills associated with entrepreneurship in related areas of Fashion and Fabrics. Students will operate an existing business, Trojan Tailors while advancing their skills in alteration, embroidery, and product design. A wide variety of career opportunities related to the clothing industry will also be covered.

F33010 EDUCATION PROFESSION LEVEL 2 (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: EDUCATION PROFESSION LEVEL 1, "B" AVERAGE, TEACHER RECOMMENDATION, CLEARANCES REQUIRED
This course is a laboratory experience designed for motivated students who have demonstrated effective work habits in Education Profession Level 1 and have a strong interest in possible careers working with children. A student selecting the Education Profession Level 2 course will have the personal opportunity of observing first-hand the concepts taught in Education Profession Level 1, concerning the physical, social, emotional, and cognitive development of the preschool child through observation and teaching of children in a preschool classroom located within our community. This experience also includes planning, children's activities in weekly and daily block plans, teaching lessons to children around various subject areas and themes, maintaining portfolios, completing written observations, and continued work in meeting CDA Competencies. **Please note, there are student fees required for this course. See guidance for details.**

F34010 **SURVIVING AND THRIVING ADULTHOOD (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
The Surviving and Thriving Adulthood course is designed to create a smooth transition from high school into the "real world". Students will work through units of study designed to create a foundation of knowledge and skills that will better equip them to handle adult challenges and obstacles. Areas of study will include healthy dating relationships, personal and career success, adult behaviors, and skills. In addition, students will explore current events and participate in service learning opportunities.

F43010 **EDUCATION PROFESSION LEVEL 3 (GRADES 11-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **EDUCATION PROFESSION LEVELS 1 & 2, TEACHER RECOMMENDATION - CLEARANCES REQUIRED**
Students who have taken both Education Profession Level 1 and Education Profession Level 2 courses and have obtained the necessary teacher recommendation, may choose to select the Education Profession Level 3. The Education Profession Level 3 is recommended for students who have a sincere interest in pursuing a career in Early Childhood Education, Elementary or Secondary Education, daycare, or related fields dealing with children. The curriculum is designed to help students understand child growth and development through direct interaction with children in a setting where they are with a certified teacher. In-class time is devoted to preparation/completion of the CDA Ready Certificate Requirements. **Please note, there are student fees required for this course. See guidance for details.**

General Electives

G11010E **ELL ACADEMIC SUPPORT (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is designed to meet the needs of those students who need additional English Language Learner (ELL) services. Grading is Pass/Fail.

G14010 **UNITED STATES ACADEMIC DECATHLON (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
G44510 **UNITED STATES ACADEMIC DECATHLON (GRADE 12 ONLY)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is open to any 9th-12th grade student who would like to participate in the United States Academic Decathlon competitions. The topics of study include Language & Literature, Fine Arts, Music, Mathematics, Science, Economics, Social Science, Essay, Interview, Prepared Speech, and Impromptu Speech. This course is definitely NOT designed solely for honors students. In order for McDowell to compete successfully, students are needed from all academic levels: Honors (GPA 3.75-4), Scholastic (GPA 3.0-3.74), and Varsity (GPA 3.0 and below). Participation in United States Academic Decathlon League affords all students, regardless of GPA, the opportunity to earn college scholarships as well as other awards. Former participants will also attest to the benefit they have gained in their study skills and personal communication skills because of USAD. Students may also participate individually in the program without being in the class with the prior permission from the instructor.
Note: This is an extracurricular activity as well as a class, and students should not sign up for the class unless they are prepared to meet after school and occasional weekends.

G17010 **SOCIAL SKILLS (GRADES 9-10)**
G37010 **SOCIAL SKILLS (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
Students with social or behavioral needs will schedule this elective course. This course is offered to students who need assistance in developing friendships and social interactions with peers and the community. It can be taken as a yearlong or semester course. Topics will include adolescent/young adult social issues, dealing with feelings, manners, getting along with others, etc. Field trips into the community to practice and develop these skills will be part of the curriculum.

G17410 **DECISION MAKING 1 (GRADES 9-10)**
G37410 **DECISION MAKING 2 (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: IEP
This course is designed to develop individual decision-making skills immediate reaction to short-term and long-term planning. The use of researched based strategies, individual student needs, and real-life application are a fundamental part of the course. Students who are at a basic level of utilizing decision-making skills will be recommended for this course through their advisor or counselor.

G17610 **DAILY LIVING (GRADES 9-10)**
G37610 **DAILY LIVING (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
Students needing instruction with personal care and developing independent skills at home and in the community will be scheduled for this elective course. Topics may include personal hygiene, basic cooking, daily schedules, cleaning, laundry, grocery shopping, and self-advocacy. Field trips into the community to practice and develop these skills will be a part of the curriculum.

G17710 **WORK SKILLS (GRADES 9-10)**
G37710 **WORK SKILLS (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
Students needing a high level of support to develop employable skills will be scheduled for this elective course. Instruction will focus on the development of soft skills and hard skills for the workplace. Work experiences in school and in the community will be a part of the curriculum.

G24030** **AP® SEMINAR (GRADES 10-11)**
CREDIT: 1.50 CREDIT
PREREQUISITE: ADMINISTRATIVE APPROVAL REQUIRED
AP® Seminar is a foundational course that engages students in cross-curricular conversations where they can explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, researching foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. They synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision so they can craft and communicate evidence-based arguments. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

G29110 **INDEPENDENT STUDY (GRADES 9-10)**
G39110 **INDEPENDENT STUDY (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: APPLICATION PROCESS
Independent Study is a program that is available for students who wish to pursue an in-depth study of a particular topic. Both teacher and student-designed programs are available and scheduled by quarter/semester only. Students may earn a maximum of one credit, per year, for independent study. The course will be Pass/Fail and will not be included in class rank, but will count as an elective credit for graduation. A PowerPoint presentation must be produced to explain your independent study project. The student must complete Independent Study paperwork and be approved before Independent Study can be placed on a students' schedule. **Independent Study will not be scheduled until approved.** Contact the Guidance Office for further information.

G30510 **ACADEMIC SUPPORT (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: IEP
Students with academic needs will schedule this elective course. This program provides reinforcement and support for the student and develops study skills and learning strategies in the content areas. Taking this course will help students develop organizational skills, a greater understanding of their own learning styles, and develop learning strategies. Grading is Pass/Fail.

G33510 **CURRENT EVENTS (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: IEP
Students requiring a higher level of instruction to understand current events will be scheduled for this course. Topics will be focused on current local, state, and national events and how it impacts the individual.

G44030** **AP® RESEARCH (GRADE 12)**
CREDIT: **2.00 CREDIT**
PREREQUISITE: **ADMINISTRATIVE APPROVAL REQUIRED**
AP® Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a yearlong investigation to address a research question. In the AP® Research course, students further develop the skills acquired in the AP® Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

G48510 **INTERNSHIP/JOB SHADOWING (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **2.75 GPA AND 90% ATTENDANCE RATE**
Internship is an opportunity for students to get outside the walls of McDowell and job shadow in a field they have an interest in learning more about and/or pursuing after graduation. It is an opportunity to gain real-world experience, build community connections, develop professional skills, and looks great on a transcript and resume. Students will shadow 4 hours per week during Monday-Thursday. Every Friday, students report to class for instruction/reflection/ experience sharing. Students are required to find their own replacement and must provide their own transportation. Students can take this elective for a max of 2 quarters, with a different shadowing experience each quarter.

G48610 **MCDOWELL MANUFACTURING INTERNSHIP (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **2.75 GPA AND 90% ATTENDANCE RATE**
This course is an opportunity for students to develop new and additional career awareness and career education activities to better prepare for the workplace and post-secondary education. Students with specific career objectives are matched with related employment experiences as they will be creating real parts for local manufacturing companies and adding value to the local supply chain. Schedules are individualized based on employer and student needs. Students will be doing their internship in the McDowell Manufacturing Lab located on the McDowell campus.

Mathematics

M11010 **MATH (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION
OTHER INFO: CAN BE TAKEN MORE THAN ONCE
This course reviews math computation and word problems while introducing algebraic concepts using manipulatives and guided practice. Students engage with the material through large-group, small -group, and independent work. These mathematical skills will be applied in real-life situations as students engage in career and vocational training in the community.

M12010** **MATH 1 (GRADE 9)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
This course is designed for students who need additional support with the Algebra 1 curriculum. The Math 1, Math 2, and Math 3 courses provide the full Algebra 1 curriculum. Students are scheduled for this course by recommendation from an advisor or counselor.

M13910A** **ACADEMIC ALGEBRA 1 Part A**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This course is designed for students who have shown sufficient knowledge of fundamental operations and Pre-algebra concepts. Students will begin learning concepts of algebra including a thorough review of Pre-algebra skills, solving equations and inequalities, linear functions, and systems of equations. Students who complete this course successfully will be scheduled into Algebra 1 Part B.

M13910B** **ACADEMIC ALGEBRA 1 Part B**
CREDIT: 1.00 CREDIT
PREREQUISITE: SUCCESSFULL COMPLETION OF ALGEBRA 1 PART A
This course is designed for students who have completed Algebra 1 Part A successfully. Students will finalize their learning of concepts of algebra including solving systems of equations, working with exponents and radicals, investigating data analysis and probability, and solving with polynomials. Students who complete this course successfully will be prepared for Geometry and Algebra 2.

M14010** **ACADEMIC ALGEBRA 1**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM AN ADVISOR OR COUNSELOR
Algebra 1 is a one-semester, one-credit course designed as a beginning study of Algebra. The course introduces students to variables, algebraic expressions, functions, linear equations and inequalities, linear systems, polynomials, probability, and data analysis while giving students the opportunity to explore and solve real-world application problems.

M22010** **MATH 2 (GRADE 10)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
This course is designed for students who need additional support with the Algebra 1 curriculum. The Math 1, Math 2, and Math 3 courses provide the full Algebra 1 curriculum. Students are scheduled for this course by recommendation from an advisor or counselor.

M24010** **ACADEMIC GEOMETRY**
CREDIT: 1.00 CREDIT
PREREQUISITE: STUDENTS WHO HAVE SUCCESSFULLY COMPLETED ALGEBRA 1
Academic Geometry is a one-semester, one-credit course which focuses on points, lines, planes, and other geometric figures as they relate to our physical world. Students will engage in a study of geometric reasoning, coordinate geometry, parallel and perpendicular lines, triangle congruence, properties of polygons and circles, similarity, right triangle trigonometry, area, and volume and will apply this learning to solve real-world mathematical problems.

M24020** **HONORS GEOMETRY**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" AVERAGE OR BETTER IN ALGEBRA 1 WITH TEACHER RECOMMENDATION
Honors Geometry is a one-semester, one-credit course in which emphasis is placed on problem-solving, understanding, applying, justifying, and developing geometric properties in two and three dimensions. Students will engage in an in-depth study of geometric reasoning, coordinate geometry, parallel and perpendicular lines, triangle congruence, properties of polygons and circles, similarity, right triangle trigonometry, area, and volume and will apply this learning to solve real-world mathematical problems.

M32010** **MATH 3 (GRADE 11)**
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
This course is designed for students who need additional support with the Algebra 1 curriculum. The Math 1, Math 2, and Math 3 courses provide the full Algebra 1 curriculum. Students are scheduled for this course by recommendation from an advisor or counselor.

M33610** **ACADEMIC ALGEBRA 2 (180) (GRADES 10-12)**
CREDIT: 2.00 CREDIT
PREREQUISITE: RECOMMENDATION OF ADVISOR OR COUNSELOR
This course is designed for post-secondary students who need sufficient math to prepare for college admissions tests. Higher level Algebra topics including functions and their representations will be covered.

M34010** **ACADEMIC ALGEBRA 2 (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: STUDENTS WHO HAVE SUCCESSFULLY COMPLETED ALGEBRA 1
This course is designed for college-bound students who need sufficient math to prepare for college admissions tests and meet college entrance requirements to various fields of study. Higher level Algebra topics including functions and their representations will be covered.

M34020** **HONORS ALGEBRA 2 (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" AVERAGE OR BETTER IN ALGEBRA 1 AND HONORS GEOMETRY AND/OR TEACHER RECOMMENDATION
Honors Algebra 2 is a one-semester, one-credit course that introduces students to advanced functions, while emphasizing problem-solving and reasoning. Students will engage in a study of functions, linear equations, systems, matrices, polynomials, rational expressions and equations, quadratics, exponential and logarithmic functions, series and sequences, probability, and statistics and will apply this learning to solve real-world mathematical problems

M42010 **CONSUMER MATHEMATICS (GRADE 12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This course is designed for students who plan to complete their fourth credit in mathematics outside the traditional college preparatory curriculum. Mathematical procedures will be applied to everyday consumer problems. Units will include budgeting, banking, earning and spending money, taxes, and managing household and travel expenses.

