



# McDOWELL



*Scheduling Guide*  
*2022-2023*



# Millcreek Township School District

## BOARD OF EDUCATION

Mr. Gary Winschel—President  
Mr. J. Michael Linder—Vice President  
Mr. Jason Dean  
Ms. Janis Filbeck  
Mr. Michael Kobyłka  
Ms. Janine McClintic, Esq.  
Ms. Sallie Newsham  
Ms. Shirley Winschel  
Ms. Kimberly Lupichuk  
Mrs. Linda Sitter, Board Secretary

## CENTRAL OFFICE ADMINISTRATION

Dr. Ian A. Roberts—Superintendent  
Mrs. Darcie Moseley—Assistant Superintendent  
Mr. Aaron O’Toole—Chief Financial Officer  
Ms. Melody L. Ellington—Director of Personnel  
Mr. Joseph Orlando—Director of Elementary Education  
Dr. John Cavanagh—Director of Secondary Education  
Dr. Timothy Stoops—Director of Alternative Learning & Assessment  
Mrs. Marianne Ouellet—Supervisor of ELA & Social Studies K-12  
Mrs. Jennifer Dunmire—Supervisor of Math & Science K-12  
Dr. Edward Nientimp—Director of Pupil Services  
Mrs. Lori Baniewicz—Supervisor of Special Education  
Mrs. Kate Barbaro—Supervisor of Special Education  
Mrs. Mary Triana—Supervisor of Special Education

### McDowell Intermediate High School Administration

Mr. Scott Quivey, Principal  
Mrs. Shannon Patton, Assistant Principal  
Mr. Kirk Atwood, Assistant Principal

### Guidance

Mr. Robert Marriott, Guidance Counselor  
Mrs. Remle Moyak, Guidance Counselor  
Mrs. Jessie Zabloutny, Guidance Counselor  
Mrs. Brandi Gross, Educational Assistant  
Mrs. Jill Sanford, Educational Assistant  
Mrs. Heidi Wells, Secretary



### McDowell High School Administration

Mr. Brian Fuller, Principal  
Mrs. Sandra Means, Assistant Principal  
Mr. Justin Izbicki, Assistant Principal  
Mr. Mark Becker, Director of Athletics

### Guidance

Mr. Scott Boyd, Guidance Counselor  
Mrs. Pamela Dixon, Guidance Counselor  
Mrs. Christine Rys, Guidance Counselor  
Mrs. Shantel Kay, Educational Assistant  
Mrs. Julie DeVore, Educational Assistant  
Mrs. Pam Kwiatkowski, Secretary

# Table of Contents

---

<b>Requesting Courses Online</b> .....	<b>1-6</b>
<b>General Information</b> .....	<b>7-9</b>
<b>STEM Certificate Program</b> .....	<b>10-11</b>
<b>Focused Study Programs</b> .....	<b>12-15</b>
Center for the Performing Arts .....	<b>12</b>
Education Profession Pathway Certificate Program .....	<b>12</b>
Erie County Technical School Program .....	<b>13</b>
McDowell Manufacturing Academy .....	<b>13</b>
Advanced Placement® Courses .....	<b>13</b>
Honors College .....	<b>14</b>
Distinctive Scholar Program .....	<b>14</b>
AP® Capstone .....	<b>14</b>
Advanced Placement® Course Map .....	<b>15</b>
<b>Course Offerings</b> .....	<b>16-27</b>
<b>Course Descriptions</b> .....	<b>28-58</b>
Aerospace (AFJROTC) .....	<b>28</b>
Business .....	<b>29-30</b>
Center for Performing Arts .....	<b>31-32</b>
Computer Science .....	<b>33</b>
English / Language Arts .....	<b>34-36</b>
Family and Consumer Science .....	<b>37-38</b>
General Electives .....	<b>39-40</b>
Mathematics .....	<b>41-42</b>
Science .....	<b>43-45</b>
Social Studies .....	<b>46-48</b>
Technology Education .....	<b>49-50</b>
Visual Arts .....	<b>51-52</b>
Wellness .....	<b>53</b>
World Language .....	<b>54-55</b>
Erie County Technical School Course Offerings .....	<b>56-58</b>
<b>NCAA Division I Academic Standards</b> .....	<b>59-61</b>
<b>NCAA Division I Sliding Scale</b> .....	<b>61</b>
<b>NCAA Division II Academic Standards</b> .....	<b>62-63</b>
<b>NCAA Division II Sliding Scale</b> .....	<b>64</b>
<b>NCAA Course Information for the NCAA Eligibility Center</b> .....	<b>65</b>













# 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 8<sup>th</sup> 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

<u>Course</u>	<u>Credit</u>
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 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	<b>28.0</b>

## 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-athletes 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 59-61 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

**\*New for 2021 and Beyond\***

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**

- Graphic Media Design and Print
- Computer Programming
- Computer Networking
- Health Assistant
- Drafting & Design Engineering
- Electrical Engineering
- Metal Fabrication
- Precision Machining
- Automotive Technology

