

A resource for students and parents to  
engage in educational and career planning



# **Carbondale Area**

# **Jr./Sr. High School**

## **Course Selection Guide**

## **2025-2026**

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Carbondale, PA 18407  
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[www.carbondalearea.org](http://www.carbondalearea.org)



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Dear Parents and Guardians,

Carbondale Area Jr./Sr. High School is committed to providing your child with the best education possible and that includes challenging every student to reach his or her full potential. Our goal is to ensure that your child will have a strong foundation for future success in whatever College or Career they choose to enter. We will accomplish this through our outstanding educational system where highly effective classroom teachers, using a rich and rigorous curriculum and differentiated instruction will help all students meet the PA academic standards.


This course selection guide provides course descriptions that will assist you and your child in selecting the proper courses to meet their needs and interests. We encourage you to take an active role in developing your child's educational plan as we strive to create high expectations and learning experiences for a successful academic career.

Respectfully,



Joseph W. Farrell  
Principal  
Carbondale Area Jr./Sr. High School

Respectfully,



Lawrence A. Gabriel III  
Assistant Principal  
Carbondale Area Jr./Sr. High School

## **GUIDANCE DEPARTMENT CONTACT INFORMATION**

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1-844-330-2273 ext. 1192

## **COUNSELING SERVICES**

Counselors at Carbondale Area Junior/Senior High School are available to help students understand abilities and pursue interests and learning opportunities in relation to their academic, career, personal, and social growth and development. They assist students define goals and explore and examine occupational areas. Most important, they strive to help students develop as individuals and be able to acquire and develop the tools and skills to set and attain future goals. Students are encouraged to meet with their counselors to discuss course selection each year.

Success in the New Economy Video

<https://www.youtube.com/watch?v=bauDp4NdPK8&t=273s>

## **INTRODUCTION TO THE COURSE SELECTION PROCESS**

This course selection guide is intended to assist students in grades 8 – 11 select high school courses for grades 9 – 12. School counselors, teachers, and the principal make placement and scheduling recommendations for incoming 7<sup>th</sup>, as well as 8<sup>th</sup> grade students, based on the students' academic and standardized test performance and learning needs. This course selection guide includes course descriptions for all courses offered in grades 7 – 12 in the Carbondale Area School District. Every attempt will be made to accommodate course requests when students meet all eligibility criteria. However, some courses, class periods, schedule options, or suggested class size limitations may not be available based upon scheduling conflicts, number of students, staffing limitations, and other considerations.

## **LEVEL RECOMMENDATION GUIDELINES**

### **Advanced Placement**

This level is for academically talented college preparatory students whose abilities, interests, and demonstrated levels of performance show they can/will meet the demands of difficult college work in high school. Advanced Placement classes assume students already have strong foundations in the specific subject area of the course and are seriously interested in preparing to take the subject area AP exam.

### **Honors**

This level is for high achieving students who are capable of higher levels of thinking and demonstrate the ability to perform academically in a highly competent manner. This level requires the student to be responsible, mature, and have well-developed study skills which enable the student to pursue independent learning.

### **Academic**

This level is for students who are preparing for post-secondary college and career opportunities. This level requires the student to be responsible, mature, and have well-developed study skills which enable the student to pursue their academic and career goals.

## **SEQUENTIAL SUBJECTS AND PREREQUISITES**

### **TEACHER RECOMMENDATIONS (English, Social Studies, Math, and Science)**

All returning C.A.H.S. students will be recommended for their current level of courses as part of course registration for the following year. Please understand that these recommendations are made in the best academic interest of the student. You are strongly encouraged to follow these recommendations. However, if you feel strongly that a change in level is appropriate, please communicate with your child's current teacher in that subject area and their counselor. Should a change be made, there is no assurance that a schedule adjustment will be able to be made later if there is a desire to return to the recommended course level. Please refer to the course change information found in the Academic Load and Changing Courses section of this booklet.

### **PREREQUISITES**

All prerequisite information will be listed directly in the course description.

### **REQUEST FOR SCHEDULE CHANGES (ADD/DROP)**

If a student requests any schedule change, he or she must do so by the end of the current school year (no later than June 30). If a student enrolls in a course that is more rigorous than that which was recommended, he/she will have the opportunity to drop the course prior to October 1. Students must request to drop the course in writing and meet with a counselor prior to being permitted to drop the course. However, there is no assurance that a schedule adjustment will be able to be made.

## **SUMMER SCHOOL**

Students who fail a class are encouraged to attend summer school to retake and pass that class, therefore maintaining progress toward graduation.

### **7<sup>th</sup> & 8<sup>th</sup> Grade**

Penn Foster will be Carbondale Area's official on-line credit recovery program (Summer School). To properly remediate for the PSSA testing, 7<sup>th</sup> and 8<sup>th</sup> grade students who fail Math, English, Reading, or any combination of the three are required to retake and pass those courses online through Penn Foster. Private tutors will not be permitted in any of these subject areas. Failure to enroll in and successfully pass will result in the student being retained in his/her present grade level and therefore having to repeat all appropriate grade level courses.

### **9<sup>th</sup> through 12<sup>th</sup> Grade**

Penn Foster will be Carbondale Area's official on-line credit recovery program (Summer School) for students in grades 9 through 12 who fail a course (s). Students are encouraged to make up any courses they failed in the summer immediately following the failure of any course. However, they will not be required to do so, nor will they be retained in their present grade level if they do not do so. They will be promoted to the next grade level, lacking credits and will be required to make up the failed course(s), on-line through Penn Foster, before their anticipated graduation. For students lacking credits to graduate on time, the Guidance Department will keep students and families informed of their credit status.

## **REPEATING SUBJECTS**

A subject in which students have earned high school credit may NOT be rescheduled for additional credit. If students fail a subject, they are **STRONGLY** encouraged to attend summer school. If this is not possible, courses may be repeated the following year if available for scheduling. Students are reminded to review their credits with their counselor to ensure they are on track to meet credit requirements for graduation.



# GRADUATION REQUIREMENTS

1. Credit Requirements
2. Pathways to Graduation
3. Graduation Project Requirements

## 1. CREDIT REQUIREMENTS

Successful completion of 23 or more credits is required for graduation. Students in grades 9-12 are required to enroll in a minimum of 26 credits over four years with at least 6 full credit courses (in 10<sup>th</sup> through 12<sup>th</sup> grade) and Physical Education each year. Health is required in 11<sup>th</sup> Grade. The minimum credit requirements for each subject area are listed below.

English	4.0 credits
Science	3.0 credits
Math	3.0 credits
Social Studies	3.0 credits
Arts/Humanities	2.0 credits
Physical Education	2.0 credits
Health	0.5 credits
Electives	5.5 credits
<b>TOTAL</b>	<b>23 credits</b>