M45010** **ACADEMIC TRIGONOMETRY/ALGEBRA 3**
CREDIT: 1.00 CREDIT
PREREQUISITE: AT LEAST A "C" AVERAGE IN ALGEBRA 2 AND GEOMETRY WITH A TEACHER RECOMMENDATION
This course is designed for students who are college bound and/or contemplate math or science-related careers. The depth and difficulty of problems demand that computations be completed with speed and accuracy, which will be a focal point of this course. College-bound students who contemplate math or science-related careers are encouraged to take this course to expand their problem-solving and analyses skill sets.

**NCAA APPROVED COURSE

M46020** **HONORS PRE-CALCULUS/TRIGONOMETRY**
CREDIT: 1.00 CREDIT
PREREQUISITE: AT LEAST A "B" AVERAGE IN HONORS ALGEBRA 2 OR AT LEAST A "B" AVERAGE IN TRIGONOMETRY/ALGEBRA 3 WITH A TEACHER RECOMMENDATION

This course is designed to effectively prepare the college-bound student with the appropriate math skills, manipulative methods, and concept comprehension requisite to successfully study calculus. It is a blending of the major topics from Algebra 3, Trigonometry, and Analytical Geometry. Students needing to study calculus in the pursuit of their careers would benefit from this course. These fields of study include engineering, science, mathematics, business, medicine, finance, economics, architecture, and education.

M50030 **MATHEMATICS DUAL ENROLLMENT**
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVAL

Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

M56020** **HONORS CALCULUS**
CREDIT: 1.00 CREDIT
PREREQUISITE: AT LEAST A "B" AVERAGE GRADE IN HONORS PRE-CALCULUS WITH TEACHER RECOMMENDATION

Honors Calculus is a full credit course offered to those students with high math aptitude and mastery of acquired prerequisite math skills. The curriculum will be similar to an introductory college-level course including functions, graphs, limits, derivatives, integrals, applications, modeling, and use of technology. Students who need to study calculus in college will benefit from this course. These include students majoring in science, business, mathematics, engineering, medical, and computer-related fields.

M56030S** **AP® CALCULUS AB (GRADES 11-12)**
CREDIT: 1.00 CREDIT—SEMESTER
M56030Y** **AP® CALCULUS AB (GRADES 11-12)**
CREDIT: 2.00 CREDIT—YEARLONG
PREREQUISITE: "A" AVERAGE IN HONORS PRE-CALCULUS WITH A TEACHER RECOMMENDATION

A Pre-calculus packet must be completed prior to the first day of class. This packet will be available in the Guidance Office once the course is added to a student's schedule. Calculus AB includes topics equivalent to most college level Calculus 1 and some Calculus II. This course will follow the College Board Advanced Placement® Exam in May. It is offered to those students with exceptional math aptitude and mastery of algebraic, geometric, trigonometric, analytical, and calculator skills. Modern themes of the revised AP® curriculum to be emphasized include multi-representational approaches of functions, graphs, limits, derivatives, integrals, applications, modeling, and use of technology. Test-taking strategies requisite for successful performance on the AP® Exam will be emphasized throughout the course. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

M57010** **PROBABILITY AND STATISTICS (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: AT LEAST A "B" IN ALGEBRA 2 OR HIGHER

This is a course designed to effectively prepare college-bound students with the appropriate statistical tools and theory necessary to collect and analyze data wisely. The students will also be able to use the data to draw the appropriate inferences for populations and regarding hypothesis testing. Students interested in pursuing a career in technology, medicine, engineering, business, economics, nursing, mathematics, psychology, sociology, or education will benefit from this elective.

M57020** **HONORS PROBABILITY AND STATISTICS (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: "A" OR "B" IN HONORS ALGEBRA 2 OR HIGHER MATH WITH A TEACHER RECOMMENDATION

This is a course designed to effectively prepare college-bound students with the appropriate statistical tools and theory necessary to collect and analyze data wisely. The students will also be able to use the data to draw the appropriate inferences for populations and regarding hypothesis testing. Topics are presented at an accelerated pace and in greater depth than the academic course. Students interested in pursuing a career in technology, medicine, engineering, business, economics, nursing, mathematics, psychology, sociology, or education will benefit from this elective.

M57030** **AP® STATISTICS (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: "A" OR "B" IN HONORS ALGEBRA 2 OR HIGHER MATH WITH A TEACHER RECOMMENDATION

AP® Statistics involves the study of four main areas: exploring data, sampling and experimentation, anticipating patterns using probability, and statistical inference. This is **not** Calculus-based statistics. The materials presented will allow the students to not only calculate the data but also interpret and communicate the data effectively. This course, unlike other math courses, requires the students to read the text and answer questions with written explanations on a daily basis. In addition to reading, the students will also learn through a variety of discovery, group and calculator activities that allow the students to develop their own understanding at a higher level of thinking. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

M58030** **AP® CALCULUS BC (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: HONORS OR AP® CALCULUS WITH A TEACHER RECOMMENDATION REQUIRED

Calculus BC includes topics equivalent to most college level Calculus I, II, and some Calculus III. Through the use of the unifying themes of derivatives, integrals, limits, approximation and applications, and modeling, the course becomes a cohesive whole rather than a collection of unrelated topics. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations also are important. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

NOTE:

Students are not able to take two math courses in one school year until they have successfully completed Academic Algebra 2 or Honors Algebra 2.

Science

C10010 SCIENCE
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
Students with academic needs will schedule this elective course. The course focuses on developing science skills and understanding used in real life situations.

C12010 APPLIED EARTH AND SPACE SCIENCE**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION
This course offers students a general survey of Earth Science including the meteorological, geological, and astronomical processes that occur daily. The course involves classroom instruction with supportive laboratory activities. Instruction and assessment will be conducted in a variety of ways to best meet each student's needs. This level of Earth and Space Science meets state standards.

C14010 ACADEMIC EARTH AND SPACE SCIENCE**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
Academic Earth and Space Science meets state standards and prepares students for post-secondary education. This is the level of Earth and Space Science taken by most students at McDowell. The course strives to give students a better understanding of the earth including the meteorological, geological, and astronomical processes that occur daily. To do this, students will be engaged in classroom instruction with supportive laboratory activities, computer research, data interpretation, and mathematical computations.

C14020 HONORS EARTH AND SPACE SCIENCE**
CREDIT: 1.00 CREDIT
PREREQUISITE: A "B" OR BETTER IN ALGEBRA 1.
Honors Earth and Space Science is designed for the student who is seriously considering science, engineering, medicine, etc. as a potential college major. The course strives to give students a better understanding of the earth including the meteorological, geological, and astronomical processes that occur daily. The honors level provides a distinct challenge to those students interested in the sciences. Strong mathematical skills are a definite plus for the student considering Honors Earth and Space Science. Admission to this level is based primarily upon teacher recommendation with the student's motivation, interest in science, previous science grades, and mathematical skills being major factors.

C22010 APPLIED BIOLOGY**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION
Biology is designed to meet the state standards of biological sciences. The emphasis of this course is on the characteristics of life, classification of living things, the chemical and cellular basis of life, genetics, evolution, and ecology. The course includes laboratory experiences and frequent quizzes. Students are expected to keep an organized binder and to be able to work both in groups and independently. Students will take the Keystone Biology Exam upon completion of the course.

C24010 ACADEMIC BIOLOGY**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
Academic Biology meets the state standards for biological sciences and offers a broad survey of biology with emphasis on the characteristics of life, classification of living things, the chemical and cellular basis of life, microscopy, genetics, DNA technology, evolution, and ecology. Students are expected to keep an organized notebook, complete independent reading of the text, apply analytical skills in laboratory investigations, and demonstrate high motivation. Students will take the Keystone Biology Exam upon completion of the course.

C24020 HONORS BIOLOGY**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION AND A MINIMUM OF "B" AVERAGE IN HONORS MATH AND SCIENCE COURSES
Honors Biology is designed for college-bound students who have maintained an "A" or "B" average in previous honors level math and science classes. Students are expected to have a strong interest in science as well as a desire to challenge themselves. The course stresses the depth of subject matter to begin to prepare students for future biology courses while covering the state standards for biological science. Students experience a rigorous study in the areas of biochemistry, cytology, genetics, and evolution, enhanced by in-depth laboratory investigations. Students will take the Keystone Biology Exam upon completion of the course.

C25030 AP® BIOLOGY (GRADES 11-12)**
CREDIT: 2.00 CREDIT
PREREQUISITE: HONORS BIOLOGY (FINAL GRADE OF "B" OR HIGHER) AND HONORS/AP CHEMISTRY (FINAL GRADE OF "B" OR HIGHER) WITH PRE-APPROVAL FROM THEIR CURRENT SCIENCE INSTRUCTOR. RECOMMENDED COMPLETION OR CONCURRENT ENROLLMENT IN A STATISTICS COURSE.
AP® Biology is a rigorous course focusing on enduring, conceptual understandings and the content that supports them. Students will spend a large amount of time on inquiry-based learning of essential concepts, develop reasoning skills necessary to engage in the "6 Science Practices", and is laboratory intensive. Students who take AP® Biology will also develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses. The AP® Biology course is equivalent to a two-semester college introductory biology course covering four "Big Ideas": Evolution, Cellular Processes, Genetics & Information Transfer, and Biological Interactions. This AP® course will follow the College Board Advanced Placement® curriculum and will facilitate students preparing to take the Advanced Placement® Exam. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

C27010 ISSUES IN EARTH AND SPACE SCIENCE (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: STUDENTS MUST HAVE SUCCESSFULLY COMPLETED A PREVIOUS EARTH AND SPACE SCIENCE COURSE
Issues in Earth and Space Science emphasizes the underlying natural processes that give rise to natural hazards such as earthquakes, volcanic eruptions, tsunamis, floods, and more. Additionally, the course evaluates how society confronts the dangers posed by these natural hazards.

C28010** **CSI FORENSIC SCIENCE (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **AN "A" OR "B" IN ACADEMIC/HONORS BIOLOGY**

The focus of this laboratory intensive, upper-level course will be to introduce students to some of the specialized fields of forensic science, the principles of science and technology upon which they are based, and the application of these principles to various analyses of crime scene evidence. Students will examine forensic sciences, criminal cases, and the law from an interdisciplinary approach. Students will be exposed to tools and techniques employed by forensic science, expert witnesses, and the application of forensic science to the law. Example topics include History of Forensic Science, types of evidence; crime scene investigation, latent fingerprints; trace evidence; hair and fiber analysis; soil and glass analysis; blood and serology; DNA analysis; drugs and toxicology; human remains; firearms, tool marks, and impressions; forensic entomology and decomposition. Other possible topics include fraudulent document identification, as well as fire and explosives examination. The laboratory experience will involve analyses based on methods such as observation; thin-layer chromatography, microscopic examination and evaluation; forensic photography; latent fingerprint lifting and analysis; density and refractive index of glass; luminal detection of blood, blood spatter analysis, ABO and Rh blood typing, DNA extraction and gel electrophoresis; measurement and comparison. Students will be required to complete "Crime Reports" based on evidence they have collected.

C31010** **SCIENCE IN THE COMMUNITY**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **IEP**

Science in the Community is the hands-on practical study of scientific principles in the real world. Students will study concepts and principles in the area of general science by conducting experiments and laboratory activities.

C32010** **APPLIED CHEMISTRY**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **TEACHER RECOMMENDATION**

In this course each unit presents a science-technology-society problem or issue then develops the chemistry concepts that help to resolve the issue. The course focuses on 4 units that explore fundamental chemistry concepts: Water: Exploring Solutions, Materials: Structure and Uses, Petroleum: Breaking and Making bonds, and Air: Chemistry and the Atmosphere.

C33010** **MECHANICAL SCIENCE (GRADES 11-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**

This course emphasizes hands-on laboratory analysis, with a focus on problem-solving abilities and communication. Students will collaborate to investigate simulations of experiences in the science industry. The physical science course will examine topics such as coding, electroplating, innovation through work in the fields of physics, chemistry, manufacturing, and engineering. Students will be given real-world scenarios that will duplicate situations experienced in the industry. The students will then be required to work together with groups, assuming varied roles in the group to interpret data, evaluate situations, create solutions and propose changes based on the simulated scenarios.

C33510** **CONSERVATION SCIENCE (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**

Students will develop skills, build an understanding of science and learn scientific techniques taught through the lens of conservation with an emphasis on hands-on, real-world activities. The curriculum focuses on wildlife conservation and the outdoor recreational activities that financially support the North American model of Wildlife Conservation, such as hunting, fishing, trapping, conservation work, shooting sports, and boating.

C34010** **ACADEMIC CHEMISTRY**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **SUCCESS IN THIS COURSE REQUIRES A SOLID BACKGROUND IN MATHEMATICS AND A MINIMUM GRADE OF "C" IN ALGEBRA 1. ALL STUDENTS MUST BE ENROLLED IN ALGEBRA 2, OR ALGEBRA 3/ TRIG OR PRE-CALCULUS.**

This chemistry course is the study of the composition, structure, and properties of matter and the changes it undergoes and it prepares students for post-secondary education. This course is organized around the central theme that the properties of matter are a consequence of its structure and follows a logical, sequential development of major chemical principles.