### 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 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**

- Digital Technology in Art
- Graphics
- Animation
- Digital Photography
- Comm.: Broadcast Journalism
- Advanced Video Production

#### Advanced English

##### **One or more earning a B- or better**

- Honors or AP® English 11
- Honors or AP® English 12
- Advanced Exploring Writing

#### Advanced Math

##### **One or more earning a B- or better**

- Honors Algebra 2
- Honors PreCalc/Trig
- Honors Calculus
- Honors Probability & Statistics
- AP® Statistics
- AP® Calculus AB
- AP® Calculus BC

#### Advanced Science

##### **One or more earning a B- or better**

- Aero Science 2
- CSI Forensic Science
- Honors Chemistry
- AP® Chemistry
- AP® Biology
- Honors Physics
- AP® Physics 1
- AP® Physics C—Mechanic
- Honors Organic Chemistry
- Honors Anatomy & Physiology
- AP® Environmental Science
- Mechanical Science

#### Advanced Technology

##### **One or more earning a B- or better**

- Architectural Design
- Advanced Computer Design & Mfg.
- Introduction to Applied Engineering
- Wood Technology 3
- Wood Technology 4
- Graphics Technology 2
- Metal Technology 2
- CNC Manufacturing
- Energy and Power Technology
- Robotics 2

#### Global Awareness/Citizenship

##### **One or more earning a B- or better**

- International Business and Ethics
- AP® Comparative Govt. & Politics
- AP® U.S. Government & Politics
- Justice Education
- Hon. French 3, German 3, or Spanish 3
- Hon. French 4, German 4, or Spanish 4
- Honors Spanish 5
- AP® Human Geography
- AP® Psychology

#### **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**

- Internship
- Volunteer Work
- AP® Research
- McDowell Manufacturing
- Independent Study related to STEM fields
- STEM Camp or After School Program
- Part-time employment in a STEM related job
- Two pre-approved STEM field trip options

**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](mailto: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](mailto: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](mailto: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](mailto: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 [taylor@mtsd.org](mailto:taylor@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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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
<b>3</b> YEAR		<ul style="list-style-type: none"> <li>▪ Performing Arts 1</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performing Arts 2</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> <li>▪ Music Theory or Music History (11 or 12)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performing Arts 3</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> <li>▪ Popular Dance</li> </ul>
<b>4</b> YEAR	<ul style="list-style-type: none"> <li>▪ Performing Arts 1</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performing Arts 2</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performing Arts 3</li> <li>▪ Ensemble *</li> <li>▪ PE Dance</li> <li>▪ Music Theory or Music History (11 or 12)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performing Arts 4</li> <li>▪ Ensemble *</li> </ul>

*\*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.\*

### 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)

\*Certain requirements must be met

# 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 9<sup>th</sup>-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
<ul style="list-style-type: none"> <li>▪ English</li> <li>▪ World Geography</li> <li>▪ Math</li> <li>▪ Earth/Space Science</li> <li>▪ Aquatics</li> <li>▪ Health</li> <li>▪ Electives (2.5 Credits)</li> </ul>	<ul style="list-style-type: none"> <li>▪ English</li> <li>▪ U.S. and the World 10</li> <li>▪ Math</li> <li>▪ Biology</li> <li>▪ Physical Education *</li> <li>▪ Technical Program - AM</li> </ul>	<ul style="list-style-type: none"> <li>▪ English</li> <li>▪ U.S. and the World 11</li> <li>▪ Math/Science *</li> <li>▪ Health</li> <li>▪ Physical Education</li> <li>▪ Technical Program - PM</li> </ul>	<ul style="list-style-type: none"> <li>▪ English</li> <li>▪ U.S. Government/Economics</li> <li>▪ Math/Science *</li> <li>▪ Elective (1 credit)</li> <li>▪ Physical Education</li> <li>▪ Technical Program - PM</li> </ul>

\*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 one AP® course 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
- 

## 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
<b><u>1st Semester</u></b>	Computer Science Principles* Human Geography* Psychology* Statistics* World History: Modern*	Calculus AB* Computer Science Principles* English Language and Composition* Environmental Science* Human Geography* Psychology* Statistics* Studio Drawing U.S. Government & Politics*	Calculus AB* Computer Science Principles* English Literature and Composition* Environmental Science* Human Geography* Macroeconomics Psychology* Statistics* Studio Drawing U.S. Government & Politics*
<b><u>2nd Semester</u></b>	Computer Science Principles* Seminar* Statistics* World History: Modern*	Calculus BC* Comparative Government* Computer Science Principles* English Language and Composition* Physics C-Mechanics* Statistics* U.S. History *	Calculus BC* Comparative Government* Computer Science Principles* English Literature and Composition* Macroeconomics Physics C-Mechanics* Statistics* U.S. History *
<b><u>3 Quarters</u></b>  <b><u>or</u></b>  <b><u>Full Year</u></b>	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.