## 2. Graduation Pathways in Accordance with Act 158 of 2018; Class of 2023 and Beyond

### **Carbondale Area School District**

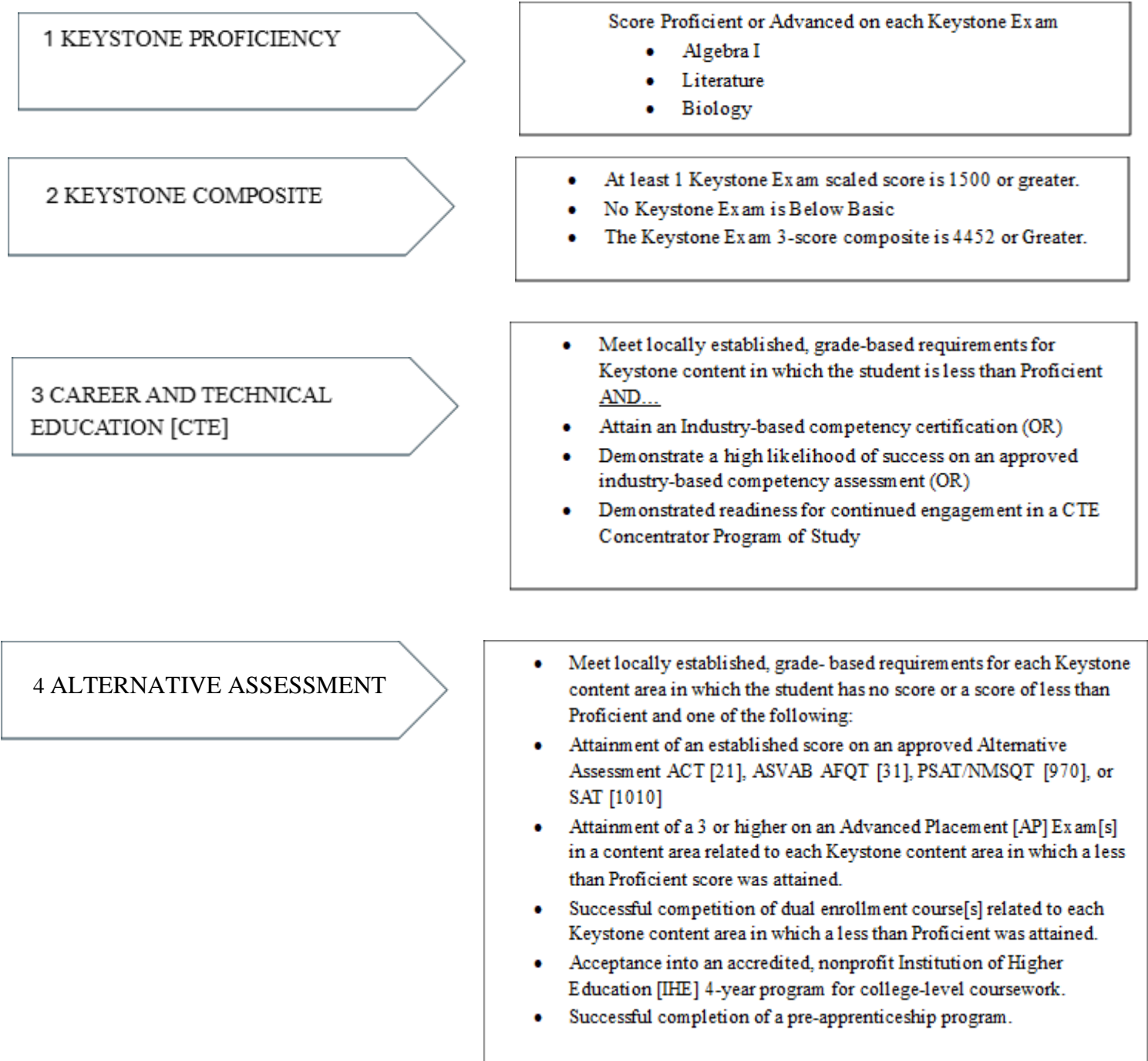
#### Graduation Pathways in Accordance with Act 158 of 2018 Class of 2023 and Beyond

In addition to fulfilling Carbondale Area School District's graduation requirements, students of the class of 2023 and beyond must successfully meet the requirements of one of the five pathways outlined below per Act 158 of 2018, which was signed into law by Governor Tom Wolf on October 24, 2018. It provides alternatives to Pennsylvania's statewide requirement of attaining proficiency on the three [3] end-of-course Keystone Exams- Algebra I, Literature, and Biology- through which a student may achieve statewide graduation requirements. Effective with the graduating class of 2023, students have the option to demonstrate postsecondary preparedness through one of four additional pathways that more fully illustrate college, career, and community readiness. Keystone Exams will continue as the statewide assessment Pennsylvania uses to comply with accountability requirements set forth in the federal Every Student Succeeds Act (ESSA). Although students will no longer be required to achieve proficiency on the Keystone Exams to meet statewide graduation requirements, students must take the Keystone Exams for

purposes of federal accountability. Failure to do so will affect a Local Education Agency (LEA) and the school’s participation rate. More detailed information can be found at [www.pdesas.org](http://www.pdesas.org)

PENNSYLVANIA PATHWAYS TO GRADUATION (CLASS OF 2023 AND BEYOND)

1. KEYSTONE PROFICIENCY PATHWAY
2. KEYSTONE COMPOSITE PATHWAY
3. CAREER AND TECHNICAL EDUCATION [CTE] CONCENTRATOR
4. ALTERNATIVE ASSESSMENT PATHWAY
5. EVIDENCE BASED PATHWAY



## 5 EVIDENCE BASED

Meet locally established, grade-based requirements for each Keystone content area in which the student has no score or a score of less than Proficient and must provide *three* [3] pieces of evidence, as outlined below, consistent with the student's goals and career plans:

SECTION ONE- At least one piece of evidence required from Section one.

- Attainment of 3 or better on any AP Exam.
- Successful completion of any dual enrollment or postsecondary course.
- Industry-recognized credential.
- Acceptance into an other- than 4- year Institution of Higher Education (I.H.E.) for college-level coursework.

SECTION TWO- No more than TWO (2) pieces of evidence permissible from Section 2.

- Attainment of Proficient or Advanced on any Keystone Exam.
- Successful completion of a service-learning project.
- Letter guaranteeing full-time employment, or military enlistment.
- Completion of an internship, externship, or cooperative education program.
- Compliance with NCAA Division 2 Academic Requirements.

Students are encouraged to participate in a job shadowing experience in grades 9 through 12. Job shadowing is a one-day experience in which students can explore a career by spending time with a professional in their workplace. It gives students a chance to see what a job is like, ask questions, and learn about daily tasks. This experience helps students discover their interests.

## BUSINESS, MANAGEMENT, & ADMINISTRATION

### Marketing

- Merchandising
- Marketing Management
- Marketing Communications
- Marketing Research
- Professional Sales

### Finance

- Securities and Investment
- Banking Services
- Business Finance
- Accounting
- Insurance

### Business, Management, and Administration

- Administrative Support
- Operations Management
- Business Information Management
- Human Resources Management
- General Management

### Hospitality, Tourism, and Lodging

- Recreation, Amusement, and Attractions
- Restaurants and Food/Beverage Services
- Travel and Tourism

## ARTS, COMMUNICATIONS, & INFORMATION SYSTEMS

### Arts, Audio/Video Technology, & Communications

- Audio/Video Technology and Film
- Journalism and Broadcasting
- Performing Arts
- Printing Technology
- Communications Technology
- Visual Arts

### Information Technology

- Information Support and Services
- Network Systems
- Programming and Software Development
- Web and Digital Communications

## HEALTH SCIENCE TECHNOLOGY

### Health Science

- Biotechnology Research and Development
- Diagnostic Services
- Support Services
- Health Informatics
- Therapeutic Services

## AGRICULTURE, FOOD, AND NATURAL RESOURCES

- Animal Systems
- Agribusiness Systems
- Environmental Service Systems
- Food Products and Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural, and Technical Systems

## HUMAN SERVICES

### Law, Public Safety, Corrections, & Security

- Correction Services
- Emergency and Fire Management Services
- Law Enforcement Services
- Legal Services
- Security and Protective Services

### Human Services

- Consumer Services
- Counseling and Mental Health Services
- Early Childhood Development and Services
- Family/Community Services
- Personal Care Services

### Government and Public Administration

- Revenue and Taxation
- Foreign Service
- Governance
- National Security
- Planning
- Public Management and Administration
- Regulation

### Education and Training

- Administration and Administrative Support
- Professional Support Services
- Teaching/Training

## ENGINEERING, MANUFACTURING, & TECHNOLOGY

### Architecture and Construction

- Construction
- Design/Pre-Construction
- Maintenance Operations

### Manufacturing

- Production
- Manufacturing Production
- Process Development
- Maintenance, Installation, and Repair
- Quality Assurance
- Logistics and Inventory Control
- Health, Safety, and Environmental Assurance

### Science, Technology, Engineering, & Mathematics

- Engineering and Technology
- Science and Mathematics

### Transportation, Distribution, & Logistics

- Facility and Mobile Equipment Maintenance
- Health, Safety, and Environmental Management
- Logistics Planning and Management Services
- Sales and Services
- Transportation Operations
- Transportation Systems/Infrastructure Planning, Management, and Regulation
- Warehousing and Distribution Center Operations



### **3. GRADUATION PROJECT REQUIREMENTS**

All students will be required to complete an individualized, career-focused Graduation Project consisting of a Research Paper, Electronic Career Portfolio within the Smart Futures platform, and a Final Presentation. The focus of the project is to assist students in relating their career interests and postsecondary higher education aspirations to individual aptitudes and achievements. Students must successfully complete each of these components in accordance with the specific guidelines set forth to meet the Graduation Project requirement.