C34020** **HONORS CHEMISTRY**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" OR HIGHER IN ALGEBRA 1, A "B" OR BETTER IN HONORS BIOLOGY OR HONORS EARTH SCIENCE, AND ALL STUDENTS MUST BE ENROLLED IN ALGEBRA 2, OR ALGEBRA 3/TRIG, OR PRE-CALCULUS**

This advanced course will present essential principles and fundamental concepts of chemistry and it prepares students for post-secondary experiences. More topics in chemistry will be covered than in academic and in more depth. A higher level of quantitative analysis of data and information will be expected than in Academic Chemistry.

C34030** **AP® CHEMISTRY (GRADES 10-11)**
CREDIT: **2.00 CREDIT**
PREREQUISITE: **AN "A" OR "B" IN HONORS ALGEBRA 2 AND ALL STUDENTS MUST BE ENROLLED IN ALGEBRA 3/TRIG OR PRE-CALCULUS OR CALCULUS OR AP® CALCULUS**
OTHER INFO: **MEETS DAILY FOR A FULL YEAR**

This is a college course in chemistry. Essential principles and fundamental concepts of chemistry are presented. Enriched topics and concepts are also studied when appropriate. Laboratory experiences are emphasized and a mathematical interpretation of laboratory data is often required. This course will follow the College Board Advanced Placement® curriculum and will prepare you to take the Advanced Placement® Exam in May. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

C34220** **HONORS CHEMISTRY 2 (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**

Science Honors Chemistry 2 would cover chemical content related to thermochemistry, kinetics, equilibrium, and aqueous equilibrium (including acid/base chemistry).

C36020** **HONORS ANATOMY & PHYSIOLOGY (GRADES 10-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **ACADEMIC BIOLOGY (FINAL GRADE OF "A") OR HONORS/AP BIOLOGY (FINAL GRADE OF "B" OR HIGHER)**
OTHER INFO: **POSSIBLY 10TH GRADE WITH PREREQUISITES TAKEN EARLY**

Human Anatomy & Physiology is an elective course offered to students who are interested in the health and science-related fields after graduation. These include such areas as a medical doctor, physician assistant, nursing, physical therapy, occupational therapy, dentistry, x-ray technician, exercise science, mortuary, and many others. Students will learn about evidence-based medicine and the human body (integumentary, skeletal, muscular, digestive, respiratory, cardiovascular, urinary, and reproductive systems) in depth. There is extensive lab time spent with small mammal (fetal pig/cat/mink) dissection, organ (heart, eye, kidney, etc.) dissections, models, charts, and personal physiology. Students are required to complete all dissections and coursework. This class is taught at the level of a first-year college Anatomy & Physiology course.

C44030** **AP® PHYSICS 1 (GRADES 11-12)**
CREDIT: **2.00 CREDIT**
PREREQUISITE: **A "B" OR BETTER IN HONORS OR AP® SCIENCE AND MATHEMATICS COURSE: TRIGONOMETRY, PRE-CALCULUS, CALCULUS**
OTHER INFO: **MEETS DAILY FOR A FULL YEAR**
This is a rigorous course in College Physics for students with superior ability and high achievement in mathematics and science. It is taught from a college text. The course meets five blocks per week. Prospective AP® Physics students should be able to use the quadratic equation, basic trigonometric functions, and systems of algebraic equations to solve a variety of word problems. This AP® course will follow the College Board Advanced Placement® curriculum and will facilitate students preparing to take the Advanced Placement® Exam. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

C37030** **AP® ENVIRONMENTAL SCIENCE (GRADES 10-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **RECOMMENDATION FROM HONORS BIOLOGY TEACHER**
The goal of the AP® Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

C43010** **CONCEPTUAL PHYSICS**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **PASSING GRADES IN ALGEBRA 1 AND CHEMISTRY AND CURRENTLY ENROLLED IN ALGEBRA 2**
This course will cover topics in physics with less emphasis on mathematics than other physics courses. This course is hands-on with an emphasis on discovery and understanding. Students will be required to use basic algebra to solve problems.

C44010** **ACADEMIC PHYSICS**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" AVERAGE IN HONORS OR ACADEMIC SCIENCE AND MATH COURSES, INCLUDING ALGEBRA 1 AND 2, AND CURRENTLY ENROLLED IN ACADEMIC ALGEBRA 3/ TRIG, OR PRE-CALCULUS OR CALCULUS**
This course prepares students for post-secondary education and requires strong math skills. This course will emphasize the mathematical concepts of physics for students planning on going on to college. Students will be required to use basic algebra such as volume, area, and density formulas, and the Pythagorean Theorem. Students will also be required to use basic trigonometry (sine, cosine, and tangent functions) to solve a variety of word problems.

C44020** **HONORS PHYSICS**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" OR BETTER IN HONORS MATHEMATICS AND SCIENCE COURSES AND CURRENTLY ENROLLED IN TRIGONOMETRY OR PRE-CALCULUS (OR HIGHER LEVEL OF MATH)**
This course prepares students for post-secondary education and requires superior ability and achievement in mathematics and science. Prospective Honors Physics students should be able to use a variety of formulas including the quadratic equation, basic trigonometry functions, and systems of algebraic equations to solve various word problems.

C37010** **ENVIRONMENTAL ISSUES (GRADES 10-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **STUDENTS MUST HAVE SUCCESSFULLY COMPLETED A PREVIOUS EARTH AND SPACE SCIENCE COURSE**
This course is designed for any student interested in the environment. The main topics include over-population, natural resource use, climate change, and watershed assessment. Special attention is given to the evidence of human impact on the environment and analyzing data to propose solutions to current environmental problems.

C45020** **HONORS ORGANIC CHEMISTRY (GRADES 11-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **A "B" OR BETTER IN HONORS OR AP® CHEMISTRY**
This course is designed for students who have had chemistry. It will provide a foundation for students who plan on entering the fields of nursing, medicine, chemistry, environmental or industrial chemistry, or science education. This course focuses on organic functional groups and on laboratory experiments. Experiments will include comparisons of organic groups, extractions, synthesis of esters and aspirin.

C47010 **GENERAL SCIENCE**
CREDIT: **.50 CREDIT**
PREREQUISITE: **N/A**
In this course, students will examine concepts in physical science from an experimental and discussion based perspective. Emphasis will be placed on problem-solving, collection and interpretation of data and classroom participation. Topics covered include but are not limited to energy, motion, buoyancy, air resistance, chemical reactions, forensic science, and other current scientific issues.

C50030 **SCIENCE DUAL ENROLLMENT**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED**
Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

C54030** **AP® PHYSICS C—MECHANICS (GRADES 11-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **A "B" OR BETTER IN HONORS OR AP® CHEMISTRY AND A "B" OR BETTER IN TRIG/PRE-CALCULUS AND CALCULUS**
This is a rigorous course in College Physics for students with superior ability and high achievement in mathematics and science. It is taught from a college text. Prospective AP® Physics C students should be able to use the quadratic equation, trigonometry, systems of algebraic equations, and basic calculus functions to solve a variety of word problems related to Kinematics. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

Social Studies

S10010 SOCIAL STUDIES
CREDIT: 1.00 CREDIT
PREREQUISITE: IEP
Students with academic needs will schedule this elective course. The course focuses on developing social studies skills and understanding used in real life situations.

S14110 ACADEMIC WORLD GEOGRAPHY**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
The purpose of 9th grade World Geography is to develop an understanding of geographical elements (physical, economic, political, human, and cultural) that contribute to the world we live in. Students will demonstrate knowledge of how these features make world regions distinct but will also determine how we contribute to a global society. Students will exhibit their understanding by successfully mastering a variety of geographic skills.

S14120 HONORS WORLD GEOGRAPHY**
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA IS BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION
This course is an honors level course that will develop an understanding of geographical elements (physical, economic, political, human, and cultural) that contribute to the world we live in. Students will demonstrate knowledge of how these features make world regions distinct but will also determine how we contribute to a global society. Students will exhibit their understanding by successfully mastering a variety of geographic skills. This course is designed for college-bound students with higher level thinking skills. Students will be required to engage in oral reporting, in-depth reading, library research, and major projects.

S18010 POSITIVE PSYCHOLOGY (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Positive Psychology uses scientific methods to study and develop ways for people and communities to thrive. This course will look at the history and development of the field of positive psychology as well as introduce students to the important psychologists in this field. Students taking this course will have the ability to practice researched based methods to improve their mental well-being and learn about the science behind developing habits and engaging in activities and thought processes that can lead to a more meaningful life. Students taking this course must be willing to try to implement various methodologies (gratitude journal, engaging in flow practice) as well as taking online happiness inventories.

S23510 CURRENT ISSUES (GRADES 9-10)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course will introduce students to issues and events that impact our lives in a global and multicultural society. It will focus on the big ideas of how conflict and change affect society at a local, regional, national, and global level. Students will research current economic, political, and social problems and will explore how conflicts affect groups, as well as individuals. Students will analyze, evaluate, and formulate informed positions on topics dealing with business and economics, environmentalism, teenage issues, health and medicine, law and politics, science and technology, ethics, society and culture, and war and diplomacy. Students will participate in tasks such as debates, discussions, and presentations.

S23710 INTRODUCTION TO CRIMINAL JUSTICE (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
The purpose of this course is to provide an overview of three major areas of the criminal justice system: Law Enforcement, Courts, and Corrections. Students will explore the process of criminal investigations, functions of local, state, and federal courts, and individual rights. The course will require students to apply content using critical thinking and logical reasoning.

S24110 ACADEMIC WORLD HISTORY 10**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This is an academic level course that covers U.S. History and World History through the 19th and early 20th centuries. The course will cover political, economic, geographic, cultural, and legal developments of the time periods. Students will engage in a variety of learning activities including class discussion, oral presentations, library research, and instruction utilizing computer/internet resources. This course will prepare students for post-secondary experiences.

S24120 HONORS WORLD HISTORY 10**
CREDIT: 1.00 CREDIT
PREREQUISITE: PLACEMENT IS BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION
This is an honors level course that covers U.S. History and World History through the 19th and early 20th centuries. The course will cover political, economic, geographic, cultural, and legal developments of the time periods. This course is designed for college -bound students with higher level thinking skills. Students will be required to engage in oral reporting, in-depth reading, library research, and major projects.

S24130 AP® WORLD HISTORY: MODERN (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM HONORS WORLD GEOGRAPHY TEACHER
In AP® World History: Modern, students investigate significant events, individuals, developments, and processes from 1200 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning and comparison, causation, and continuity and change over time. The course provides six themes that students explore throughout the course in order to make connections among historical developments in different times and places: humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S25030 AP® HUMAN GEOGRAPHY (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM HONORS WORLD GEOGRAPHY TEACHER
The AP® Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine the socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. By the end of the course, students should be more geoliterate, more engaged in contemporary global issues, and more multicultural in their viewpoints. They should have developed skills in approaching problems geographically, using maps and geospatial technologies, thinking critically about texts and graphic images, interpreting cultural landscapes, and applying geographic concepts such as scale, region, diffusion, interdependence, and spatial interaction, among others. Students should see geography as a discipline relevant to the world in which they live; as a source of ideas for identifying, clarifying, and solving problems at various scales; and as a key component of building global citizenship and environmental stewardship. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S28110** **JUSTICE EDUCATION (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course allows students the opportunity to explore topics such as race relations, terrorism roots, prejudice and bias, genocide, and gender bias. We will explore the dangers presented by the presence of prejudice and hate in the world today and how to become active in preventing such actions. We will also investigate incidents of bias which include any acts against people or property that are motivated by prejudice based on race, religion, ethnicity, sexual orientation, gender social groups, ability or appearance. This course strives to cultivate an appreciation of the positive aspects of diversity in our society today. This course requires students to complete a final project as stipulated in the course syllabus.

S29010** **CONSTITUTIONAL LAW (GRADES 10-12)**
CREDIT: .50 CREDIT
PREREQUISITE: 10TH GRADE SOCIAL STUDIES TEACHER RECOMMENDATION
This course is an in-depth study for juniors and seniors to investigate the U.S. Constitution and how its provisions have been interpreted by the U.S. Supreme Court. The course aims to provide students with the opportunity to explore the U.S. Constitution from a variety of different perspectives. The course is divided into two sections. In the first section, students explore how the three branches of the federal government share power as well as how the federal government shares power with the states. In the second section, students focus on the origin and continual interpretation of the civil rights and liberties guaranteed in the U.S. Constitution.

S33010** **CONTEMPORARY ISSUES (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Contemporary Issues will provide students with the opportunity to explore issues and events that impact our lives on an international, national, state and local scale. Through the course, students will also address pressing social issues in their world. Some of those issues will be selected by the teacher and others will be selected by the students. Students will investigate their issues and summarize and present their findings to the class, as well as lead a discussion on their chosen topics. As students address the various topics, they will develop a sense of where things are in the world, nation, state, and region. Students will develop a habit of checking the news at all different levels by accessing a variety of print and online sources. This course provides students with the foundational understanding, knowledge, and skills necessary to develop informed opinions about the global, national, state, and local issues.