## McDowell Intermediate and McDowell High School Course Offerings

### *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

## McDowell Intermediate and McDowell High School Course Offerings

---

### 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
P14010	Mixed Chorus 9-10	9-10	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
P34010	Mixed Chorus 11-12	11-12	1.00
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
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
D50030	Technology Dual Enrollment	11-12	1.00

# McDowell Intermediate and McDowell High School Course Offerings

## English / Language Arts

Course Number	Course Name	Grade Level	Credit
E10010	Literacy	9-12	1.00
E12010	Film Appreciation and Analysis	9-12	.50
E13010	Introduction to Media	9-12	.50
E14010**	Academic English 9	9	1.00
E14020**	Honors English 9	9	1.00
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	9-10	.50
E33510	Advanced Video Production	9-12	.50
E34010**	Academic English 11	11	1.00
E34020**	Honors English 11	11	1.00
E35530**	AP® English Language and Composition 11	11	1.00
E36010**	Advanced Exploring Writing	10-12	.50
E37510**	Journalism 1	9-12	.50
E38010**	Young Adult Literature	11-12	.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
G15010E	English for English Language Learner (ELL)	9-12	1.00

**\*\*NCAA APPROVED COURSE**

## McDowell Intermediate and McDowell High School Course Offerings

---

### *Family & Consumer Sciences*

<b>Course Number</b>	<b>Course Name</b>	<b>Grade Level</b>	<b>Credit</b>
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
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

## McDowell Intermediate and McDowell High School Course Offerings

### 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
G26010**	Basic Forensics—Speech & Debate	9-12	1.00
G27010	Career Exploration	10-12	.50
G29110	Independent Study	9-10	.50
G30510	Academic Support	11-12	.50
G33510	Current Events	11-12	.50
G36010**	Advanced Forensics—Speech & Debate	10-12	.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	11-12	.50
G48510S	Internship	11-12	1.00

**\*\*NCAA APPROVED COURSE**

## McDowell Intermediate and McDowell High School Course Offerings

### 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	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
M44810**	Academic Trigonometry	10-12	.50
M44910**	Academic Algebra 3	10-12	.50
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**

## McDowell Intermediate and McDowell High School Course Offerings

### 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
C34010**	Academic Chemistry	11	1.00
C34020**	Honors Chemistry	11	1.00
C34030**	AP® Chemistry	10-11	2.00
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**

## McDowell Intermediate and McDowell High School Course Offerings

### 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
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
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**

**\*Pending NCAA Approval**

## McDowell Intermediate and McDowell High School Course Offerings

---

### 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

## McDowell Intermediate and McDowell High School Course Offerings

---

### 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	Graphics	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

## McDowell Intermediate and McDowell High School Course Offerings

### Wellness

Course Number	Course Name	Grade Level	Credit
H14010	Aquatics	9	.50
H14210	Aquatics II	10-12	.50
H14510	Health 9	9	.50
H17010	PE Dance	9-12	.50
H23010	Lifetime Fitness	9-12	.50
H24010	Physical Education 10	10	.50
H33010	Weight Training	9-12	.50
H34510	Health 11	11	.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	10-12	1.00
W15010**	German 1	10-12	1.00
W17010**	Spanish 1	9-12	1.00
W24010**	French 2	10-12	1.00
W25010**	German 2	10-12	1.00
W27010**	Spanish 2	9-12	1.00
W34020**	Honors French 3	11-12	1.00
W35020**	Honors German 3	11-12	1.00
W37020**	Honors Spanish 3	10-12	1.00
W44020**	Honors French 4	11-12	1.00
W45020**	Honors German 4	11-12	1.00
W47020**	Honors Spanish 4	10-12	1.00
W50030	Foreign Language Dual Enrollment	11-12	1.00
W57020**	Honors Spanish 5	11-12	1.00

**\*\*NCAA APPROVED COURSE**

## McDowell Intermediate and McDowell High School Course Offerings

### Erie County Technical School

AM	PM	PM	Course Name	Grade Level	Credit
			<b>COMMUNICATION CLUSTER</b>		
V22010	V32010	V42010	Art and Design for Business	10-12	4.00
V26510	V36510	V46510	Graphic Media Design and Print	10-12	4.00
V22510	V32510	V42510	Computer Programming	10-12	4.00
V29210	V39210	V49210	Computer Networking	10-12	4.00
			<b>CONSTRUCTION CLUSTER</b>		
V23010	V33010	V43010	Construction Trades	10-12	4.00
V26010	V36010	V46010	Facility Maintenance Technology	10-12	4.00
			<b>HUMAN SERVICES CLUSTER</b>		
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
			<b>MANUFACTURING CLUSTER</b>		
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
			<b>SPORTS THERAPY AND EXERCISE SCIENCE</b>		
			<b>TRANSPORTATION CLUSTER</b>		
V20510	V30510	V40510	Auto Body Repair	10-12	4.00
V21010	V31010	V41010	Automotive Technology	10-12	4.00

# McDowell Intermediate and McDowell High School Descriptions

## 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. 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. **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.