## **CLASS RANK/ GRADING SYSTEM/WEIGHTED GRADES**

Class rank is cumulative, weighted and is based upon all full credit courses taken in grades 9-12. Advanced Placement courses in Biology, Chemistry, English, Math, American History, and Computer Science Principles, Physics, and all Honors courses are weighted by a factor of +4. A student who transfers to Carbondale Area School District will be assigned a class rank after being enrolled for at least two [2] semesters. A student transferring as a senior will not be ranked. A student must be enrolled in the high school for four [4] full consecutive years [Grades 9-12] to be considered Valedictorian, Salutatorian, or Class Poet. In addition to meeting all other graduation requirements, he/she must also complete two [2] years of a foreign language and complete three [3] Advanced Placement courses. For students in grades 9 through 11 to be considered first, second, or third in their respective grade levels, they must be enrolled in two [2] or more Honors or Advanced Placement courses and a foreign language course [unless he/she previously completed two (2) years of foreign language].

Letter and grade point average conversions are listed below:

99-100	A+	3.9-4.0
95-98	A	3.5-3.8
93-94	A-	3.3-3.4
91-92	B+	3.1-3.2
87-90	B	2.7-3.0
85-86	B-	2.5-2.6
83-84	C+	2.3-2.4
77-82	C	1.7-2.2
75-76	C-	1.5-1.6
70-74	D	1.0-1.4
00-69	F	0

## **HONOR ROLL**

Students who have attained an overall average of 93-100 in all major subjects are designated as having achieved Distinguished Academic Honors. Students who have attained an overall average of 87-92 in all major subject areas are designated as having achieved Second Honors. A failing grade or an incomplete grade in any subject disqualifies a student from the Honor Roll regardless of his/her overall average.

## **DISTINGUISHED ACADEMIC HONORS RECOGNITION CRITERIA**

Students earn Distinguished Academic Honors recognition at our Academic Honors Night Ceremony by achieving and maintaining a cumulative academic course average of 93.0 and above [not rounded] with a minimum of four [4] core academic courses of rigor each year, including courses adhering to the College Prep, Honors, and/or Advanced Placement curriculum; the only exception to this would be Career Technology students who may only have three [3] core academic courses of rigor in conjunction with their specific programming at the Career Technology Center. To be considered Valedictorian, Salutatorian, or Class Poet, a student must be enrolled in the high school for four [4] full consecutive years [grades 9 through 12] and have completed three [3] or more Advanced Placement courses and two [2] years of a foreign language. Likewise, for students in grades 9 through 11 to be considered first, second, or third in their respective grade levels, they must be enrolled in two [2] or more Honors or Advanced Placement courses and a foreign language course [unless he/she previously completed two (2) years of foreign language].

## **NATIONAL HONOR SOCIETY NATIONAL JUNIOR HONOR SOCIETY**

Selection to the National Honor Society and National Junior Honor Society is based on scholarship, character, leadership, and service. To be eligible for membership consideration, a student must have a cumulative average of 90 or above for six consecutive quarters.

The National Honor Society and National Junior Honor Society are national organizations that recognize outstanding students who demonstrate high levels of scholarship, leadership, service, and character, with the additional attribute of citizenship for NJHS. To qualify for and maintain membership in the Carbondale Area Chapters of NHS or NJHS, students must meet the following criteria.

7<sup>th</sup> grade students must maintain a 90 average for the first two quarters, and then apply for membership by writing an application essay and seeking teacher recommendations. 8<sup>th</sup> and 9<sup>th</sup> grade students who were not previously inducted can also apply if they maintained a 90 overall for the previous school year and a 90 for the first two quarters of their current school year. To maintain membership, students must perform 10 hours of community service throughout the year and not have more than two marking periods where their overall average falls below 90 percent.

10<sup>th</sup> grade students must maintain a 90 average for the first two quarters, plus have had an overall average of 90 or better in 9<sup>th</sup> grade, and then apply for membership by writing an application essay and seeking teacher recommendations. 11<sup>th</sup> and 12<sup>th</sup> grade students who were not previously inducted can also apply if they maintained a 90 overall for the previous school year and a 90 for the first two quarters of their current school year. To maintain membership, students must perform 15 hours of community service throughout the year and not have more than two marking periods where their overall average falls below 90 percent.

## **CAREER TECHNOLOGY CENTER**

The Career Technology Center of Lackawanna County (CTCLC) offers 16 career areas to 8 local school districts in addition to non-public and other non-participating districts when requested. Programs are designed to be three years in length, beginning in sophomore year.

### **CTCLC Program Areas Include:**

Automotive Technology  
Building Mechanics Trades  
Carpentry  
Child Development  
Collision Repair  
Cosmetology  
Creative Communications, Digital Communications  
Creative Communications, Illustration and Design  
Creative Communications, Print Production and Technology  
Culinary Arts  
Cybersecurity  
Electrical Construction & Maintenance  
Heating, Ventilation, and Air Conditioning (HVAC)  
Masonry  
Medical Assistant and Patient Care Technician  
Plumbing & Heating  
Protective Services  
Robotics & Automation  
Service Occupations  
Smart Systems & Engineering Technology (Set)  
Welding Technology

Ninth-grade students tour the Career Technology Center (CTC) of Lackawanna County, where they observe each program in action and learn about the hands-on training available. This tour helps them become familiar with the programs and explore their interests. In the spring of ninth grade, students begin the CTC application process to start a program in their sophomore year.

## **JUNIOR ACHIEVEMENT**

Carbondale Area partners with Junior Achievement to provide students with valuable learning experiences through programs like Tomorrow's Teachers, JA YES Day, and the JA Inspire career exploration event. These programs help students develop important skills, explore career options, and prepare for future success. This partnership enhances educational opportunities and supports students' personal and professional growth.

## **WORKFORCE SUMMIT**

Carbondale Area provides the opportunity for 12<sup>th</sup> grade students to attend the Skills in Scranton Workforce Summit. This full-day event offers networking, professional development, and career exploration opportunities. Highlights include connecting with 50 top local employers, attending workshops on resume building and interview techniques, and gaining insights from industry leaders during featured presentations.

## **COURSE OFFERINGS AND DESCRIPTIONS**

### **CO/OP / INTERNSHIP**

The Co-op/Internship program is a one-year program offered to seniors only. The course is designed to provide on-the-job training in a career area of the student's choice. Students will obtain skills in an occupational area that is not taught in high school and will prepare students for new and futuristic careers. This program is designed to teach employability skills with planned, supervised, and practical work experience in a business setting. Students will develop personal initiative, learn to work with others, and recognize the importance of an appropriate attitude and behavior for the occupation. Students report to their work site for half of the school day and can earn up to three elective credits for this course.

### **DUAL ENROLLMENT**

Students in grades 11 and 12 may qualify and earn college and high school credit concurrently through dual enrollment in Carbondale Area School District. Dual enrollment allows students the opportunity to earn college credit through courses at Carbondale Area that are taught by certified adjunct faculty at Lackawanna College, Keystone College, and Johnson College. These courses may include: U.S. History I (CAHS-AP History); Principles of Accounting (CAHS-Accounting); College Algebra (CAHS-Trigonometry/Pre-Calculus); Introduction to Statistics and Data Analysis (CAHS-Probability and Statistics); Introduction to Literature (CAHS-English 12/AP English); College Writing (CAHS-Advanced Composition); General Chemistry I (CAHS-Chemistry); General Chemistry I Lab (CAHS-Chemistry Lab), Anatomy & Physiology (CAHS-Honors Anatomy & Physiology), Pre-Calculus (CAHS Honors Pre-Calc/Trig), Calculus I (CAHS AP Math), Elementary Spanish I (CAHS Spanish 3), Elementary Spanish II (CAHS Spanish 4), Intro to Information Technology (CAHS AP Computer Science Principles).



In addition, students may qualify and earn college and high school credit concurrently through dual enrollment in Carbondale Area School District through already existing courses at Lackawanna College and Johnson College. Courses may be in person (on campus) or online.

Although there are costs associated with dual enrollment courses (tuition, books, and fees), it would be advantageous for the student to enroll because tuition costs are offered at a reduced rate.

## **PENNSYLVANIA INTERSCHOLASTIC ATHLETICS ASSOCIATION**

### **PIAA GUIDELINES**

#### **AGE – PIAA CONSTITUTION & BYLAWS: Article I: Article XIX**

A student shall be ineligible for interscholastic athletic competition upon attaining the age of nineteen years, with the following exception: If the age of 19 is attained on or after July 1, the student is eligible, age-wise, to compete through that school year.