S34110** **ACADEMIC U.S. HISTORY 11**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This is an academic course that will provide a survey of the social, political, economic, cultural, and intellectual history of the United States from the Reconstruction era to the present. United States History examines industrialization, immigration, world wars, the Great Depression, Cold War, and post-Cold War eras. Themes that may be addressed include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy.

S34120** **HONORS U.S. HISTORY 11**
CREDIT: 1.00 CREDIT
PREREQUISITE: PLACEMENT IS BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION
This is an honors course that will provide a survey of the social, political, economic, cultural, and intellectual history of the United States from the Reconstruction era to the present. United States History examines industrialization, immigration, world wars, the Great Depression, Cold War, and post-Cold War eras. The content and pace of themes are generally accelerated, and students will be required to draw upon multiple analysis measures in their daily work. Themes that may be addressed include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy. Required readings are detailed and require advanced critical thinking and analysis.

S34130** **AP® U.S. HISTORY (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM HONORS SOCIAL STUDIES TEACHER
In AP® U.S. History, students investigate significant events, individuals, developments, and processes in nine historical periods from approximately 1491 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical comparisons; and utilizing reasoning about contextualization, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: 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. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S44010** **ACADEMIC U.S. GOVERNMENT 12**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course presents the structure, function, and application of government and political systems at local, state, and federal levels. This course will prepare students for post-secondary experiences. This class requires students to complete an out-of-class project as stipulated in the course syllabus.

S44020** **HONORS U.S. GOVERNMENT 12**
CREDIT: .50 CREDIT
PREREQUISITE: PLACEMENT IS BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION
Honors U.S. Government presents the structure, function, and application of the United States Government and political system with the main focus on the national level with some connections made to the state and local governments. Current events are used as a tool to help students to make connections to concepts and theories taught in the class to the real world situations of today. It provides honor students a faster paced and more challenging government course that expects them to grasp key concepts and information of the course through specified readings and class activities. This class requires students to complete an out-of-class project as stipulated in the course syllabus.

S45530** **AP® U.S. GOVERNMENT AND POLITICS (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM PREVIOUS SOCIAL STUDIES TEACHER

This introductory college course will follow the College Board Advanced Placement® curriculum and prepare students to take the Advanced Placement® Exam in May. It will focus on the constitutional underpinnings of democracy, political beliefs and behaviors, political parties and interest groups, and mechanisms that facilitate the communication of interests and preferences of like-minded citizens. Also, Congress, the presidency, the bureaucracy, federal courts, institutions and policy processes, civil liberties, and civil rights will be covered. This course requires students to complete an out-of-class project as stipulated in the course syllabus. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S46010** **ACADEMIC ECONOMICS 12**
CREDIT: .50 CREDIT
PREREQUISITE: N/A

This is an academic economics course that covers basic economic theory, comparative economics, consumer economics, and budgeting. This course will prepare students for post-secondary experiences.

S46020** **HONORS ECONOMICS 12**
CREDIT: .50 CREDIT
PREREQUISITE: PLACEMENT IS BASED ON PREVIOUS ACHIEVEMENT AND TEACHER RECOMMENDATION

This is an honors economics course that covers economic theory, comparative economics, consumer economics, and budgeting. It will provide honors students with a more challenging economics course through reading, writing, and numerous class activities.

S46030** **AP® MACROECONOMICS (GRADE 12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION

AP® Macroeconomics provides students with a thorough understanding of the principles of economics. The course looks at the United States economy as a whole, while also investigating how the world's different economies affect each other. This course is designed to help the beginning economics student comprehend the principles essential for understanding the basic economizing problem, with a particular focus on a national income and price-level determination, and the study of other major macroeconomic policies and sectors. Students will be able to understand and apply the economic perspective, to reason accurately and objectively about economic matters, and develop a lasting and relevant interest in economics and the economy. Macroeconomics is a mathematical and technical look at the economy and the course will require an extensive time commitment outside of the classroom dedicated to reading, research, and problem-solving. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S48010** **ACADEMIC PSYCHOLOGY (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A

This elective course is designed for juniors and seniors who wish to explore the fascinating field of psychology. The focus of the academic course will be on important psychological concepts and principles as well as their practical applications in life. This course is ideal for those students who want a general introduction to psychology. Topics to be covered include human growth and development, learning, motivation, personality, parapsychology, and psychological disorders.

S48020** **HONORS PSYCHOLOGY (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: STRONG PERFORMANCE IN ENGLISH AND SOCIAL STUDIES RECOMMENDED

This level of psychology is geared for juniors and seniors who wish to undertake a more challenging and in-depth investigation into the field. A college level text will be utilized to cover the topics of methods, approaches, and history; biological basis of behavior; sensation and perception; states of consciousness; learning; cognition, motivation, and emotion; developmental psychology; personality; testing and individual differences; abnormal psychology; treatment of psychological disorders; and social psychology.

S48030** **AP® PSYCHOLOGY (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM HONORS U.S. HISTORY 11, HONORS ENGLISH, OR HONORS SCIENCE TEACHER

This is the most advanced level of psychology designed for grades 10, 11, and 12 who are considering a major/career in psychology and will prepare to take the Advanced Placement® Exam, as well as enjoy the challenge of a college level course. The course follows the College Board Advanced Placement® Curriculum. It is more intense than the honors course and out-of-class expectations are greater. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

S50030 **SOCIAL STUDIES DUAL ENROLLMENT**
CREDIT: 1.00 CREDIT
PREREQUISITE: CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED

Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

S55530** **AP® COMPARATIVE GOVERNMENT AND POLITICS (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION

The AP® Comparative Government and Politics course enables students to learn about diverse political institutions and processes and teaches the tools that citizens need to understand global events. Students are encouraged to think about international politics in a way that enables comparison and generalization and to become more analytical in their understanding of political events. The course content includes a study of six countries—Britain, China, Iran, Mexico, Nigeria, and Russia. Students will utilize the United States as a measure of known concepts before engaging in how terms and concepts apply to the six nations. This AP® course focuses, not only on government systems, but also the economies, environments, institutions, and policies of these nations. Although this is a senior course, juniors will be considered for this course with a teacher recommendation. This AP® course fulfills the requirement for government courses at McDowell. **Some supportive resources may be required readings over the summer months preceding the AP® Comparative Government and Politics course. Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

Technology Education

T11110 **MATERIALS MANUFACTURING: WOOD TECHNOLOGY 1 (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
This course will introduce students to basic technology as it relates to manufacturing processes used in the woodworking industry. Students will develop critical, creative, and problem-solving skills as they create solutions to designs related to the woodworking industry. This course provides meaningful contexts for learning scientific, mathematical, and technological concepts. Additionally, students will be introduced to design software programs currently used in the workplace.

T12010 **FOUNDATIONS OF TECHNOLOGY DESIGN AND ENGINEERING (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
OTHER INFO: STUDENTS PURSUING ENGINEERING AND INDUSTRIAL TECHNOLOGY PATHWAY WILL BENEFIT FROM THIS COURSE (EIT)
Students will be introduced to the Engineering Design Process to develop critical, creative thinking, and problem-solving skills. This course provides a meaningful context for learning scientific, mathematical, and technological concepts. Students will be introduced to Engineering Design Software Programs.

T13510 **INTRO TO ROBOTICS (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: N/A
Intro to Robotics is a full credit high-level course that is appropriate for students who are interested in the design, engineering, and programming of robots or other technical careers. The Intro to Robotics course is designed to explore the past, current, and future use of automation technology in the industry and everyday use. The students will receive a comprehensive overview of robotic systems, the subsystems that comprise them, and how all of the parts work together to form one robot. Students will research, design, and build functioning robots to complete various tasks through remote control and basic programming. Careers in robotics, programming, and engineering will be discussed also. Intro to Robotics focuses heavily on prior knowledge from STEM-related courses and further develops understanding and supports further exploration of STEM in other subject areas.

T15010 **MATERIALS MANUFACTURING: METAL TECHNOLOGY 1 (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This beginning metals course introduces students to the basic fundamental metal working process. Areas of content include basic CAD, safety, measuring/layout, sheet metal, machining, welding, foundry, and forging. Students will be working on the required projects. This course is recommended for the pre-engineering student.

T21110 **MATERIALS MANUFACTURING: WOOD TECHNOLOGY 2 (GRADES 9-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: MATERIALS MANUFACTURING: WOOD TECHNOLOGY 1
This course is a continuation of the Materials Manufacturing: Wood Technology 1 course. This course places more emphasis on the engineering and design process. Students will continue to develop critical, creative, and problem-solving skills as they create solutions to designs related to the woodworking industry. This course provides meaningful contexts for learning scientific, mathematical, and technological concepts. Additionally, students will utilize design software programs currently used in the workplace.

T21510 **HOME MAINTENANCE (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: RECOMMENDATION FROM METAL 1 OR WOOD 1 TEACHER
This course provides students with an opportunity to explore the many different areas in construction that relate to home maintenance and repair. Students will develop advanced problem-solving skills as they relate to home repair and essential life skills that will help make them self-reliant in maintaining or updating a residential structure along with basic vehicle maintenance. Examples of projects students will work on are electrical, plumbing, roofing, drywall and including vehicle maintenance projects.

T22110 **ARCHITECTURAL DESIGN (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: FOUNDATIONS OF TECHNOLOGY DESIGN AND ENGINEERING
This course follows "Foundations of Technology: Design and Engineering". Students will utilize the Engineering Design Process and continue to develop critical, creative, and problem-solving skills as they create solutions to engineering design problems. This course provides meaningful contexts for learning scientific, mathematical, and technological concepts. Additionally, students will utilize design and manufacturing software programs currently used in the workplace.

T23510 **ROBOTICS 2 (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: RECOMMENDATION FROM ROBOTICS 1 TEACHER
This course will build upon the foundation knowledge built in Robotics 1. The course will follow the FIRST (For the Inspiration and Recognition of Science and Technology) Robotics curriculum. The students will develop both a robot to meet current year game guidelines and the development of team components such as promotion, travel, fundraising, programming, graphic design, team strategy, and community outreach. This course will provide students with specialized task teams designed to operate in a "business" style setting.

T25010 **MATERIALS MANUFACTURING: METAL TECHNOLOGY 2 (GRADES 9-12)**
CREDIT: .50 CREDIT
PREREQUISITE: MATERIALS MANUFACTURING: METAL TECHNOLOGY 1
This course is designed to give the students an in-depth study of machine metalworking. This course will continue to explore machine metalworking with an emphasis on tolerances and specifications as prescribed by working drawings selected by the instructor. Each student will also be introduced to Mast CAD/CAM and CNC machine prototyping.

T31110 **MATERIALS MANUFACTURING: WOOD TECHNOLOGY 3 (GRADES 10-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: MATERIALS MANUFACTURING: WOOD TECHNOLOGY 2
This course is a continuation of the Materials Manufacturing: Wood Technology 2 course. This course places continued emphasis on the engineering and design process. Students will continue to develop critical, creative, and problem-solving skills as they create solutions to designs related to the woodworking industry. This course provides meaningful contexts for learning scientific, mathematical, and technological concepts. Additionally, students will utilize CAD/CAM software programs and advanced manufacturing systems currently used in the workplace.

T32110 **ADVANCED COMPUTER DESIGN AND MANUFACTURING (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: ARCHITECTURAL DESIGN
This course follows Architectural Design. This course will allow students to focus their study in either the architectural or mechanical design disciplines. The Engineering Design Process will continue to be used to develop critical, creative, and problem-solving skills as they create solutions to engineering design problems. This course incorporates higher level math, science, and technological concepts.

T36010 **GRAPHICS TECHNOLOGY 1 (GRADES 11-12)**
T46010 **GRAPHICS TECHNOLOGY 2 (GRADES 11-12)**
CREDIT: .50 CREDIT
PREREQUISITE: N/A
To keep pace with technology, a computer-aided design/drafting and graphics course will be offered as a new approach to creative art and geometric design. In this course, students will develop critical thinking and problem-solving skills. This course will integrate the technological and problem-solving methods with the knowledge of math, communications, and their discipline. It will provide students with an opportunity to research, design, develop, build, and evaluate solutions to real-life problems. This information will then be applied in the design process as students work individually and in groups on a number of design activities.

T41110 **MATERIALS MANUFACTURING: WOOD TECHNOLOGY 4 (GRADES 11-12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: MATERIALS MANUFACTURING: WOOD TECHNOLOGY 3
This course is a continuation of the Materials Manufacturing: Wood Technology 3 course. This course places a strong emphasis on the engineering, design, and manufacturing process. Students will continue to develop critical, creative, and problem-solving skills as they create solutions to designs related to the woodworking industry. This course provides a setting for students to independently apply scientific, mathematical, and technological concepts. Additionally, students will utilize CAD/CAM software programs and advanced manufacturing systems currently used in the workplace.