# McDowell Intermediate and McDowell High School Descriptions

## 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.

## McDowell Intermediate and McDowell High School Descriptions

---

**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.

# McDowell Intermediate and McDowell High School Descriptions

## 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.

### **P14010 MIXED CHORUS (GRADES 9-10)**

**CREDIT:** 1.00 CREDIT

**PREREQUISITE:** N/A

The students will become familiar with the proper technique for singing and other relevant information for the correct choral performance. Basic music theory is taught so the student will have an overall understanding of the symbols and terminologies used in music. There will be three evening concerts per semester that students are required to attend. Students who play the 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.

# McDowell Intermediate and McDowell High School Descriptions

## **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.

## **P34010 MIXED CHORUS (GRADES 11-12)**

**CREDIT:** 1.00 CREDIT

**PREREQUISITE:** N/A

Students will be given instruction on proper vocal production. Music theory will continue to be taught to make the students familiar with the various musical terminologies and symbols associated with music. The chorus will perform with the Vocal Ensemble at the seasonal BACH TO ROCK concert and three mandatory evening concerts throughout the year. Students are required to attend all performances. In-school performances and assembly programs will also be included. Students who play the piano are encouraged to consider chorus to serve as accompanists.

## **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.

# McDowell Intermediate and McDowell High School Descriptions

## 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.

### 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.**

### 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.

# McDowell Intermediate and McDowell High School Descriptions

## English / Language Arts

### **E10010** LITERACY **CREDIT:** 1.00 CREDIT **PREREQUISITE:** IEP

Students with academic needs will schedule this elective course. This course focuses on developing literacy skills and techniques to increase reading analysis and comprehension.

### **E12010** FILM APPRECIATION AND ANALYSIS (GRADES 9-12) **CREDIT:** .50 CREDIT **PREREQUISITE:** N/A

This course is designed to help students better appreciate and analyze films. Students will explore and study the elements of film, the production process, and the nature of film as an art form. While watching films, students will discuss filmmaking choices and thematic elements. A range of film genres will be viewed from a variety of directors and decades.

### **E13010** INTRODUCTION TO MEDIA (GRADES 9-12) **CREDIT:** .50 CREDIT **PREREQUISITE:** N/A

This course develops the writing, performing, and directing skills needed to understand television and radio communications. Students will discover and develop their literacy skills, as well as a critical understanding of how technology has changed our world and will continue to do so. Students will acquire photography and videography skills and will engage in pre-production, production, and post-production processes to create a finished production (e.g. podcast). Students will learn basic non-linear editing techniques.

### **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.

### **E23010** SPORTS AND NEWS BROADCAST JOURNALISM (GRADES 9-12) **CREDIT:** .50 CREDIT **PREREQUISITE:** N/A

This course explores broadcast journalism, a means of news gathering and communication. Students will hone their videography skills while learning questioning techniques. They will write stories in broadcast style to create stand-up news packages, television interviews and work as a team to produce a live news-style program. Students will advance their non-linear editing software skills to create their final products.

### **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 9-10) **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.

### **E33510** ADVANCED VIDEO PRODUCTION (GRADES 9-12) **CREDIT:** .50 CREDIT **PREREQUISITE:** INTRODUCTION TO MEDIA

This course explores the video production processes involved in advertising and filmmaking. Students will create public service announcements and promotional videos as well as learn the structure of storytelling for the visual medium of film. For all projects, they will write scripts, shoot films to accompany a script using various techniques, and edit the film using advanced non-linear editing software.

### **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 Common Core State Standards 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.

# McDowell Intermediate and McDowell High School Descriptions

**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.

**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

Writing at its best is an exciting exchange of ideas and opinions. It is "thinking made visible". To significantly improve writing skills, students must have ample opportunities for daily writing. They must discover independently what they have to say and see that it is effectively communicated to their readers. Emphasis will be on the development of each student's unique "voice" and style. This course serves as an additional arena for practicing writing in various forms. It is intended to supplement and augment writing in the regular English classroom. It will further prepare the student to function effectively in both higher education and in the non-academic world.

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

This course develops basic journalistic writing in various styles and formats. Students will improve their writing techniques while adhering to the rules of grammar, spelling, punctuation, and Associated Press style in preparation for the Advanced Journalism class. The course focuses on story generation, research, interviewing, grammar, Associated Press style, and concise writing. As the course ends, students will be required to produce stories that are suitable for publication in McDowell's student publications, *The Trojan Times Online* and *The Trojan Voice*. Students also will investigate topics such as news bias, fairness, multi-platform journalism, ethics, and social media. This course introduces the principles of contemporary journalism by requiring students to produce quality pieces for the web or print publications while being mindful of the editing process and deadlines.

**E38010\*\*** YOUNG ADULT LITERATURE (GRADES 11-12)  
**CREDIT:** .50 CREDIT  
**PREREQUISITE:** N/A

Young Adult Literature is a course designed for avid readers to serve as an introduction to the multiple genres of contemporary young adult literature. Students will read a range of texts written by the current, and often award-winning authors. Discussions will include perspectives of genre, theme, and interaction of adolescence and adulthood. Approaches to interpretations and analysis will be delivered via reading, writing, and a variety of assessments. Works will be introduced and analyzed from a literary or sociocultural perspective.