In sports where interscholastic competition is limited to grades 7 through 9, if the age of 15 is attained on or after July 1, the student is eligible, age-wise, to compete through that school year. If the age of 16 is attained on or after July 1, the student is eligible, age-wise, to compete with students in the ninth grade.

#### **AMATEUR STATUS – PIAA Constitution & By-Laws – Article III**

To be eligible to participate in a sport, a student must be an amateur in that sport. A student loses amateur status in a sport if the student, or the student's parent(s) or guardian(s), receives money or property for or related to the student's athletic ability, participation, performance, services, or training in a sport.

#### **ELIGIBILITY OF SEVENTH, EIGHTH, AND NINTH GRADE STUDENTS TO PARTICIPATE IN SENIOR HIGH SCHOOL INTERSCHOLASTIC ATHLETICS - PIAA Constitution and By-Laws: Article XIX**

Students in the 7th or 8th grade who have not attained the age of fifteen years before July 1, and students in the 9th grade who have participated in one season in that sport during that school year, may neither Practice nor compete with students in the 10th, 11th or 12th grades. Students in the 7th or 8th grade who have attained the age of fifteen years before July 1 and students in the 9<sup>th</sup> grade, who have not participated in one season in that sport during that school year, may, with written approval of the high school Principal and the junior high/middle school Principal, Practice with, participate in a maximum of two Inter-School Practices or Scrimmages, and compete with students

in grades 10, 11 and 12. The option to compete at the senior high school level of competition (grades 10-12) or at the junior high/middle school level of competition (grades 7-9) is exercised when the student participates in a Contest. If the student first participates in a junior high/middle school Contest, the student is committed to that level of competition in the sport involved for the entire school year. If the student first participates in a senior high school Contest, the student is committed to that level of competition in that sport for the entire school year. If the student does not participate in a Contest, the option to compete at the junior high/middle school level of competition or senior high school level of competition must be exercised not later than 21 days after the student begins Practice. Once this option is exercised, it may not be changed in that sport for the entire school year.

### **ATTENDANCE – PIAA Constitution & By-Laws: Article III**

A pupil must be regularly enrolled in a secondary school in full-time attendance. A student is eligible only at the school at which the student is enrolled. Exceptions exist for home-schooled students and students enrolled in Charter or Cyber Schools. A pupil who has been absent from school for a total of twenty or more days in a semester shall not be eligible to participate in any athletic contest until he/she has attended school for a total of forty-five (45) school days following the twentieth day of absence. A PIAA district committee may consider an exception when there is an extended absence because of approved reasons.

CASD Attendance Policy: Student-athletes must report to school by homeroom--, if driving by 7:55AM and remain in school for the duration of the entire school day to participate in interscholastic practice or competition on that day. If a student-athlete misses any portion of the school day, he or she must have a signed note from the Principal or Assistant Principal to be able to participate. An attendance irregularity during the last day of classes of the school week will make a student ineligible for activities during the weekend. Exceptions for absences for educational, religious, and medical reasons will be made when prior approval from the student's assigned school office has been granted.

### **PIAA PERIOD OF PARTICIPATION - PIAA Constitution and By-Laws: Article VIII**

No student is eligible for practice or participation in interscholastic athletics prior to entry into seventh grade. A student-athlete loses eligibility when the student-athlete has reached the end of the student's fourth consecutive year beyond the eighth grade. If the student repeats a grade after eighth, the student will be ineligible as a senior. Played six seasons beyond the sixth grade or four seasons beyond the eighth grade in any sport. Completed the work of grades 9-12, inclusive.

## **NATIONAL COLLEGIATE ATHLETICS ASSOCIATION N.C.A.A. GUIDELINES**

The NCAA Eligibility Center certifies the academic and amateur credentials of all students who want to play sports in an NCAA Division I or II institution as freshmen. In order to practice, play and receive an athletic scholarship, students need to meet certain academic benchmarks. An additional certification process exists to make sure the student is still an amateur, necessary in order for the student to compete. For complete eligibility requirements refer to the NCAA's website at <https://web3.ncaa.org/ecwr3/> When you register for the SAT or ACT, use the NCAA Eligibility Center code of 9999 to ensure all scores are reported directly to the NCAA Eligibility Center. Test scores that appear on your transcript will **not** be used.

The following requirements must be met in order for a student to be able to practice, play and receive ascholarship at an NCAA Division I or II college or university.

- Division I:**
1. Graduate from high school;
  2. Complete a minimum of 16 core courses;
  3. Complete 10 core courses, including seven in English, math or natural/physical science, before the seventh semester;
  4. Present a minimum 2.30 core-course grade-point average (GPA);
  5. Present a qualifying test score on either the ACT or SAT; and
  6. Complete the amateurism questionnaire and request final amateurism certification.

**Division I Core-Course Breakdown** (Courses **MUST** appear on your list of Approved Core Courses)

- 4 years of English
- 3 years of math (Algebra I or higher)
- 2 years of natural or physical science (including one year of a lab science)
- 1 extra year of English, math, or natural or physical science
- 2 years of social science
- 4 years of extra core courses from any category above or world language

- Division II:**
1. Graduate from high school;
  2. Complete a minimum of 16 core courses;
  3. Present a minimum 2.20 core-course grade-point average (GPA);
  4. Present a qualifying test score on either the ACT or SAT;  
and
  5. Complete the amateurism questionnaire and request final amateurism certification.

**Division II Core-Course Breakdown** (Courses MUST appear on your list of Approved Core Courses)

- 3 years of English
- 2 years of math (Algebra I or higher)
- 2 years of natural or physical science (including one year of a lab science)
- 3 additional years of English, math, or natural or physical science
- 2 years of social science
- 4 years of extra core courses from any category above or world language

# **7<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Reading – full credit
3. Math – full credit
4. American Cultures I – full credit
5. Integrated Science 7 – full credit
6. Study Skills – partial credit
7. Phys. Ed. – partial credit
8. Music Elective – partial credit (Music, Band, or Chorus)

## **ENGLISH LANGUAGE ARTS 7 (ELA 7) – COURSE #170**

This course is designed to engage students in the writing process through distinct mode-specific writing and examination of grammatical concepts in the context of their own compositions. In alignment with the Pennsylvania Core Standards, students will write arguments to support claims with clear reasons and relevant evidence, write informational texts to examine topics and convey ideas, and write narratives to develop real or imagined experiences or events. Students will also acquire enhanced strategies to write evidence-based analysis of literary and informational texts. Course writing assignments will provide the foundation for students to refine and demonstrate a command of standard English grammar and writing conventions.

## **ENGLISH LANGUAGE ARTS 7A (ELA 7A) – COURSE #171**

This course is designed to engage students in the writing process through distinct mode-specific writing and examination of grammatical concepts in the context of their own compositions. In alignment with the Pennsylvania Core Standards, students will write arguments to support claims with clear reasons and relevant evidence, write informational texts to examine topics and convey ideas, and write narratives to develop real or imagined experiences or events. Students will also acquire enhanced strategies to write evidence-based analysis of literary and informational texts. Course writing assignments will provide the foundation for students to refine and demonstrate a command of standard English grammar and writing conventions. Remediation for the general level is addressed in daily lessons and assignments as needed.

## **READING 7 – COURSE #5017**

The purpose of this course is to provide instruction that enables students to accelerate the development of reading and analyzing literary fiction and informational texts. In alignment with the Pennsylvania Core Standards, instruction will emphasize reading comprehension, evidence-based writing, and vocabulary study using a variety of literary and informational texts encompassing a broad range of text structures, genres, and levels of complexity. This differentiated reading course incorporates guided practice and modeling of reading strategies that will enable students to improve their overall reading performance. Enrollment in this course is based on teacher recommendation.

### **READING II 7 – COURSE #5057**

The purpose of this course is to provide instruction that enables students to accelerate the development of reading and analyzing literary fiction and informational texts. In alignment with the Pennsylvania Core Standards, instruction will emphasize reading comprehension, evidence-based writing, and vocabulary study using a variety of literary and informational texts encompassing a broad range of text structures, genres, and levels of complexity. This differentiated reading course incorporates whole group, small group, one on one instruction with intensive guided practice and modeling of reading strategies that will enable students to improve their overall reading performance. Enrollment in this course is based on teacher recommendation.