T47510 **INTRODUCTION TO APPLIED ENGINEERING (GRADE 12 ONLY)**
CREDIT: 1.00 CREDIT
PREREQUISITE: PHYSICS AND ALGEBRA 2 (MAY BE TAKEN CONCURRENTLY WITH THE COURSE)
OTHER INFO: STUDENTS PURSUING ENGINEERING AND INDUSTRIAL TECHNOLOGY PATHWAY WILL BENEFIT FROM THIS COURSE (EIT)
Students interested in engineering as a career will explore hands-on projects. Students must be able to use mathematical and physical science skills to solve engineering problems and apply this knowledge to construct models/prototypes. Emphasis will be placed on developing skills needed by first-year college engineering students.

T41010 **CNC MANUFACTURING (GRADE 12)**
CREDIT: 1.00 CREDIT
PREREQUISITE: TEACHER RECOMMENDATION, WOOD 1 AND METAL 1
This course is for the student who would like to advance their knowledge, skills, and capabilities in the use of Master CAD/CAM and CNC woodworking machinery. Topics include safety, speeds, feed, tooling, setups, and programming. The student project will be computer- based design, layout, and machining techniques as used in the industry.

Visual Arts Department

A10110 ART SURVEY (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Art Survey is an introductory course providing an opportunity for beginning art students interested in gaining experiences in a variety of media. Students will examine the fundamentals of both two and three-dimensional design within historical and multi-cultural contexts.

A13010 CERAMICS 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course deals with ceramic construction and design techniques and may include coil binding, sculpture, pinch method, hard slab, soft slab, tile making, throwing on the potter's wheel, and surface decoration of ceramics. A current and historical perspective of ceramic objects will be explored.

A14010 DRAWING 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Drawing 1 introduces students to the fundamentals of drawing. The course explores elements and principles of design through observational, abstract, and nonrepresentational drawing. Emphasis will be on technique, perspective, composition, building form, value, and light. Students may use tools such as pencils, Conte crayons, charcoal, pastels, and ink to explore such themes as still life, portraiture, and figure drawing.

A15010 DIGITAL TECHNOLOGY IN ART (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Digital Art is an introductory course providing an opportunity for students interested in gaining experience in digital media. Students will learn how to use appropriate software to create a variety of artworks. Additionally, students will compose artwork that employs multiple disciplines, applications, and materials. Students will be required to utilize basic art skills, knowledge, and creativity to be successful.

A16010 INTERIOR DESIGN 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This course is offered to students who have an interest in interior design, home furnishing, and housing design. The focus is on the use of the art elements and principles of design through various creative, hands-on projects involving interior space and home furnishing/ accessories. Course may include color schemes, floor plans, furniture/ accessory product design, housing careers, elevations, blueprints, housing styles and history, style boards, interior design treatments, and field trips.

A17010 PAINTING 1 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Painting 1 covers the fundamentals of the element of color, color theory and mixing, composition, and form in space. Students will develop skills in watercolor, tempera, acrylic, and other painting media. Emphasis will be placed on the development of technical abilities, observation skills, and acquisition of knowledge within the discipline of painting set against the cultural fabric of art history.

A18010 SCULPTURE (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Sculpture will provide students with the opportunity to explore the elements and principles of three-dimensional design. Sculpting processes such as modeling, carving, and assembly may be employed to create original forms. A wide variety of media such as paper, cardboard, wood, metal, brick, plastics, clay, and found objects will provide the media from which to make sculpture. Historical, contemporary, and cultural sculpture forms will be examined to assist students in image and design options.

A21310 GRAPHIC ARTS (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Graphic Arts is a course providing an opportunity for students interested in gaining experience using digital media in the content area of graphic arts. Students will use computers as a base to compose graphic artwork that employs multiple disciplines, applications, and materials. Students will work with product design, advertising concepts, marking designs, etc. Students will be required to utilize basic art skills, knowledge, and creativity to be successful.

A21610 DIGITAL PHOTOGRAPHY (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Digital Photography is a course providing an opportunity for students interested in gaining experience using digital cameras and software to create a digital product. Projects will include knowledge of camera and software, types of photography, and applications and techniques employed within the process itself. Students will be required to utilize basic art skills, knowledge, and creativity to be successful.

A21810 ANIMATION (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
Animation provides an opportunity for students interested in gaining experience in various aspects of creating art through the use of animation. Students will learn how to use appropriate software to create a variety of animation projects. Projects will include different types of animation, applications, and techniques employed within the process itself based on the principles of animation. Students will be required to utilize basic art skills, knowledge, and creativity to be successful.

A23010 CERAMICS 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN CERAMICS 1
Ceramics 2 is designed to allow students to expand their understanding of the basic principles of ceramic practice. Construction and design techniques may include coil binding, sculpture, pinch method, hard slab and soft slab, tile making, and throwing on the potter's wheel. Students will continue to build on their knowledge of glaze techniques.

A23510 MIXED MEDIA (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
This intermediate-level class builds on basic art skills, utilizing drawing and painting media, fibers, printmaking, sculpture, assemblage, photography and graphic arts to explore how combining those various media and techniques allows the student to create artwork with a personal thematic approach. Contemporary mixed media techniques and concepts, with emphasis on understanding the fundamentals of artistic expression, are a means for each student to experiment, discover, and develop personal imagery. Student s will also research how artists create a brand using personal imagery. The various media are presented as a means to improve technical and perceptual art abilities and to demonstrate their proficiency with each media on a technical as well as conceptual level.

A24010 DRAWING 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN DRAWING 1
Drawing 2 expands on fundamentals learned in Drawing 1. The course employs the elements and principles of design with exploratory media in order to develop techniques. Students will practice observational skills and abstraction process and make informed design-based decisions for nonrepresentational pieces. Media may include pen and ink, markers, Conte crayons, charcoal, and pastels. The importance of art history in drawing will also be explored.

A27010 PAINTING 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN PAINTING 1
Painting 2 further develops the fundamentals of painting. Emphasis will include the concepts of space, light and shade, and color and composition through the student's direct observation of subject matter and non-observational images. The development of the technical facility and the forging of a personal artistic style is the ultimate goal of this course. Sketchbooks will be required to record ideas for painting. The importance of art history in painting will also be explored.

A33010 CERAMICS 3 (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN CERAMICS 2
Ceramics 3 will focus on the mastery of individual aesthetic development. Students may expand on techniques such as pinch, coil, hard slab and soft slab, methods of hand building, along with some skill in throwing on the potter's wheel, as well as explore the use of them in combination. Successful completion of this course, along with an additional art course, fulfills the prerequisite for AP® art courses.

A34010 DRAWING 3 (GRADES 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN DRAWING 2
Drawing 3 will focus on the mastery of individual aesthetic development. Students will expand on thematic foci such as still life, portraiture, cartooning, figure, landscape, fantasy, or experimental subject matter. Drawing media may include a variety of tools such as charcoal and pastel, ink and Conte crayon. Successful completion of this course, along with an additional art course, fulfills the prerequisite for AP® art courses.

A36010 INTERIOR DESIGN 2 (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN INTERIOR DESIGN 1
This course further develops advanced skills in the fields of Interior Design, Decorations, and Living Environments. Students will build upon knowledge gained in areas such as the elements and principles of design, basic color theory, choosing backgrounds, and space planning to further develop their artistic and creative skills in the design and maintenance of living environments. Students will explore the various components of an Interior Design career and practical skills for living environments, such as interior construction, furniture styles and selection of furniture, remodeling and renovating, storage design, home maintenance, budgeting, and the relatively new field of Redesign. Sketchbooks will be required for this course.

A44030 AP® STUDIO ART: DRAWING (GRADES 10-12)
CREDIT: 1.00 CREDIT
PREREQUISITE: SUCCESSFUL PERFORMANCE IN DRAWING 3
AP® Drawing Studio is a semester-long college-level course that focuses on the techniques, skills, and media surrounding the study of drawing. A portfolio is assembled through the course of the students' best work that is then submitted to the College Board in lieu of taking an exam in the spring. Technical skills will be sharpened and creative experimentation with various forms of media encouraged. Prerequisites include Drawing 1, 2, and 3 as well as a portfolio application prior to acceptance into the class. **Students who choose to participate in an AP® course will be required to take the AP® Exam for that course.**

Wellness

H14010 AQUATICS (GRADE 9)
CREDIT: .50 CREDIT
PREREQUISITE: N/A
OTHER INFO: 9TH GRADE PHYSICAL EDUCATION REQUIREMENT

This course is divided into four units: 1) Stroke Mechanics, 2) Basic Water Skills, 3) Basic Water Safety, and 4) Aquatic Sports. The first unit is devoted to stroke mechanics including the six styles of swimming: Front Crawl, Elementary Backstroke, Back Crawl, Sidestroke, Breaststroke, and Butterfly. The second unit deals with basic water skills (i.e. surface diving, diving entries, treading water, and underwater swimming). This unit is designed to give students personal water safety skills to use in case of an aquatic emergency. The third unit offers basic water safety including elementary forms of rescue and activities using clothes for flotation and the canoe for rescue. The fourth unit, aquatic sports, offers students the opportunity to participate in an aquatic sports tournament. Sports included in this unit are Water Volleyball, Water Basketball, and Inner Tube Water Polo. All students receive Red Cross swimming certificates based on competencies performed throughout the course.

H14210 AQUATICS II (GRADE 10-12)
CREDIT: .50 CREDIT
PREREQUISITE: SUCCESSFUL DEEP-WATER TEST IN AQUATICS AND COMFORTABLE SWIMMING MULTIPLE LENGTHS OF THE POOL

This course is divided into four units. Unit 1 (Stroke Mechanics and Basic Water) is devoted to stroke mechanics, including the six styles of swimming: Front Crawl, Elementary Backstroke, Back Crawl, Sidestroke, Breaststroke, and Butterfly. Unit 1 will also cover basic water skills (i.e., surface dives, diving entries, treading water, floating, turns, transitions, and starts). Unit 2 (Water Safety and Basic Rescues) is designed to give students personal water safety skills to use in an aquatic emergency. It offers basic water safety, including survival float/swim, elementary forms of rescue, cold water survival skills, wading rescues, and scenarios that require rescue decision-making. In Unit 3 (Swimming Endurance and Cardiovascular Training), students will be given the opportunity to improve their fitness level through endurance swimming and other cardiovascular exercises in and out of the water, including water aerobics and water exercises. Unit 4 (Water Sports and Water Activities) will focus mainly on the sport of water polo but will also cover basic diving board techniques and recreational activities such as water basketball, water volleyball, and kayaking/canoeing/paddleboarding. This course does fulfill a physical education requirement.

H14510 HEALTH 9
CREDIT: .50 CREDIT
PREREQUISITE: N/A

This required course is designed to encourage students to improve health literacy and to recognize personal responsibility for their well being by examining their own lives and choices concerning their health. Through a variety of classroom activities and community guest speakers, students will evaluate and discover new ways to improve or maintain their present health status. Current teen health issues drive the curriculum that includes wellness, self-esteem, mental health, eating disorders, nutrition, drug education, relationships, infectious diseases, STI's, and abstinence education.

H15010 ADAVANCED TEAM SPORTS (GRADES 9-10)
H35010 ADVANCED TEAM SPORTS (GRADES 11-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

This course is designed to provide students with the opportunity to improve physical fitness through competitive advanced team sports. Demonstration and explanation of safety techniques/rules as well as rules/game strategy/play will be given to the students. The student will complete written, skills, and fitness tests. Warm-ups will include cardiorespiratory endurance activities. Instruction in high intensity team sports with an emphasis on cardio will be included. The student will use the information provided to create a new competitive game as a final project.

H17010 PE DANCE (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

PE Dance class fulfills the student's physical education requirement **but does not fulfill the 9th-grade Aquatics requirement.** The PE Dance is divided into three disciplines: Ballet, Jazz, and Tap. Students in the course are then divided into beginner, intermediate, and advanced levels prior to beginning each discipline. Levels are determined by audition. The technique is stressed in each class and routines are choreographed for group recitals. This is an excellent course for any student (male or female) who wishes to study dance or is interested in the theater.

H23110 PERSONAL FITNESS (GRADES 9-10)
H33110 PERSONAL FITNESS (GRADES 11-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

This course will take the students through a variety of lifetime sports and lifelong fitness activities. A wide variety of team and individual sports will be focused on during this quarter long class. Students will also learn proper free weight training and how to improve overall fitness through a variety of cardiovascular and weight-bearing activities. This course does fulfill a physical education requirement.

H24010 PHYSICAL EDUCATION 10 (GRADE 10 ONLY)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

The physical education classes are quarter classes meeting every day for the nine weeks. The physical education program has been designed to meet the needs of our Intermediate High School students with an emphasis on physical fitness. The program consists of individualized lifetime fitness activities and sports. All activities will be co-educational.

H33010 WEIGHT TRAINING (GRADES 9-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

Content for this course includes an emphasis on (1) healthy living, (2) health-related fitness, and (3) skills and habits necessary for a lifetime of activity. This course is designed to help students of multiple athletic backgrounds develop their muscular strength and muscular endurance. Content for this course includes an emphasis on healthy weightlifting, types of lifting, and skills and habits necessary for a lifetime of resistance training. Finally, upon completion of this course, students will have developed the foundation skills and understandings necessary for continuing a healthy, active lifestyle for the remainder of their lifetime. In addition, they will be encouraged to continue physical activity beyond their high school career to remain healthy in their future endeavors. This course does fulfill a physical education requirement.