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

Academic English 12 focuses on the mastery of the Common Core State Standards 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.**

## McDowell Intermediate and McDowell High School Descriptions

---

**E47010Q**            **ADVANCED JOURNALISM (GRADES 9-12)**  
**CREDIT:**            **.50 CREDIT**  
**PREREQUISITE:**    **JOURNALISM 1**

**E47010**            **ADVANCED JOURNALISM (GRADES 9-12)**  
**CREDIT:**            **1.00 CREDIT**  
**PREREQUISITE:**    **JOURNALISM 1**

This course puts the journalistic skills developed in Journalism 1 into practice by working for McDowell's student publications. Students will continue to improve journalistic writing techniques while adhering to the rules of grammar, spelling, punctuation, and Associated Press style while working as a team to publish *The Trojan Times Online* and *The Trojan Voice*. Students will apply for various positions on the staff (news, features, opinion, sports writers, and editors; photographers; web editors and designers; copy editors; page layout designers; video content editors). As a team, the students will continuously publish news for McDowell High School and the Millcreek community. The students will focus on story generation, research, interviewing, grammar, Associated Press style, and concise writing. Students will engage in contemporary journalism by requiring students to produce quality pieces for the web or print publications while being mindful of the editing process and deadlines.

**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.

**G15010E**            **ENGLISH FOR ENGLISH LANGUAGE LEARNER (ELL) (GRADES 9-12)**  
**CREDIT:**            **1.00 CREDIT**  
**PREREQUISITE:**    **N/A**

This course is designed to strengthen the non-English proficient student's ability to use English language skills so that they can achieve success both academically and socially in the content areas and in the school community. Students are expected to obtain, process, construct and provide subject matter information in spoken and written form based on their individual levels of proficiency.

# McDowell Intermediate and McDowell High School Descriptions

## 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:**            **EXPLORING CULINARY ARTS**  
**RECOMMENDED**

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:**            **EXPLORING CULINARY ARTS**  
**RECOMMENDED**

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:**            **EXPLORING CULINARY ARTS**  
**RECOMMENDED**

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.**

**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.**

## McDowell Intermediate and McDowell High School Descriptions

---

**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.**

# McDowell Intermediate and McDowell High School Descriptions

## 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)**

**CREDIT:**            **.50 CREDIT**  
**PREREQUISITE:**    **IEP**

**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.

**G26010\*\***        **BASIC FORENSICS—SPEECH & DEBATE (GRADES 9-12)**

**CREDIT:**            **1.00 CREDIT**  
**PREREQUISITE:**    **N/A**

This performance-based course provides a hands-on introduction to basic speech and debate skills. Students spend the first half learning about and preparing for oral interpretive presentations. Interpretive events are assessed using multiple criteria, including student's use of vocal variety and the student's ability to incorporate expression and gesture into his/her interpretation. The second half offers debate techniques and practice and the Student Congress experience. Research is a key component in the second half of the curriculum. Extemporaneous and impromptu speaking opportunities occur throughout the year. Colleges and universities view forensics experience favorably.

**G27010**            **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.

# McDowell Intermediate and McDowell High School Descriptions

**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 student's 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.

**G36010\*\***                **ADVANCED FORENSICS—SPEECH & DEBATE (GRADES 10-12)**  
**CREDIT:**                **.50 CREDIT**  
**PREREQUISITE:**       **BASIC FORENSICS**

This course provides a hands-on introduction to advanced speaking and presentation skills. Time will be spent refining oral interpretive skills. Advanced debate techniques such as Lincoln-Douglas, Clash, and Heckling Debate will be introduced and practiced. If you have a flair for the dramatic, enjoy sharing and debating ideas, and are a logical and creative thinker, this is the course for you.

**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.

**G48510**                    **INTERNSHIP (GRADES 11-12)**  
**CREDIT:**                **.50 CREDIT**  
**PREREQUISITE:**       **MINIMUM GPA OF 2.75 AND 95% ATTENDANCE DURING THE JUNIOR YEAR (ATTENDANCE PREREQUISITE MAY BE WAIVED FOR EXTENUATING CIRCUMSTANCES)**

**G48510S**                **INTERNSHIP (GRADES 11-12)**  
**CREDIT:**                **1.00 CREDIT**  
**PREREQUISITE:**       **MINIMUM GPA OF 2.75 AND 95% ATTENDANCE DURING THE JUNIOR YEAR (ATTENDANCE PREREQUISITE MAY BE WAIVED FOR EXTENUATING CIRCUMSTANCES)**

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 must complete 45 hours of job shadowing per quarter are encouraged to find their own placement, and must provide their own transportation.

# McDowell Intermediate and McDowell High School Descriptions

## Mathematics

**M11010**                    **MATH**  
**CREDIT:**                **1.00 CREDIT**  
**PREREQUISITE:**      **IEP**

Students with academic needs will schedule this course to address individual needs and receive small group instruction. This year-long course is geared to students in grades nine through twelve who need to develop math skills to be used in real life situations. The focus will be on the math skills needed for a vocational and independent living experience. Community-based instruction will be a part of the curriculum.