### **MATH 7 – COURSE #471**

The Math 7 course is a highly rigorous course that includes the arithmetic of, as well as converting between, all types of rational numbers – whole numbers, fractions, mixed numbers, terminating decimals, repeating decimals, percentages, and signed numbers. Proportional relationships are explored using ratios, unit rates, and constant of proportionality, simple interest, tax, tips, fees, commission, markup/markdown, and percent of increase/decrease. In addition to signed numbers, the pre-algebra concepts of variables; generating and creating equivalent expressions; and writing, solving, and graphing equations and inequalities are introduced. Also integrated are a variety of geometry topics such as scale drawings, triangle properties, triangle inequality theorem, slicing three-dimensional figures, angle relationships, circumference, area, surface area, and volume. Lastly addressed are the concepts of statistics and probability which include random sampling, drawing inferences about populations, measures of central tendency, variability, simple/compound probability, and likelihood of events occurring. Incorporated throughout the covered topics is calculator/technology use and multi-step applications/word problems that relate mathematical concepts to real life problem solving. The course curriculum, content, objectives, instruction, activities, and assessments are aligned with and prepare students to meet the Pennsylvania 7<sup>th</sup> Grade Common Core Standards for Mathematics.

### **GENERAL MATH 7 – COURSE #472**

The General Math 7 course includes the arithmetic of, as well as converting between, all types of rational numbers – whole numbers, fractions, mixed numbers, terminating decimals, repeating decimals, percentages, and signed numbers. Proportional relationships are explored using ratios, unit rates, and constant of proportionality, simple interest, tax, tips, fees, commission, markup/markdown, and percent of increase/decrease. In addition to signed numbers, the pre-algebra concepts of variables; generating and creating equivalent expressions; and writing, solving, and graphing equations and inequalities are introduced. Also integrated are a variety of geometry topics such as scale drawings, triangle properties, triangle inequality theorem, slicing three-dimensional figures, angle relationships, circumference, area, surface area, and volume. Lastly addressed are the concepts of statistics and probability which include random sampling, drawing inferences about populations, measures of central tendency, variability, simple/compound probability, and likelihood of events occurring. Incorporated throughout the covered topics is calculator/technology use and multi-step applications/word problems that relate mathematical ideas to real life problem solving. The course curriculum, content, objectives, instruction, activities, and assessments are aligned with and prepare students to meet the Pennsylvania 7<sup>th</sup> Grade Common Core Standards for Mathematics.

### **INTEGRATED SCIENCE 7 – COURSE #370**

Integrated Science 7 is a comprehensive course that explores the individual science disciplines within the following main topics: Life Sciences, Physical Sciences, and Earth and Space Sciences. In Life Sciences, students focus on topics pertaining to cells, ecosystems, human impacts on the environment and genetics. The Physical Sciences component delves into energy, matter, and forces. Earth and Space Science topics include weather and climate, geological processes, and space systems. Throughout the school year, students explore the connections between these scientific concepts and real-world applications, all while aligning with the Pennsylvania STEELS standards.

### **AMERICAN CULTURES I – COURSE #272**

American Cultures I is a survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-colonial era to the Civil War. American Cultures I examine colonization, the American Revolution, establishment of the Constitution, immigration and expansion of the nation, the War of 1812, and the events leading up to and during the Civil War. Themes that are covered in American Cultures I include: American culture, civil and political rights, technological change, economic change, immigration and migration, the formation and growth of the federal government, and the study of U.S. foreign and domestic policy throughout the period up to and including the Civil War.

### **GENERAL MUSIC 7 – COURSE #727**

General Music 7 is a study of basic music and music appreciation. The students will learn the history of the Star-Spangled Banner, music of the Armed Forces, Carbondale Area's Alma Mater, copyright, music theory and composition, musical careers, and music in the cinema. Units and course work are focused on music in everyday life. Challenging course work will include writing a song parody, writing an original composition, and a research project on musical careers and dramatic work of cinematic music.

### **BEGINNING BAND – COURSE #731**

Pre-requisite: Prior instrumental music experience is not required.

Beginning band is designed to provide students with an introductory experience on band instruments. Students will begin their study of instrumental music and standard performance practices on woodwind, brass, and percussion instruments. Instruction areas include ensemble rehearsal and performance techniques, musicianship, tone production, festival performance, self-critique techniques and music literacy.

Beginning Band is open to all 7<sup>th</sup> and 9<sup>th</sup> grade students who are required to take a music class whether band, chorus or general music. Student lessons will be available during the day and will be graded on attendance. Students are expected and encouraged to practice their instrument at home and must be available for evening concerts and performances, as it is part of the student's grade. Dress rehearsals will be held before each concert, which are also part of the student's grade.

### **JUNIOR HIGH CHORUS – COURSE #722**

Chorus provides an opportunity for participating students to become acquainted with two, three, and four-part harmony, solo performance, group participation, community involvement, organizational skills, public performance, and self-esteem. Students will also become familiar with conventional musical selections, world songs, foreign pieces and more unconventional texts and pieces (including holiday, classical, show tunes, standards, etc.). Students will also learn to work as a “team” and to work with each other’s talents and excitement for the art of singing.

### **PHYSICAL EDUCATION – COURSE #978**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meeting the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

### **STUDY SKILLS – COURSE #5078**

Using SOAR Learning and Soft Skills, students will learn to become more independent, learn the value of developing a strategy for learning, and learn “career-ready skills.” The course objective is for students to learn new skills and information, to comprehend information, to write clearly, communicate effectively, manage time, and meet deadlines. Through the use of these skills, students should expect to earn better grades, build confidence, and learn simple skills to use in school and in the workplace.



# **8<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Math – full credit
3. American Cultures II – full credit
4. Integrated Science 8 – full credit
5. Phys. Ed. – partial credit
6. Health – partial credit
7. Introduction to STEM – partial credit
8. Applied Computer Science – partial credit
9. Art – partial credit

## **ENGLISH LANGUAGE ARTS 8 (ELA 8) – COURSE #180**

This course is a continuation of the literary foundation provided in previous English-Language Arts classes, and in alignment with the Pennsylvania Core Standards, it prepares students for the requirements of high school English courses. The course enables students to strengthen their independent reading and comprehension skills through a wide range of increasingly complex informational and literary texts, including content-area readings. Students will work both independently and in small group settings to improve reading comprehension and critical analysis by engaging in close reading and other active reading strategies, examining literary elements and their modern connections, refining discussion skills, and formulating evidence-based responses orally and in writing. Students are provided with opportunities to engage in the writing process, whereby they build upon prior knowledge of mode-specific writing skills, as well as examine and practice grammatical concepts in the context of their own written compositions.

## **ENGLISH LANGUAGE ARTS 8A (ELA 8A) – COURSE #181**

This course is a continuation of the literary foundation provided in previous English-Language Arts classes, and in alignment with the Pennsylvania Core Standards, it prepares students for the requirements of high school English courses. The course enables students to strengthen their independent reading and comprehension skills through a wide range of increasingly complex informational and literary texts, including content-area readings. Students will work both independently and in small group settings to improve reading comprehension and critical analysis by engaging in close reading and other active reading strategies, examining literary elements and their modern connections, refining discussion skills, and formulating evidence-based responses orally and in writing. Students are provided with opportunities to engage in the writing process, whereby they build upon prior knowledge of mode-specific writing skills, as well as examine and practice grammatical concepts in the context of their own written compositions. Remediation for the general level is addressed in daily lessons as needed.

## **HONORS ALGEBRA I – COURSE #480**

This course includes further study of solving linear equations, including those with extraneous solutions, properties of real numbers, proportional relationships, probability, inequalities, estimation, greatest common factor, and least common multiple. The course extends the study of volume to include cones, cylinders, and spheres. The course introduces students to systems of linear equations and inequalities in two variables, in addition to exponent equations. Students

will learn how to simplify exponent expressions, find equations and identify properties of functions, and perform operations in and apply scientific notation. Students will learn how to use the Pythagorean Theorem and about the properties of the Objects of Transformation. Students will learn how to construct and interpret scatter plots and two-way tables when given a set of data. The students will learn how to interpret data using measures of central tendency. Students will learn how to simplify expressions involving roots, absolute value symbols, and exponents. Students will be introduced to polynomial operations and factoring. Emphasis will be placed on real world application problems and higher-level thinking word problems. Calculators are incorporated per the PA Common Core Standards. The course curriculum, instruction, and assessment are aligned with the Pennsylvania Common Core Standards for Mathematics. The course's objectives, content, and activities prepare students to meet both the 8<sup>th</sup> Grade and Algebra I Common Core Standards. Students in this course take the Keystone Exams.