H34510 HEALTH 11
CREDIT: .50 CREDIT
PREREQUISITE: N/A

This quarter course is designed to help prepare the students for the challenge of modern life, to meet personal needs for the future, and to assist students in making healthy, lifestyle choices. Stress management, reproduction and sexuality, AIDS, substance abuse, domestic violence, first aid/CPR, and death education are some examples of units that are covered.

H44010 PHYSICAL EDUCATION 11/12 (GRADES 11-12)
CREDIT: .50 CREDIT
PREREQUISITE: N/A

The program in physical education provides students an opportunity to improve their personal fitness level through many types of physical activity. Students will rotate through a variety of team, individual, and recreational sports.

H48010 **INTRODUCTION TO HEALTH SCIENCES (GRADE 12 ONLY)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **A "B" IN ACADEMIC BIOLOGY, ACADEMIC CHEMISTRY, AND 11TH GRADE HEALTH**

This senior course prepares students for careers in health professions. Course topics will include human anatomy and physiology, medical terminology, disorders, diseases, and health care. The body systems covered include anatomical terminology, skeletal system, muscular system, respiratory system, cardiovascular system, and the nervous system.

World Language

W14010** **FRENCH 1 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**
French 1 is carefully designed to guide students toward proficiency in communication while developing general communication into how languages work. The goal is to equip students: 1) to function in a French-speaking culture, 2) to use the language for a lifetime of personal enjoyment and enrichment, and 3) to appreciate the role of French culture in a global context. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W15010** **GERMAN 1 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**
German 1 is carefully designed to guide students toward proficiency in communication while developing a general communication into how languages work. The goal is to equip students: 1) to function in a German-speaking culture, 2) to use the language for a lifetime of personal enjoyment and enrichment, and 3) to appreciate the role of German-speaking cultures in a global context. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W17010** **SPANISH 1 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **N/A**
Spanish 1 is carefully designed to guide students toward proficiency in communication while developing a general insight into how languages work. The goal is to equip students: 1) to function in a Spanish-speaking culture, 2) to use the language for a lifetime of personal enjoyment and enrichment, 3) to appreciate the role of Hispanic cultures in a global context, and 4) to continue expanding their proficiency for further education or for the workplace. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W24010** **FRENCH 2 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **FRENCH 1 WITH AT LEAST A "C" AVERAGE PLUS TEACHER RECOMMENDATION**
French 2 is a second-year course with an emphasis placed upon the reinforcement of the audio-lingual skills, the acquisition of a broader active vocabulary, and the development of reading and writing skills through personal involvement and association of ideas. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W24510** **FRENCH CULTURE (GRADES 10-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **SUCCESSFUL COMPLETION OF FRENCH 2**
This is a quarter-long bilingual course and will include the following units: Fine Arts, Current Events, History and Governmental Structure, and traditional holidays and foods of French-speaking countries. The course will be structured around and incorporate the National Standards for Foreign Language Learning.

W25010** **GERMAN 2 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **GERMAN 1 WITH AT LEAST A "C" AVERAGE PLUS TEACHER RECOMMENDATION**
German 2 continues the reading and writing skills in the target language. The abilities of speaking and understanding are stressed continuously throughout the year. German 2 offers a more detailed study of vocabulary and grammar with emphasis on the use of the language in both oral and written exercises. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W25510** **GERMAN CULTURE (GRADES 10-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **SUCCESSFUL COMPLETION OF GERMAN 2**
This is a quarter-long bilingual course and will include the following units: Fine Arts, Current Events, History and Governmental Structure, and traditional holidays and foods of German-speaking countries. The course will be structured around and incorporate the National Standards for Foreign Language Learning.

W27010** **SPANISH 2 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **SPANISH 1 WITH AT LEAST A "C" AVERAGE PLUS TEACHER RECOMMENDATION**
Spanish 2 is a continuation of Spanish 1. Spanish 2 begins with an opening unit that acts as a "bridge" from past learning to the content to come. Each chapter teaches all four communication skills, with communicative objectives provided for new word sections and grammar sections. A strong cultural strand reveals the richness and diversity of the Spanish-speaking world. The relevancy of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W27510** **SPANISH CULTURE (GRADES 10-12)**
CREDIT: **.50 CREDIT**
PREREQUISITE: **SUCCESSFUL COMPLETION OF SPANISH 2**
This is a quarter-long bilingual course and will include the following units: Fine Arts, Current Events, History and Governmental Structure, and traditional holidays and foods of Spanish-speaking countries. The course will be structured around and incorporate the National Standards for Foreign Language Learning.

W34020** **HONORS FRENCH 3 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **FRENCH 2 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**
French 3 is an honors course that is a continuation of French 2. French 3 begins with an opening unit that acts as a "bridge" from past learning to the content to come. Each chapter teaches all four communication skills. There is a reciprocal relationship between proficiency-based teaching and the development of critical thinking skills. Students begin incorporating higher-order thinking skills, from simple observing, sorting, identifying, restating, and describing through the very highest levels of justifying, persuading, assessing, predicting, and hypothesizing.

W35020** **HONORS GERMAN 3 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **GERMAN 2 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

Honors German 3 is a continuation of German 2. This course helps students to develop proficiency in the four basic communication skills: listening, speaking, reading, and writing. German 3 aims to increase the students' knowledge and appreciation of the diverse cultures of Germany and the German-speaking countries of Europe. The opportunity for creative use of the language is stressed, both in oral and written exercises. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W37020** **HONORS SPANISH 3 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **SPANISH 2 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

Honors Spanish 3 is a continuation of Spanish 2. Spanish 3 begins with an opening unit that acts as a "bridge" from past learning to the content to come. Each chapter teaches all four of the communication skills. Students begin incorporating higher-order thinking skills from simple observing, sorting, identifying, restating, and describing through higher levels of justifying, persuading, assessing, predicting, and hypothesizing. The relevance of developing world language proficiency in all career pathways will be evident in this course. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W44020** **HONORS FRENCH 4 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **HONORS FRENCH 3 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

French 4 is an honors course that is a continuation of French 3. Each chapter works on all four communication skills. Students continue to incorporate higher-level thinking skills and build proficiency. There is a complete review of grammar and the introduction of new concepts. Students will be given the opportunity to write a children's story in French. French 4 aims to develop the student's understanding of the French culture and that of various French-speaking countries around the world.

W45020** **HONORS GERMAN 4 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **HONORS GERMAN 3 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

This honors course places equal emphasis on the oral and written aspects of German. There is a complete review of grammar and selected texts deal with German literature featuring various well-known authors. The course also includes video and German TV series, German cinema, and news and current events in German. If possible, students may teach lessons to elementary children. Many literacy strategies are incorporated into each of the four modalities of world language study (listening, speaking, reading, and writing).

W47020** **HONORS SPANISH 4 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **HONORS SPANISH 3 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

Spanish 4 is an honors course that is a continuation of Honors Spanish 3. Each chapter works the four modalities of world language study. Students will continue to incorporate higher-level thinking skills and build their Spanish proficiency. Activities provide students practice in interpreting, expressing, and negotiating meaning through constant interactions as they continue to work on more open-ended, personalized speaking and writing tasks.

W50030 **FOREIGN LANGUAGE DUAL ENROLLMENT**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **CRITERIA LISTED BELOW AND PRINCIPAL PRE-APPROVED**

Juniors (mostly second semester) with an unweighted GPA of 3.5 and Seniors with an unweighted GPA of 3.25 may attend college courses (either at a local college campus or an RCI site). The college course and grade earned will be placed on the high school transcript. Where school dismissal is required to attend such classes, the schedule at McDowell shall be adjusted. See your counselor in Guidance for more information.

W57020** **HONORS SPANISH 5 (GRADES 9-12)**
CREDIT: **1.00 CREDIT**
PREREQUISITE: **HONORS SPANISH 4 WITH AT LEAST A "B" AVERAGE PLUS TEACHER RECOMMENDATION**

Spanish 5 is an honors level course that will take the knowledge and skills developed through Spanish 1-4 and apply them to new learning tasks. This class is the bridge between the different styles and requirements of high school and university instruction. Students will use a variety of resources (such as literature, music, art, periodicals, the Internet, textbooks, and videos) to make connections from culture to culture in a relevant and authentic way. As in levels 1-4, the four modalities of language will be strengthened and assessed with an emphasis on speaking in various situations.

Erie County Technical School

COMMUNICATION CLUSTER

V22010 ART AND DESIGN FOR BUSINESS (GRADE 10)
V32010 ART AND DESIGN FOR BUSINESS (GRADE 11)
V42010 ART AND DESIGN FOR BUSINESS (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

In the first year of the Art & Design program, students receive training in core art skills, including color theory, perspective and illustrative drawing, lettering photography, and basic graphic design. Students also focus on work skills such as preparing a resume, writing business correspondence and acquiring basic computer skills. In the second and third years, students receive complex training in problem-solving skills by applying the design process to projects. Using a combination of computerization, photographic and conventional illustrative methods, students prepare portfolios of approximately 30 pieces of artwork. Prospective students should possess the following characteristics: 1) a demonstrated talent in drawing; 2) solid verbal and written communication skills; 3) a good sense of color, proportion, and design; 4) applied math skills; 5) developed problem-solving skills, and 6) fine motor skills. Students completing the Art & Design program can earn up to 15 credits at the Art Institute of Pittsburgh.

V26510 GRAPHIC MEDIA AND DESIGN (GRADE 10)
V36510 GRAPHIC MEDIA AND DESIGN (GRADE 11)
V46510 GRAPHIC MEDIA AND DESIGN (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

The Graphic Media and Design program introduces students to theoretical aspects as well as hands-on experiences using computers, darkroom equipment, and printing presses. Students acquire marketable skills in job planning, design and layout, copy preparation, proofing, plate making, offset press operation, bindery, and finishing. Desktop publishing and computer graphics have become an essential part of the printing industry. To meet the demands of the industry, students acquire introductory skills in electronic imaging techniques using software applications including Adobe Photoshop and PageMaker. Prospective students should possess the following characteristics: a creative mind, good typing skills, a good background in English and spelling, strong mechanical skills, good attention to detail, organized, and neatness.

V22510 COMPUTER PROGRAMMING (GRADE 10)
V32510 COMPUTER PROGRAMMING (GRADE 11)
V42510 COMPUTER PROGRAMMING (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

Students achieve entry-level skills in areas of computer operations, data entry, and computer programming depending on their ability and interests. Combined with a background of knowledge, skills, and appreciation of the data processing industry, each student is able to seek employment in the area of their interest. This course aims to present current and future practices in the ever-changing world of data processing. All instructional materials provide students with entry-level skills for positions in data processing through hands-on experience. Studies include the basics of computer science in such areas as design and internal functions, operations, computer operation and programming, data processing, and systems design. The Computer Information Systems program allows students to explore a career path that can lead to higher education in computer programming and many other related fields. Students will gain marketable skills to use computers in any field. Prospective students should be able to think logically, have good speaking, reading and writing skills, and pay attention to detail.

V29210 COMPUTER NETWORKING (GRADE 10)
V39210 COMPUTER NETWORKING (GRADE 11)
V49210 COMPUTER NETWORKING (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to further their education and training in the computer networking field. Instruction includes safety, networking, network terminology, and protocols, network standards, local area networks (LANS), wide-area networks (WANS), Open System Interconnection (OSI) models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol (IP) addressing, and network standards. Particular emphasis is given to the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems. In addition, instruction and training are provided in the proper care, maintenance and use of networking software, tools and equipment and all local, state and federal safety, building and environmental codes, and regulations.

CONSTRUCTION CLUSTER

V23010 CONSTRUCTION TRADES (GRADE 10)
V33010 CONSTRUCTION TRADES (GRADE 11)
V43010 CONSTRUCTION TRADES (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

This program prepares students to enter the building trades industry with marketable skills. This three-year program encompasses all phases of residential construction. The student will gain knowledge in the following areas: 1) basic building materials; 2) blue printing reading; 3) brick and block laying; 4) rough framing; 5) door and window installation; 6) drywall hanging and finishing; 7) stair construction; 8) roofing and siding; 9) finish trim application, and 10) basic principles of wiring and plumbing.

V26010 FACILITY MAINTENANCE TECHNOLOGIES (GRADE 10)
V36010 FACILITY MAINTENANCE TECHNOLOGIES (GRADE 11)
V46010 FACILITY MAINTENANCE TECHNOLOGIES (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

This unique and highly versatile course offers several trades in one for the student who is interested in becoming a skilled craftsperson in a variety of trades. Course content includes shop safety, proper use of hand and power tools, basic construction, plumbing, painting, electricity, woodworking, finish carpentry, and small engine repair. Employment possibilities range from individual buildings to manufacturing and industrial companies, municipalities, school districts, hotels, hospitals, airports, and large commercial operations. Prospective students should have physical stamina, mechanical aptitude, responsibility, manual dexterity, coordination, and patience.