**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:**      **SUCCESSFUL 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**

This course is designed for students who have shown sufficient knowledge of fundamental operations and Pre-Algebra concepts. Students will learn the foundations of Algebra, which meet state standards and prepare students for Geometry and Algebra 2. When taking this course, students will be scheduled into Algebra 2 for 2nd semester.

**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**

This course is designed to develop the formal and informal concepts of plane solid Geometry. The use of theorems and formal proofs are an integral part of this course. Students who are planning on furthering their education beyond high school are strongly urged to choose this course.

**M24020\*\***                **HONORS GEOMETRY**  
**CREDIT:**                **1.00 CREDIT**  
**PREREQUISITE:**      **A "B" AVERAGE OR BETTER IN ALGEBRA 1 WITH TEACHER RECOMMENDATION**

This course is designed to develop the formal and informal concepts of plane solid Geometry. The use of theorems and formal proofs are an integral part of this course. Students who are planning on furthering their education beyond high school are strongly urged to choose this course. Topics are presented at an accelerated pace and in greater depth than the academic course. Upon completion, students should take Honors Algebra 2.

**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

**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**

This course is designed for college-bound students who need sufficient math to prepare for college admissions tests and meet college entrance requirements for math-related fields. This course is more demanding than the academic Algebra 2 course and topics are presented at an accelerated pace with greater depth. Upon completion, students should take Honors Pre-Calculus.

**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 of 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.

**M44810\*\***                **ACADEMIC TRIGONOMETRY**  
**CREDIT:**                **.50 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.

**M44910\*\***                **ACADEMIC ALGEBRA 3**  
**CREDIT:**                **.50 CREDIT**  
**PREREQUISITE:**      **AT LEAST A "C" AVERAGE IN GEOMETRY AND ALGEBRA 2 WITH A TEACHER RECOMMENDATION**

The depth and difficulty of problems demand that computations be completed with speed and accuracy. College-bound students who contemplate math or science-related careers are encouraged to take this course.

# McDowell Intermediate and McDowell High School Descriptions

**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 more than two math courses in one school year until they have successfully completed Academic Algebra 2 or Honors Algebra 2.**

# McDowell Intermediate and McDowell High School Descriptions

## 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: "B" OR BETTER IN HONORS BIOLOGY. RECOMMENDED COMPLETION OF HONORS CHEMISTRY OR CONCURRENT ENROLLMENT IN HONORS CHEMISTRY.**

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.

# McDowell Intermediate and McDowell High School Descriptions

**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.

**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.**

**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) AND ACADEMIC CHEMISTRY (FINAL GRADE OF "A") OR HONORS/AP® CHEMISTRY (FINAL GRADE OF "B" OR HIGHER) WITH PRE-APPROVAL OF THEIR CURRENT SCIENCE INSTRUCTOR**  
**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.

# McDowell Intermediate and McDowell High School Descriptions

**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.**

# McDowell Intermediate and McDowell High School Descriptions

## 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.

### **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.

# McDowell Intermediate and McDowell High School Descriptions

**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.

## McDowell Intermediate and McDowell High School Descriptions

**S46030\*\***      **AP® MACROECONOMICS (GRADE 12)**  
**CREDIT:**      **1.00 CREDIT**  
**PREREQUISITE:** **HONORS U.S. HISTORY 11 AND 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:** **COMPLETION OF HONORS U.S. HISTORY 11 AND 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.**

# McDowell Intermediate and McDowell High School Descriptions

## 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.

## McDowell Intermediate and McDowell High School Descriptions

### **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.

# McDowell Intermediate and McDowell High School Descriptions

## 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 GRAPHICS (GRADES 9-12)**

**CREDIT:** .50 CREDIT

**PREREQUISITE:** DIGITAL TECHNOLOGY IN ART RECOMMENDED

Graphics 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:** DIGITAL TECHNOLOGY IN ART RECOMMENDED

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:** DIGITAL TECHNOLOGY IN ART RECOMMENDED

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.

# McDowell Intermediate and McDowell High School Descriptions

**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. Students 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.**

# McDowell Intermediate and McDowell High School Descriptions

## 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.

**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.

**H23010**                    **LIFETIME FITNESS (GRADES 9-12)**  
**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 BIOLOGY, 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.

# McDowell Intermediate and McDowell High School Descriptions

## World Language

**W14010\*\* FRENCH 1 (GRADES 10-12)**  
**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 10-12)**  
**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 10-12)**  
**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).

**W25010\*\* GERMAN 2 (GRADES 10-12)**  
**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).

**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).

**W34020\*\* HONORS FRENCH 3 (GRADES 11-12)**  
**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 11-12)**  
**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 10-12)**  
**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 11-12)**  
**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.

## McDowell Intermediate and McDowell High School Descriptions

---

**W45020\*\***            **HONORS GERMAN 4 (GRADES 11-12)**  
**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 10-12)**  
**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 11-12)**  
**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.