### **PRE-ALGEBRA – COURSE #481**

This course includes further study of solving linear equations, including those with extraneous solutions, properties of real numbers, and proportional relationships. The course extends the study of volume to include cones, cylinders, and spheres. The course introduces students to systems of linear equations in two variables, in addition to exponent equations. Students will learn how to simplify exponent expressions, find equations and identify properties of functions, and perform operations in and apply scientific notation. Students will learn how to use the Pythagorean Theorem and about the properties of the Objects of Transformation. Students will learn how to construct and interpret scatter plots and two-way tables when given a set of data. The students will learn how to interpret data using measures of central tendency. Emphasis will be placed on real world application problems and higher-level thinking word problems. Calculators are incorporated per the PA Common Core Standards. The course curriculum, instruction, and assessment are aligned with the Pennsylvania Common Core Standards for Mathematics. The course's objectives, content, and activities prepare students to meet the 8<sup>th</sup> Grade Common Core Standards.

### **MATH 8 – COURSE #482**

This course is very similar to the Pre-Algebra course; however, it allows for further review of basic math concepts in addition to the introduction of new concepts. Math 8 includes further study of solving linear equations, including those with extraneous solutions, properties of real numbers, and proportional relationships. The course extends the study of volume to include cones, cylinders, and spheres. The course introduces students to systems of linear equations in two variables, in addition to exponent equations. Students will learn how to simplify exponent expressions, find equations and identify properties of functions, and perform operations in and apply scientific notation. Students will learn how to use the Pythagorean Theorem and about the properties of the Objects of Transformation. Students will learn how to construct and interpret scatter plots and two-way tables when given a set of data. The students will learn how to interpret data using measures of central tendency. Although real world application problems and higher-level thinking word problems are covered, oftentimes the breadth and depth of those questions are on a lower level than in Pre-Algebra. Calculators are incorporated per the PA Common Core Standards. The course curriculum, instruction, and assessment are aligned with the Pennsylvania Common Core Standards for Mathematics. The course's objectives, content, and activities prepare students to meet the 8<sup>th</sup> Grade Common Core Standards.

### **AMERICAN CULTURES II – COURSE #282**

American Cultures II surveys of the social, political, economic, cultural, and intellectual history of the United States from the Reconstruction era to the present. American Cultures II examines industrialization, immigration, world wars, the Great Depression, the Vietnam conflict, the Cold War, and post-Cold War eras. Themes that are covered in American Cultures II include: American culture, 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 throughout the years of 1865 - present.

### **INTEGRATED SCIENCE 8 – COURSE #380**

Integrated Science 8 is a comprehensive course that explores the individual science disciplines within the following main topics: Life Sciences, Physical Sciences, and Earth and Space Sciences. In Life Sciences, students focus on topics pertaining to inheritance and variation of traits, evidence of common ancestry and diversity, natural selection, adaptation, biodiversity, and human impact. The Physical Sciences component delves into forces and motion, conservation of energy and energy transformation, and wave properties. Earth and Space Science topics include weather and climate, space systems, and human impact on Earth. Throughout the school year, students explore the connections between these scientific concepts and real-world applications, all while aligning with the Pennsylvania STEELS standards.

### **PHYSICAL EDUCATION – COURSE #978**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meeting the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

### **HEALTH 8 – COURSE #983**

The 8<sup>th</sup> grade Health Education program provides students with the information to take positive action regarding their health. The students learn that good health habits can improve the way they look, the way they perform in school and sports, the way they interact with others, and the way they feel about themselves. Topics covered include Self-Image, Attitudes and Values, Decision Making, Conflict Resolution, Stress Management, Communication Skills, Alcohol, Tobacco and Other Drugs, Eating Disorders, Nutrition and Fitness, Sexually Transmitted Diseases and HIV/AIDS Prevention. A Life Skills Training program is incorporated, focusing on teaching the life skills necessary for succeeding in a complex and challenging world and providing the opportunity to use these skills to better prepare the student for the challenges of life.

### **APPLIED COMPUTER SCIENCE – COURSE #403**

This course is designed for students to build on their current computer-literacy levels, learning basic computer operations, computer use in common software programs, hardware basics, internet, and social media safety. Microsoft application skills developed include word processing, PowerPoint presentation software, Excel spreadsheets as well as internet

applications. Students will combine text and graphics in a variety of formats to create publications. They will use critical thinking skills to plan projects, solve problems, and make informed decisions using appropriate tools and resources.

### **INTRODUCTION TO STEM – COURSE #308**

Introduction to STEM Lab introduces the engineering design process. Students begin the year by learning to think like an engineer. Students are posed with several problems and then must work through all steps of the process to come to a solution. Students' main goal in Intro to STEM Lab is the designing and building of a model tiny house. Students will learn about alternative energy sources and determine which sources best fit their needs. Students will collaborate to go through several iterations of blueprints, from basic bubble blueprints to hand drawn, scaled, and computer-generated designs. Students will incorporate mathematics as they use scale and proportion to determine the size their models will be. Once plans are finalized, students will use equipment in the Maker Space to build scaled models of their homes. The course concludes with students creating marketing plans for their homes which are evaluated by local real estate professionals.

This project-based course requires students to think abstractly and collaborate to accomplish a task. Students are introduced to several state-of-the-art design websites and become proficient in CAD software throughout the course.

### **ART 8 – COURSE #718**

Art 8 is a discipline-based art curriculum with its balance of content from four foundational art disciplines, art production, art history, art criticism, and aesthetics. This course is designed to build upon and increase the student's knowledge of the elements and principles of design through work with a variety of media and techniques. Art 8 allows students to develop their abilities, to make critical judgments about art and to understand and appreciate the influences of art from other times and cultures.

# **9<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Math – full credit
3. Civics – full credit
4. Biology – full credit
- 5. One Elective Choice – full credit**
6. Phys. Ed. – partial credit
7. Personal Finance – partial credit
8. Music Elective – partial credit; or full credit for Advanced Band or Advanced Chorus.

## **ENGLISH LANGUAGE ARTS 9 (ELA 9) – COURSE #191**

This course is an introduction to World Literature and is arranged instructionally through reading and studying various genres, which include fiction, nonfiction, short stories, mythology, the epic, poetry, drama, and the memoir. Each genre is presented in a comparative structure to previously read texts to distinguish between several types of writings and the characteristics of each. In addition, each new text selection is introduced with the historical context to discover the influence of the time period and its reflection within the writing. All texts are read and examined closely to further discover timeless themes and their relevance to the present. Students are provided opportunities to improve and expand their skills in the overall process of writing to strengthen their organizational and analytical skills, as well as encourage proper grammar, vocabulary, and composition. Writing assignments are aligned in accordance with the Pennsylvania Core Standards as seen in the various modes, including narrative writing, persuasive writing, informative writing, and a research paper.

## **ENGLISH LANGUAGE ARTS 9A (ELA 9A) – COURSE #192**

This course is an introduction to World Literature and is arranged instructionally through reading and studying various genres, which include fiction, nonfiction, short stories, mythology, the epic, poetry, drama, and the memoir. Each genre is presented in a comparative structure to previously read texts to distinguish between several types of writings and the characteristics of each. In addition, each new text selection is introduced with the historical context to discover the influence of the time period and its reflection within the writing. All texts are read and examined closely to further discover timeless themes and their relevance to the present. Students are provided opportunities to improve and expand their skills in the overall process of writing to strengthen their organizational and analytical skills, as well as encourage proper grammar, vocabulary, and composition. Writing assignments are aligned in accordance with the Pennsylvania Core Standards as seen in the various modes, including narrative writing, persuasive writing, informative writing, and a research paper. Remediation for the general level is addressed in daily lessons and assignments as needed.

## **HONORS GEOMETRY – COURSE #490**

**Prerequisite:** grade of 87% or higher in Honors Algebra 1, OR 93% or higher in Algebra 1, or Teacher Recommendation.

This course is very focused on **WRITING PROOFS**- it is a very challenging concept and takes **MUCH PRACTICE** to master. We will be writing proofs in most geometry topics we learn this

year. In addition to writing proofs, students will learn about: Points, Lines, and Planes; Midpoint and Distance Formulas; Segments and Angles; Parallel and Perpendicular Lines; Congruent Triangles; Triangle Relationships; Pythagorean Theorem, Special Right Triangles, and Right Triangle Trigonometry; Quadrilaterals and Other Polygons; Circles (Circumference and Area Included); and Similarity. Emphasis will be placed on real world application problems, higher-level thinking word problems, and proofs of the various topics learned. Students may work both individually and in groups to achieve mastery of content.