HUMAN SERVICES CLUSTER

V23510 COSMETOLOGY (GRADE 10)
V33510 COSMETOLOGY (GRADE 11)
V43510 COSMETOLOGY (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
Cosmetology is an art and a science involving the study of the skin, hair, and nails. The Cosmetology program provides each student with the knowledge and skills required to become a licensed cosmetologist. The license requires 1,250 hours of instruction. The curriculum includes specialized classroom training in 1) hair and scalp analysis; 2) hair cutting, setting, and styling techniques; 3) hair coloring and permanent waving; 4) skin care, facials, and make-up techniques; 5) manicures and pedicures; 6) wig styling; 7) anatomy and physiology; 8) sanitation and sterilization, and; 9) salon management. Students receive hands-on experience by using mannequin heads and live models during clinic service. The proper use of tools, equipment, safety procedures, and state laws and regulations are also important elements of the curriculum. Prospective students should possess creative and artistic aptitude, enjoy working with people, physical stamina, flexibility, and patience.

V24010 CULINARY, BAKING, & PASTRY ARTS (GRADE 10)
V34010 CULINARY, BAKING, & PASTRY ARTS (GRADE 11)
V44010 CULINARY, BAKING, & PASTRY ARTS (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
The Culinary Arts program assists the student who is interested in the fast-paced and ever-growing food services industry. The program offers a comprehensive presentation of basic principles and techniques necessary to obtain an entry-level position in the food service industry or prepare for continued training and education. Incorporating theory and practical experience, this program introduces students to a variety of food preparation techniques using the school's fully equipped commercial kitchen and restaurant. Realistic instruction is provided by using the dining room, instructional kitchen, cafeteria, baker, and theory room. Students learn the preparation of soups, sauces, salads, meats, shellfish, poultry, vegetables, presentation, garnishing, and the preparation of desserts. In addition, instructional areas include safety and sanitation, proper use of equipment, purchasing, inventory control, menu planning, diet and nutrition, serving, and food service management. Prospective students should enjoy working with people and be able to work well under pressure; have physical stamina and coordination; good organization skills; and basic math and reading abilities.

V21510 EARLY CHILDHOOD EDUCATION (GRADE 10)
V31510 EARLY CHILDHOOD EDUCATION (GRADE 11)
V41510 EARLY CHILDHOOD EDUCATION (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
The Early Childhood Education program provides the student with the necessary skills for entry-level positions in the childcare field, with an emphasis on the preschool environment. The students gain knowledge of child development principles and will learn positive guidance techniques needed for working with children. In this program, students participate in both group theory lessons and in individualized, self-directed training toward an occupational goal. Students select and work on competency-based learning guides, which lead to mastery of specific childcare skills in a preschool setting. Curriculum areas include preschool teaching techniques, child development and growth, nutrition, art, music, and children's literature. Students work three days per week in the Tech Tikes preschool as a Preschool Aide. Prospective students should enjoy children and have a pleasant personality, even temperament, patience, and good communication skills, particularly spelling and grammar.

V27010 HEALTH ASSISTANT (GRADE 10)
V37010 HEALTH ASSISTANT (GRADE 11)
V47010 HEALTH ASSISTANT (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
The Health Assistant program is ideal for students considering a career in the health and medical field. This program introduces students to various career opportunities that exist in health care. It prepares the student to enter the health care system as a competent assistant to the healthcare professional. The course exposes the student to health and medical practices such as physical therapy, occupational therapy, dietetics, medical office, nursing, medical secretary, and medical laboratory. Students are introduced to basic medical terminology, anatomy and physiology, and beginning skills in medical procedures. An emphasis is placed on work attitudes necessary to be caring men and women sensitive to the complex needs of patients. Prospective students should possess good communication and interpersonal skills, neatness and cleanliness, manual dexterity, good professional appearance, the ability to maintain confidentiality, and the ability to lift fifty pounds.

V29610 HOSPITALITY MANAGEMENT & TOURISM (GRADE 10)
V39610 HOSPITALITY MANAGEMENT & TOURISM (GRADE 11)
V49610 HOSPITALITY MANAGEMENT & TOURISM (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
When you work in lodging or food service, you're part of the hospitality profession. You are also part of the largest, fastest-growing industry in work-travel and tourism, where opportunities abound. The Tourism & Lodging Management program has everything you will need to get started in a hospitality career. Upon graduation, students are ready to begin their hospitality career or continue their education at a college or university. In this program, students participate in classroom activities that teach valuable lodging skills and knowledge. Students will also participate in internships supervised by the instructor and a worksite mentor. Major instructional units in the curriculum include an overview of lodging management, the front office, housekeeping, leadership and management, marketing and sales, and food and beverage service. The objectives of this program correspond to competency lists used in the American Hotel & Motel Association's Educational Institute's post-secondary curriculum and form the basis for articulation agreements with colleges and universities. A national certificate from the Hospitality Business Alliance (HBA) will be issued to recognize student achievement, both in the classroom and in the workplace. Future employers and college admissions officers will recognize the HBA credential as evidence of a graduate's preparation for hospitality success. This credential can put you on the road to management in one of America's largest industries.

V27210 SPORTS THERAPY AND EXERCISE SCIENCE (GRADE 10)
V37210 SPORTS THERAPY AND EXERCISE SCIENCE (GRADE 11)
V47210 SPORTS THERAPY AND EXERCISE SCIENCE (GRADE 12)
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS
The Sports Therapy and Exercise Science career major will prepare students to work in the field of physical therapy, occupational therapy, and sports medicine. Coursework starts with foundations in human anatomy, physiology, medical terminology, and clinical rehabilitation skills. Students will develop skills in injury prevention, assessment, and rehabilitation. Other topics covered include nutrition and hydration, emergency care, human development, and mental health. Upon completion of the program, students will be prepared to assess injuries and illnesses, provide care for various patient populations, and design basic rehabilitation and fitness programs. Prospective students should possess good communication and interpersonal skills, manual dexterity, a professional attitude and appearance, the ability to maintain confidentiality, and the ability to lift fifty pounds.

MANUFACTURING CLUSTER

V24510 **DRAFTING AND DESIGN ENGINEERING (GRADE 10)**
V34510 **DRAFTING AND DESIGN ENGINEERING (GRADE 11)**
V44510 **DRAFTING AND DESIGN ENGINEERING (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

Drafting careers are changing rapidly as computer technology replaces traditional procedures and functions. The course instructs students in industry standards while using one of the most up-to-date drafting laboratories in the area. The Drafting & Design Engineering program prepares students to step into the workplace or it gives them an important edge if choosing to further their education in this field. Drafting, mechanical drafting, and CAD involve making precise, instrument-aided drawings that show how to construct machines, buildings, and infrastructures. The Drafting & Design Engineering curriculum includes all facets of drawing, including the preparation of reports, charts, and data sheets. The Drafting & Design Engineering program is designed for those students interested in drafting, mechanical design, engineering, and architectural drawing. Prospective students should possess the following characteristics: creative mind and a good imagination, logical thinking, basic math skills, accuracy, and artistic ability.

V25010 **ELECTRICAL ENGINEERING (GRADE 10)**
V35010 **ELECTRICAL ENGINEERING (GRADE 11)**
V45010 **ELECTRICAL ENGINEERING (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

Students in this program learn the fundamentals of electrical skills and theory. The Electrical Engineering students acquire the skills for employment in all industrial electric occupations. The students learn in detail the theory and hands-on application of alternating current, direct current, hydraulics, pneumatics, motor controls, programmable logic controllers, and residential wiring. Using a variety of hand tools and electrical testing equipment, the students learn how to wire a variety of industrial-rated components (relays, motor starter, motors, transformers, timing relays, push buttons, selector switches) and all components used in residential wiring applications. In addition, the students receive instruction in reading residential wiring schematics, motor control schematics, programmable logic controller schematics, and hydraulic or pneumatic schematics. Prospective students should possess mechanical aptitude, ability in basic math, and manual dexterity.

V27510 **METAL FABRICATION (GRADE 10)**
V37510 **METAL FABRICATION (GRADE 11)**
V47510 **METAL FABRICATION (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

This is a comprehensive program designed to give students entry-level skills in the field of metal fabrication. Areas of study include the techniques and fundamentals of pattern development, fabrication, design, proper use of hand and power tools., acetylene welding, acetylene cutting, and metal inert gas welding. Students experience training on a variety of machines. Emphasis is placed on bench work, precision measuring instruments, shearing, forming, rolling, assembly, welding, heat treatment, blueprint reading, layout and design, quality control, press brake operation, gas tungsten arc welding (TIG) and shielded metal arc welding. Prospective students need manual dexterity, mechanical aptitude, physical stamina, and basic math skills.

V28010 **PRECISION MACHINING (GRADE 10)**
V38010 **PRECISION MACHINING (GRADE 11)**
V48010 **PRECISION MACHINING (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

The machinist is a skilled worker who forms and shapes metals from their raw state to a finely finished and accurately shaped part. Students trained in this program develop the necessary skills to be entry-level machinists. The Precision Machining program gives students the opportunity to manufacture machine parts from various metals on machines such as engine lathes, vertical and horizontal milling machines, surface and cylindrical grinders, drill presses, and the band saw. Students learn the properties of steel, aluminum, and brass. Then they see how these properties are applicable in the trade. This basic-to-advanced curriculum offers in-depth training from hand and power tools to state-of-the-art techniques such as computerized numerical control and electrical discharge machining. The understanding of shop mathematics, trigonometry, blueprint reading, and precision measuring instruments are critical elements of this program. Prospective students should possess above-average math skills, good work attitudes, mechanical aptitude, eye-hand coordination, and the patience of work neatly and accurately.

TRANSPORTATION CLUSTER

V20510 **AUTOMOTIVE BODY REPAIR (GRADE 10)**
V30510 **AUTOMOTIVE BODY REPAIR (GRADE 11)**
V40510 **AUTOMOTIVE BODY REPAIR (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

This course presents current and future practices in the rapidly changing world of auto body repair. Projects and class work use the latest technologies, equipment, and shop practices. The latest approaches to modern automobile repair and reconstruction require skilled workmanship. Students in the Auto Body Repair program learn all phases of auto body repair including the proper use of hand and power tools; damage analysis; rebuilding, reconditioning, sanding, and refinishing; basic metalworking and dent repair; frame straightening; spray painting; welding; glass installation; and safety practices. Students also learn how to estimate, prepare job orders, and general shop operations. The program uses demonstration automobiles to provide students with the opportunity to develop confidence by applying the theoretical concepts. Prospective students should have good hand-eye coordination, manual dexterity, multi-limb coordination, mechanical aptitude, skill with tools, physical strength, accuracy, and the ability to work with minimal supervision.

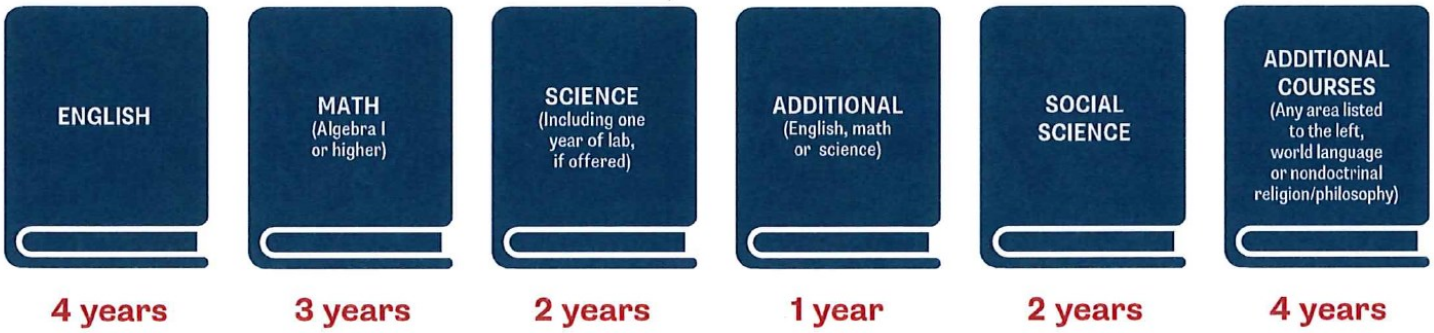
V21010 **AUTOMOTIVE TECHNOLOGIES (GRADE 10)**
V31010 **AUTOMOTIVE TECHNOLOGIES (GRADE 11)**
V41010 **AUTOMOTIVE TECHNOLOGIES (GRADE 12)**
CREDIT: 4.00 CREDIT
PREREQUISITE: APPLICATION PROCESS

Changes in automotive technology have increased the importance of the automotive technician. This program provides the student with the theory and practical experience needed to diagnose and repair automotive systems and their components. Students meeting the requirements will be eligible to take the state inspection test for a Class One License. This course covers the repair and maintenance of the ignition system, tires, braking, steering and suspension, alignment, electrical and electronic systems, fuel injection, engine repair, engine performance, and cooling system. Major and minor tune-up and inspection procedures are also included. An appropriate share of the program is devoted to studying automotive theory. Students use repair manuals, textbooks, and computers for diagnosing problems. A major emphasis of this course is to promote safe, clean, and efficient work habits. Prospective students should have mechanical aptitude, manual dexterity, skills with tools, physical stamina, good hand-eye coordination, physical strength, willingness to work in an uncomfortable environment and the ability to think logically.