# McDowell Intermediate and McDowell High School Descriptions

## 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 DESIGN & PRINT (GRADE 10)**  
**V36510**      **GRAPHIC MEDIA DESIGN & PRINT (GRADE 11)**  
**V46510**      **GRAPHIC MEDIA DESIGN & PRINT (GRADE 12)**

**CREDIT:**      **4.00 CREDIT**  
**PREREQUISITE:**      **APPLICATION PROCESS**

The Graphic Communications 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 TECHNOLOGY (GRADE 10)**  
**V36010**      **FACILITY MAINTENANCE TECHNOLOGY (GRADE 11)**  
**V46010**      **FACILITY MAINTENANCE TECHNOLOGY (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 craftsman 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.

# McDowell Intermediate and McDowell High School Descriptions

## 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.

# McDowell Intermediate and McDowell High School Descriptions

## 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 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 curriculum includes all facets of drawing, including the preparation of reports, charts, and data sheets. The Drafting & Design 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 Technologies 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.

## SPORTS THERAPY AND EXERCISE SCIENCE

## TRANSPORTATION CLUSTER

**V20510**

**AUTO BODY REPAIR (GRADE 10)**

**V30510**

**AUTO BODY REPAIR (GRADE 11)**

**V40510**

**AUTO 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 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 TECHNOLOGY (GRADE 10)**

**V31010**

**AUTOMOTIVE TECHNOLOGY (GRADE 11)**

**V41010**

**AUTOMOTIVE TECHNOLOGY (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.

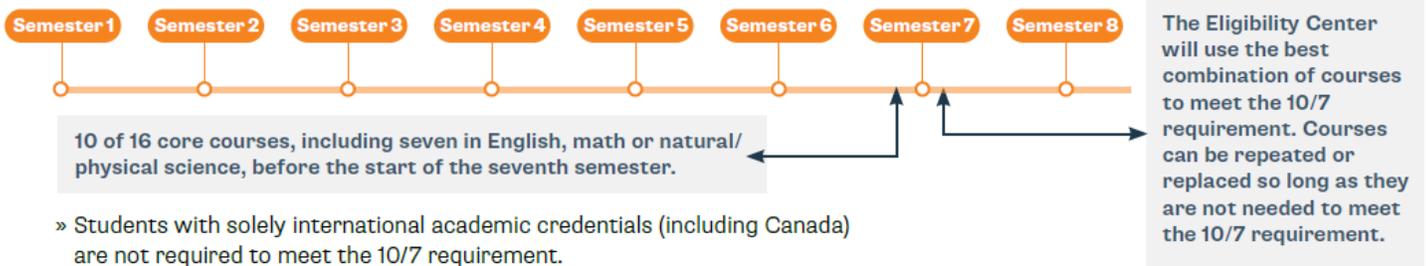
# DIVISION I ACADEMIC STANDARDS

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 graduate from high school and meet *all* of the following requirements:

1. Complete a total of 16 core courses in the following areas:



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



3. Complete the 16 NCAA-approved core courses 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 an SAT combined score or ACT sum score that matches your core-course GPA (minimum 2.300) on the Division I full-qualifier sliding scale. Review the sliding scale on [page 22](#) to ensure your score meets Division I requirements. More information regarding the impact of COVID-19 and test scores can be found at [on.ncaa.com/COVID19\\_Fall2022](https://on.ncaa.com/COVID19_Fall2022).

## How to plan your high school courses to meet the 16 core-course requirement:

# 4 x 4 = 16

9 <sup>TH</sup> GRADE	10 <sup>TH</sup> GRADE	11 <sup>TH</sup> GRADE	12 <sup>TH</sup> GRADE
(1) English (1) Math (1) Science (1) Social Science and/or additional	(1) English (1) Math (1) Science (1) Social Science and/or additional	(1) English (1) Math (1) Science (1) Social Science and/or additional	(1) English (1) Math (1) Science (1) Social Science and/or additional
<b>4 CORE COURSES</b>	<b>4 CORE COURSES</b>	<b>4 CORE COURSES</b>	<b>4 CORE COURSES</b>

# 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 graduate from high school and meet all of the following requirements:



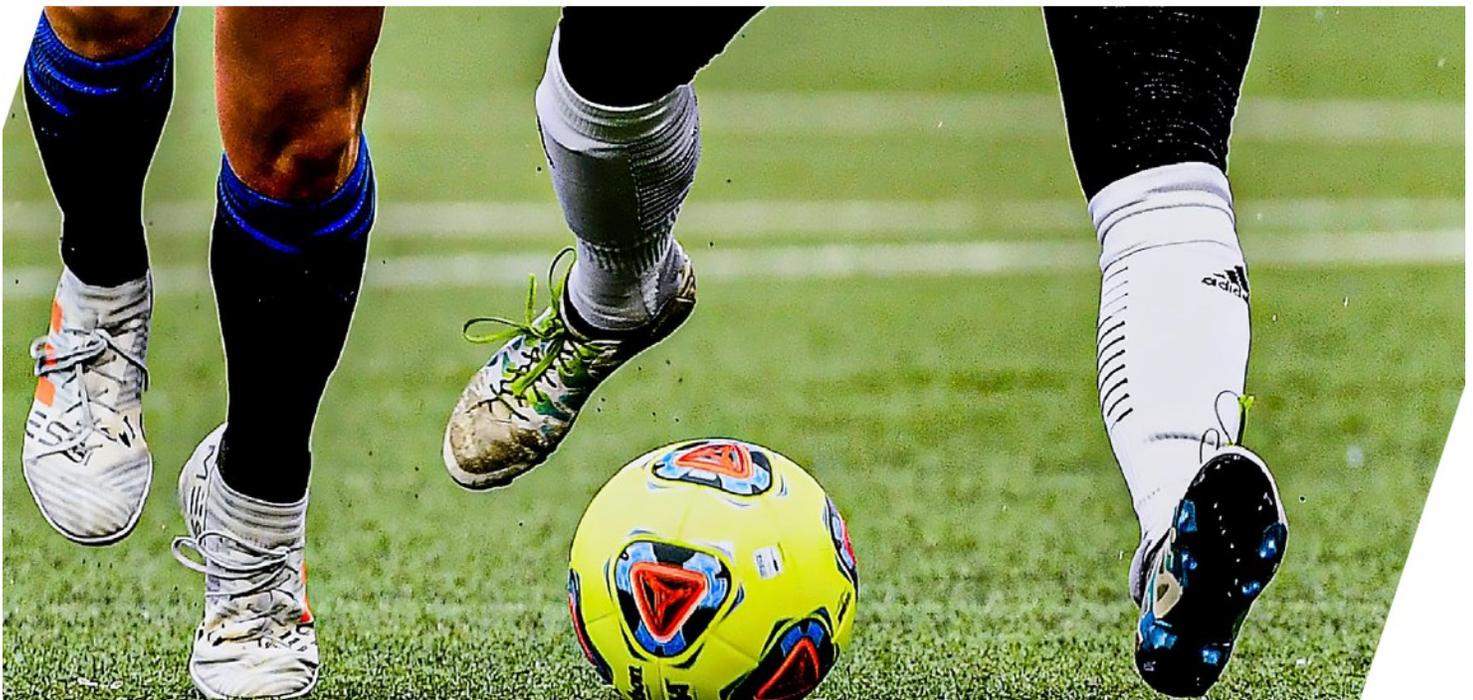
1. Complete 16 core courses in the following areas:

<b>ENGLISH</b>	<b>MATH</b> (Algebra I or higher)	<b>NATURAL/ PHYSICAL SCIENCE</b> (Including one year of lab, if offered)	<b>ADDITIONAL</b> (English, math or natural/physical science)	<b>SOCIAL SCIENCE</b>	<b>ADDITIONAL COURSES</b> (Any area listed to the left, foreign language or comparative religion/philosophy)
<b>3 years</b>	<b>2 years</b>	<b>2 years</b>	<b>3 years</b>	<b>2 years</b>	<b>4 years</b>

2. Earn an SAT combined score or ACT sum score that matches your core-course GPA (minimum 2.200) on the Division II full-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\\_Fall2022](https://on.ncaa.com/COVID19_Fall2022).

3. Submit proof of graduation to the 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 receive an athletics scholarship and practice during their first year of full-time enrollment at a Division II school, but may NOT compete.



# 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  
Honors English 9  
Academic English 10  
Honors English 10  
Academic English 11  
Honors English 11  
AP® English Language & Composition 11  
Academic English 12  
Honors English 12  
AP® English Literature & Composition 12  
Creative Writing  
Advanced Exploring Writing  
Journalism 1  
Basic Forensics  
Advanced Forensics  
Young Adult Literature  
AP® Seminar  
AP® Research

### Mathematics

Math 1 (.34 credit)  
Math 2 (.34 credit)  
Math 3 (.34 credit)  
Academic Algebra 1  
Academic Algebra 1 (180) (1.0 credit)  
Academic Geometry  
Honors Geometry  
Academic Algebra 2  
Academic Algebra 2 (180) (1.0 credits)  
Honors Algebra 2  
Algebra 3  
Trigonometry  
Honors Pre-Calculus/Trigonometry  
Honors Calculus  
AP® Calculus AB  
AP® Calculus BC  
Probability and Statistics  
Honors Probability and Statistics  
AP® Statistics  
AP® Computer Science Principles

### Natural/Physical Science

Applied Earth and Space Science  
Academic Earth and Space Science  
Honors Earth and Space Science  
Applied Biology  
Academic Biology  
Honors Biology  
AP® Biology  
Applied Chemistry  
Academic Chemistry  
Honors Chemistry  
AP® Chemistry  
Honors Organic Chemistry  
Conceptual Physics  
Academic Physics  
Honors Physics  
AP® Physics 1  
AP® Physics C—Mechanics  
AP® Environmental Science  
Honors Anatomy & Physiology  
CSI Forensics  
Environmental Issues  
Mechanical Science

### Additional Courses

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

### Social Studies

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