### **ALGEBRA I – COURSE #491**

The course involves: the study of variables; expressions and formulas; signed numbers; rational and irrational numbers; polynomials and operations; first degree equations; word problem applications; factoring; monomial and polynomial operations; solution of quadratic equations; algebraic fractions; linear equations in two variables; the Cartesian Coordinate System; linear equations and systems; powers, roots and radicals; and inequalities. Lessons, activities and assignments in Academic Algebra I are structured toward average ability students. Scientific calculators and computer aides are incorporated using Pennsylvania Keystone Algebra I standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by PA Education Code 22, Chapter 4 Regulations.

### **CONCEPTS OF ALGEBRA 1A – COURSE #452**

The course contains the following mathematical topics: connections to algebra - variables, expressions, and formulas; rational and irrational numbers; solving and graphing linear equations, inequalities, and functions; writing linear equations; solving systems of linear equations, and inequalities; polynomial operations and factoring; rational expressions and equations; radicals; exponents and exponentials; quadratic equations; data analysis and word problem applications. Lessons, activities, and assignments are structured toward basic ability students and aimed at success in algebra. Scientific calculators/technology use is incorporated using Pennsylvania Keystone Algebra I standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by PA Education Code 22, Chapter 4 Regulations. The course's objectives, content, and activities prepare students to meet the PA Academic Standards for Mathematics.

### **HONORS BIOLOGY – COURSE #3201**

This course provides a comprehensive introduction to the fundamental principles of biology, exploring the intricate world of living organisms from the microscopic level to the grand scale of evolution. Students will develop a strong foundation in key biological concepts through a combination of lectures, hands-on laboratory activities, and engaging discussions. Topics include: Basic biology principles, chemistry of life, ecology and biodiversity, photosynthesis, respiration, cells, cell organelles, cell transport, cell cycle, cell division, mitosis and meiosis, genetics, and evolution. This course will have an emphasis on Keystone Biology test prep.

### **BIOLOGY A – COURSE #322**

This course provides a comprehensive introduction to the fundamental principles of biology, exploring the intricate world of living organisms from the microscopic level to the grand scale of evolution. Students will develop a strong foundation in key biological concepts through a combination of lectures, hands-on laboratory activities, and engaging discussions. Topics include Basic biology principles, chemistry of life, ecology and biodiversity, photosynthesis, respiration, cells, cell organelles, cell transport, and mitosis. This course will have an emphasis on Keystone Biology test preparation.

### **HONORS CIVICS – COURSE #2921**

Prerequisite: Placement in this course is based upon student request, course and cumulative averages, as well as Teacher Recommendation.

This class is designed to acquaint students with the origins, concepts, organizations, and policies of the United States government and political system. This course is an introduction to the basic concepts of American government, the American political process and the rights and responsibilities associated with United States citizenship. Students explore and examine the following: Founding Documents and the Origins of United States Government; Political Parties, Elections, and Voting; The Legislative and Executive Branches of Government; State and Local Government; and the American Legal System. Students must take a Civics Exam designed by the teacher during the 4<sup>th</sup> marking period. This exam is required by the State and it is imperative the students do their best when taking the exam.

### **CIVICS – COURSE #292**

This class is designed to acquaint students with the origins, concepts, organizations, and policies of the United States government and political system. This course is an introduction to the basic concepts of American government, the American political process and the rights and responsibilities associated with United States citizenship. Students explore and examine the following: Founding Documents and the Origins of United States Government; Political Parties, Elections, and Voting; The Legislative and Executive Branches of Government; State and Local Government; and the American Legal System. Students must take a Civics Exam designed by the teacher during the 4<sup>th</sup> marking period. This exam is required by the State and it is imperative the students do their best when taking the exam.

### **PERSONAL FINANCE – COURSE #652**

This course is designed to introduce students to various personal finance and practical life skills. Through numerous practical applications students gain knowledge of financial fundamentals; long and short term funding sources; banking institutions; school loans; credit and financial charges; real estate mortgages; car loans; taxes and insurance; health insurance; understanding stocks and the stock market; and saving for the future.

### **PHYSICAL EDUCATION – COURSE# 9110**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meeting the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and

sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

### **GENERAL MUSIC 9 – COURSE #729**

General Music 9 is a study of the art of music and music appreciation. Along with historical and theoretical studies, there will also be a focus on music technology. This focus includes computer music labs and a variety of challenging work that will integrate the music art form with 21st century learning.

### **SENIOR HIGH CHORUS – COURSE #723**

Chorus provides an opportunity for participating students to become acquainted with two, three, and four-part harmony, solo performance, group participation, community involvement, organizational skill, public performance and self-esteem. Students will also become familiar with conventional musical selections, familiar with world songs, foreign pieces and more unconventional texts and pieces (including holiday, classical, show tunes, standards, etc.). Students will also learn to work as a “team” and to work with each other’s talents and excitement for the art of singing.

### **BEGINNING BAND - COURSE #731**

Pre-requisite: Prior instrumental music experience is not required.

Beginning Band is designed to provide students with an introductory experience on band instruments. Students will begin their study of instrumental music and standard performance practices on woodwind, brass, and percussion instruments. Instruction areas include ensemble rehearsal and performance techniques, musicianship, tone production, festival performance, self-critique techniques and music literacy. Beginning Band is open to all 7th and 9<sup>th</sup> grade students who are required to take a music class whether band, chorus, or general music. Student lessons will be available during the day and will be graded on attendance. Students are expected and encouraged to practice their instrument at home and must be available for evening concerts and performances, as it is part of the student’s grade. Dress rehearsals will be held before each concert, which are also part of the student’s grade.



# **10<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Math – full credit
3. World Cultures I – full credit
4. Biology – full credit
- 5. TWO Elective Choices – full credit**
6. Phys. Ed. – partial credit
7. Research Skills – partial credit

## **ENGLISH LANGUAGE ARTS 10 (ELA 10) – COURSE #122**

This course is a study of World Literature as well as composition. A survey of significant global authors and genres are presented within a framework of ancient literature through 20<sup>th</sup> Century works. Students analyze literary selections within their historical and social contexts, evaluate the influences each has on the writing of its time, and examine various literary concepts demonstrated through these selections. The course also provides opportunities for students to enhance reading comprehension and analysis of nonfiction texts. In addition, the integration of composition emphasizes the writing process with a focus on students recognizing and revising grammar, usage, agreement, and sentence structure within their own writing. In accordance with the Pennsylvania Core Standards, writing assignments provide practice of informative and argumentative modes, as well as analysis of class readings and literary concepts demonstrated in those works.

## **ENGLISH LANGUAGE ARTS 10A (ELA 10A) – COURSE #121**

This course is a study of World Literature as well as composition. A survey of significant global authors and genres are presented within a framework of ancient literature through 20<sup>th</sup> Century works. Students analyze literary selections within their historical and social contexts, evaluate the influences each has on the writing of its time, and examine various literary concepts demonstrated through these selections. The course also provides opportunities for students to enhance reading comprehension and analysis of nonfiction texts. In addition, the integration of composition emphasizes the writing process with a focus on students recognizing and revising grammar, usage, agreement, and sentence structure within their own writing. In accordance with the Pennsylvania Core Standards, writing assignments provide practice of informative and argumentative modes, as well as analysis of class readings and literary concepts demonstrated in those works. Remediation for the general level is addressed in daily lessons as needed.