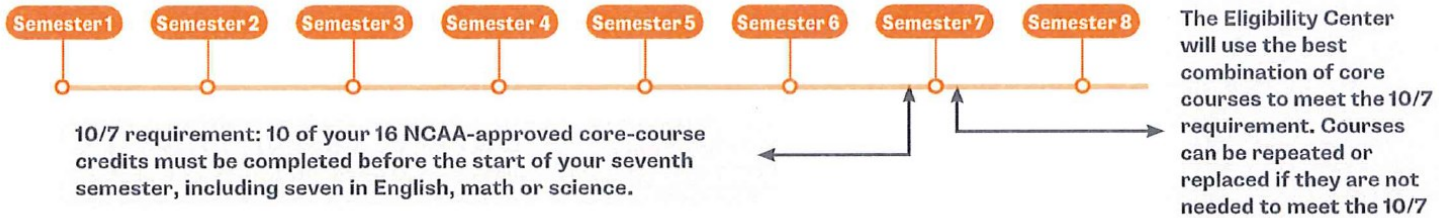
DIVISION I ACADEMIC STANDARDS

Division I schools require college-bound student-athletes to meet academic standards for NCAA-approved core courses, **core-course GPA** and test scores. To be eligible to practice, compete and receive an athletics scholarship in your first full-time year at a Division I school, you must meet all of the following requirements:

1. Earn 16 NCAA-approved core-course credits in the following areas:



2. Complete 10 of your 16 NCAA-approved core-course credits, including seven in English, math or science, before the start of the seventh semester. Once you begin your seventh semester, any course that is needed to meet the 10/7 requirement cannot be replaced or repeated.

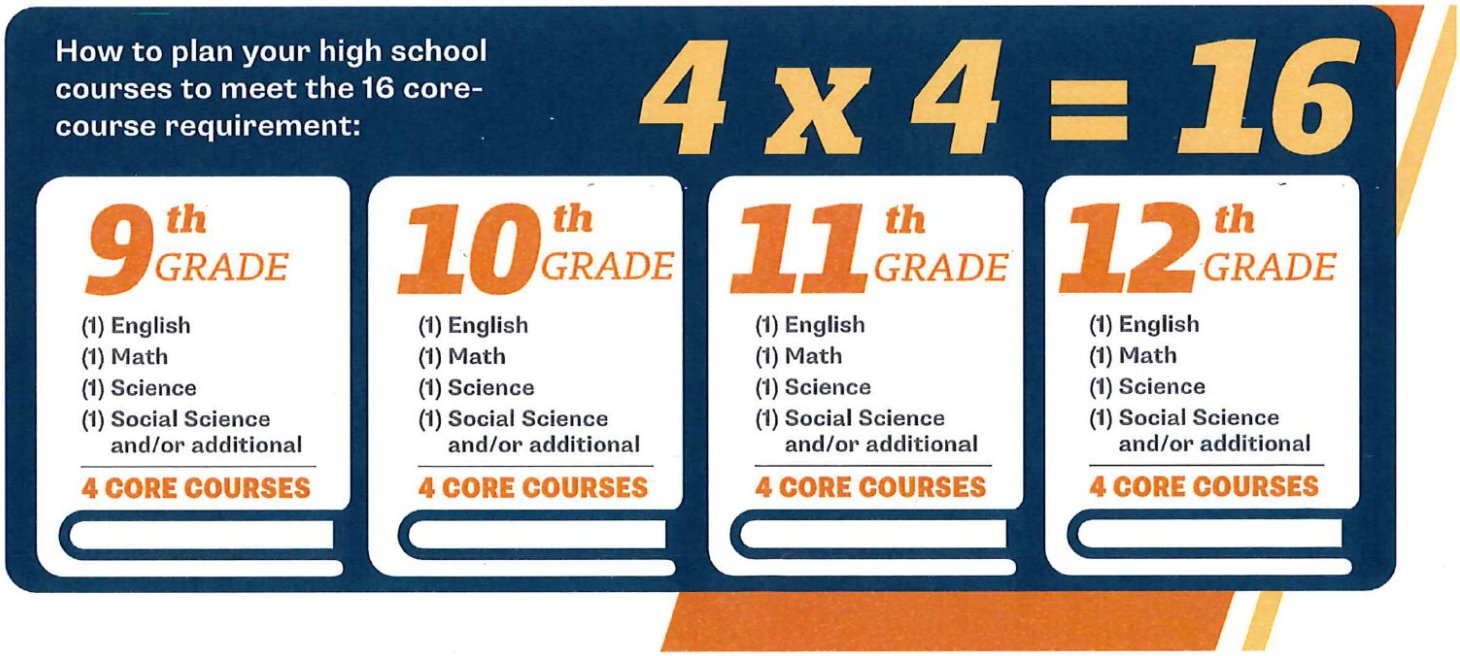


» Students with solely international academic credentials (including Canada) are not required to meet the 10/7 requirement.

3. Complete your 16 NCAA-approved core-course credits in eight academic semesters or four consecutive academic years from the start of ninth grade. If you graduate from high school early, you still must meet core-course requirements.

4. Earn a corresponding test score that matches your core-course GPA (minimum 2.3) on the Division I sliding scale (see page 22).* More information regarding the impact of COVID-19 and test scores can be found at on.ncaa.com/COVID19_Spring2023.

5. Submit your final transcript with proof of graduation to the Eligibility Center.



DIVISION II ACADEMIC STANDARDS

Division II schools require college-bound student-athletes to meet academic standards for NCAA-approved core courses, **core-course GPA** and test scores. To be eligible to practice, compete and receive an athletics scholarship in your first full-time year at a Division II school, you must meet *all* of the following requirements:

NCAA DIVISION II MAKE IT YOURS®

1. Earn 16 NCAA-approved core-course credits in the following areas:

ENGLISH	MATH (Algebra I or higher)	SCIENCE (Including one year of lab, if offered)	ADDITIONAL (English, math or science)	SOCIAL SCIENCE	ADDITIONAL COURSES (Any area listed to the left, world language or nondoctrinal religion/philosophy)
3 years	2 years	2 years	3 years	2 years	4 years

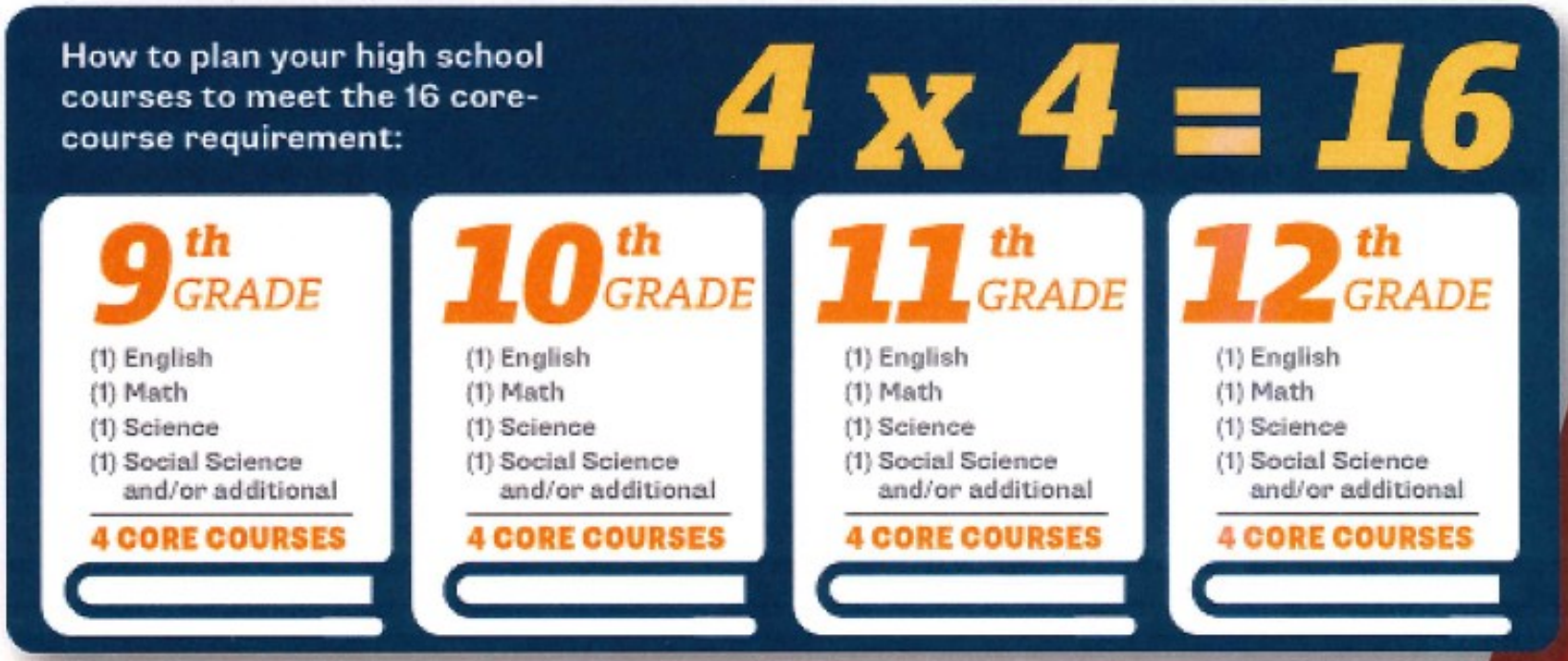
2. Earn a corresponding test score that matches your core-course GPA (minimum 2.2) on the Division II qualifier sliding scale (see page 26). More information regarding the impact of COVID-19 and test scores can be found at **on.ncaa.com/COVID19_Spring2023.**

3. Submit your final transcript with proof of graduation to the NCAA Eligibility Center.

Student-athletes enrolling at an NCAA member school Aug. 1, 2021, or later who do not meet Division II qualifier standards will be deemed partial qualifiers. All Division II partial qualifiers may practice and receive an athletics scholarship, but may NOT compete, during their first year of full-time enrollment at a Division II school.

ELIGIBILITY CENTER

EXAMPLE SCHEDULE



McDowell High School Core Course Information for the NCAA Eligibility Center

School Code 391-290

Below is a current listing of McDowell High School courses having been approved by the NCAA. These may be utilized by a potential College-Bound Student-Athlete who must meet certain core course requirements mandated by the NCAA. See official website for the official up-to-date NCAA approved courses.

English

Academic English 9
Academic English 10
Academic English 11
Academic English 12
Advanced Exploring Writing
Advanced Forensics
AP® English Language & Composition 11
AP® English Literature & Composition 12
AP® Research
AP® Seminar
Creative Writing
Debate on Current Events
Fantasy and Science Fiction
Holocaust and Jewish Literature
Honors English 9
Honors English 10
Honors English 11
Honors English 12
Journalism 1
Public Speaking
Short Stories
Young Adult Literature

Mathematics

Academic Algebra 1
Academic Algebra 2
Academic Trigonometry/Algebra 3
Academic Geometry
Algebra 3
AP® Calculus AB
AP® Calculus BC
AP® Computer Science Principles
AP® Statistics
Honors Algebra 2
Honors Calculus
Honors Geometry
Honors Pre-Calculus/Trigonometry
Honors Probability and Statistics
Math 1 (.34 credit)
Math 2 (.34 credit)
Math 3 (.34 credit)
Probability and Statistics
Trigonometry

Social Studies

Academic Economics
Academic Psychology
Academic World Geography
Academic World History 10
Academic U.S. Government
Academic U.S. History 11
AP® Comp Government and Politics
AP® Human Geography
AP® Macroeconomics
AP® Psychology
AP® U.S. Government and Politics
AP® U.S. History
AP® World History: Modern
Constitutional Law
Contemporary Issues
Current Issues
Honors Economics
Honors Psychology
Honors U.S. Government
Honors U.S. History 11
Honors World Geography
Honors World History 10
Introduction to Criminal Justice
Justice Education

Natural/Physical Science

Academic Biology
Academic Chemistry
Academic Earth and Space Science
Academic Physics
AP® Biology
AP® Chemistry
AP® Environmental Science
AP® Physics 1
AP® Physics C—Mechanics
Applied Biology
Applied Chemistry
Applied Earth and Space Science
Conceptual Physics
Conservation Science
CSI Forensics
Environmental Issues
General Science
Honors Anatomy & Physiology
Honors Biology
Honors Chemistry
Honors Chemistry 2
Honors Earth and Space Science
Honors Organic Chemistry
Honors Physics
Issues in Earth/Space Science
Mechanical Science
Science in the Community

Additional Courses

French 1
French 2
Honors French 3
Honors French 4
French Culture
German 1
German 2
Honors German 3
Honors German 4
German Culture
Spanish 1
Spanish 2
Honors Spanish 3
Honors Spanish 4
Honors Spanish 5
Spanish Culture
AP® Spanish Language and Culture