## **HONORS ALGEBRA II – COURSE #420**

The course content, objectives, and activities prepare students to meet standards of the Algebra I and Algebra II curriculum outlined in the PA Academic Standards for Mathematics. This course will also give students background knowledge for SATs and college entrance exams in mathematics. The topics covered include the following: Properties of Real Numbers, Evaluating Algebraic Expressions, Solving Linear Equations, Using Problem Solving Strategies and Verbal Models, Solving Linear Inequalities (including Compound Inequalities), Solving Absolute Value Equations and Inequalities, Relations and Functions, Finding Slope and Rate of Change, Graphing Equations of Lines, Writing Equations of Lines, Modeling Direct Variation, Drawing Scatter Plots and Determining Lines of Best Fit, Graphing Linear Inequalities in 2 Variables,

Solving Linear Systems by Graphing, Solving Linear Systems using Substitution, Solving Linear Systems using Elimination (Linear Combination), Use the Exponent Properties (Rules), Add, Subtract, and Multiply Polynomials, Factoring (6 Patterns), Using Factoring to Solve Equations, Graphing Quadratic Equations using 3 Forms (Standard, Vertex, and Intercept), Solving Quadratic Equations using Square Roots, Evaluating  $n^{\text{th}}$  roots using Rational Exponents, Applying Properties of Rational Exponents, Perform Basic Operations on Functions (Add, Subtract, Multiply, and Divide), Perform Composition of Functions, Model Direct, Inverse, and Joint Variation, Multiply and Divide Rational Expressions, Add and Subtract Rational Expressions, Solve Rational Equations, Apply the Distance and Midpoint Formulas, Apply the Counting Principles, Perform Permutations and Combinations, Define and Use Probability, Find Probabilities of Disjoint and Overlapping Events, Find Probabilities of Independent and Dependent Events, Find Measures of Central Tendency (Mean, Median, Mode, Range, Quartiles, Inter-Quartile Range, Box and Whisker Plots, and Stem and Leaf Plots), Define and Use Sequences, Analyze Arithmetic Sequences, Analyze Geometric Sequences, Perform Operations with Complex Numbers, Use Completing the Square to Solve Quadratic Equations, Use the Quadratic Formula to Solve Quadratic Equations, Find the Discriminant of a Quadratic Equation, Graph and Solve Quadratic Inequalities, and Write Quadratic Functions and Models. The main difference between Algebra II and Honors Algebra II is more in-depth problems with the Honors Algebra II.

### **GEOMETRY – COURSE #422**

**Prerequisite:** Students must have successfully completed Algebra I with a 76% or higher.

This course is very focused on **WRITING PROOFS**- it is a very challenging concept and takes MUCH PRACTICE to master. We will be writing proofs in most geometry topics we learn this year. In addition to writing proofs, students will learn about: Points, Lines, and Planes; Midpoint and Distance Formulas; Segments and Angles; Parallel and Perpendicular Lines; Congruent Triangles; Triangle Relationships; Pythagorean Theorem, and Right Triangle Trigonometry; Quadrilaterals and Other Polygons; Circles (Circumference and Area Included); and Similarity. Emphasis will be placed on real world application problems, higher-level thinking word problems, and proofs of the various topics learned. Students may work both individually and in groups to achieve mastery of content.

### **CONCEPTS OF ALGEBRA 1B – COURSE #453**

**Prerequisite:** Successful completion of Concepts of Algebra 1A course.

Concepts of Algebra 1B is an extension of the Concepts of Algebra 1A curriculum. Topics that were first introduced in Concepts of Algebra 1A will be built upon and applied to problems that require higher-order thinking skills. Fundamental skills of mathematics will be applied to such topics as functions, linear equations and inequalities, probability and statistics, radicals, exponents and exponential relationships, polynomial operations and factoring, quadratic equations, and word problem applications. Scientific calculators and computer aides are incorporated using Pennsylvania Keystone Algebra I standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by PA Education Code 22, Chapter 4 Regulations. The course's objectives, content, and activities prepare students to meet the PA Academic Standards for Mathematics.

### **HONORS WORLD CULTURES I – COURSE #221**

Prerequisite: student request, course and cumulative averages, and Teacher Recommendation.

World Cultures I course covers history from pre-history to 1500 A.D. and is designed to introduce the student to the concepts of culture in human experience and the concepts of geography. What culture is, how it develops, how it changes, and how it is transferred in time and space, its power to influence our lives and events, are some of the main topics examined. Because of the substantial influence of religion on human cultures and history, understanding major world religions will also be a focus of the course. Also, such topics as the role of family, language, art, political ideologies, government types, gender roles, work, status and war, are also examined.

### **WORLD CULTURES I – COURSE #220**

World Cultures I course covers history from pre-history to 1500 A.D. and is designed to introduce the student to the concepts of culture in human experience and the concepts of geography. What culture is, how it develops, how it changes, and how it is transferred in time and space, its power to influence our lives and events, are some of the main topics examined. Because of the substantial influence of religion on human cultures and history, understanding major world religions will also be a focus of the course. Also, such topics as the role of family, language, art, political ideologies, government types, gender roles, work, status and war, are also examined.

### **BIOLOGY – COURSE #320**

Biology is a comprehensive course that focuses on the study of life by examining the fundamentals and concepts of Basic Biological Principles, Chemistry of Life, Homeostasis and Transport, Bioenergetics, Cell Growth and Reproduction, Genetics, Ecology, and Evolution. The scientific process and laboratory skills are emphasized along with Biology's connection to other scientific disciplines.

### **PHYSICAL EDUCATION – COURSE #9910**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meeting the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

### **RESEARCH SKILLS – COURSE #5080**

This course offers tenth grade students the opportunity to learn in detail the necessary steps involved in writing a coherent, well-planned research paper. Students initially review the primary print and electronic resources available for library research and build a foundation of skills in appropriate source selection, website evaluation, and the prevention of plagiarism through note-taking strategies and the most current MLA documentation style. Following the Big6 Skills for Information Problem Solving, students are then guided through the stages of the research process to compile an independently written research report.

# **11<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Math – full credit
3. World Cultures II – full credit
4. Chemistry or Applied Science 11 – full credit
- 5. TWO Elective Choices – full credit**
6. Phys. Ed. – partial credit
7. Health 11 – partial credit

## **ENGLISH LANGUAGE ARTS 11 (ELA 11) – COURSE # 132**

This course is a study of American Literature as well as composition. A survey of significant American authors and their works are presented chronologically from the Age of Exploration to the present time. Students examine major literary movements and analyze selections within those historical contexts to understand how American Literature has evolved. Various literary concepts and key vocabulary will also be demonstrated through these representative readings of non-fiction, short story, poem and drama. In addition, the composition component of this course emphasizes writing as a process with a grammar focus on usage, agreement, sentence structure, and punctuation in the context of the student's writings. In accordance with the Pennsylvania Core Standards, writing assignments provide practice of informative and argumentative modes, as well as analysis of class readings and literary concepts demonstrated by those works. Students will also create a résumé and complete their Senior Project Research Reports toward fulfillment of their graduation requirement.

## **ENGLISH LANGUAGE ARTS 11 (ELA 11A) – COURSE #131**

This course is a study of American Literature as well as composition. A survey of significant American authors and their works are presented chronologically from the Age of Exploration to the present time. Students examine major literary movements and analyze selections within those historical contexts to understand how American Literature has evolved. Various literary concepts and key vocabulary will also be demonstrated through these representative readings of non-fiction, short story, poem and drama. In addition, the composition component of this course emphasizes writing as a process with a grammar focus on usage, agreement, sentence structure, and punctuation in the context of the student's writings. In accordance with the Pennsylvania Core Standards, writing assignments provide practice of informative and argumentative modes, as well as analysis of class readings and literary concepts demonstrated by those works. Students will also create a résumé and complete their Senior Project Research Reports toward fulfillment of their graduation requirement. Remediation for the general level is addressed in daily lessons as needed.

## **HONORS PRE-CALCULUS/TRIGONOMETRY – COURSE #429**

**Prerequisite:** Successful completion of Honors Algebra 1, Honors Algebra 2, and Honors Geometry.

This course is broken into two parts: Pre-Calculus and Trigonometry. The first part of the course, Pre-Calculus, is designed to prepare students for topics covered in a Calculus course. It begins with a comprehensive study of functions and moves into an analysis of rudimentary

calculus concepts such as the difference quotient and the notion of “taking a limit.” In addition to introducing students to terminology and concepts essential to the study of Calculus, this course should also help students develop reasoning and analytical skills which may be applied to problems outside the typical realm of mathematics. The second part of the course, Trigonometry, focuses on trigonometric principles as an extension of algebraic and geometrical concepts. Students will study angles, arcs, the unit circle, right triangle trigonometry, the six trigonometric functions, inverse functions, fundamental trigonometric identities, verifying trigonometric identities, solving trigonometric equations, the law of sines, the law of cosines, vectors, and polar coordinates. Graphing calculators, scientific calculators and computer aides will be incorporated using the Pennsylvania and National Standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by the Pennsylvania Education Code 22, Chapter 4 regulations. The course’s objectives, content and activities prepare students to meet the Pre-Calculus and Trigonometry benchmarks as outlined in the Pennsylvania Academic Standards for Mathematics. Students who take the honors version of this course will learn a broader, more contextualized, more richly detailed version of the topics listed. The course will be fast-paced and the students will receive more academically challenging assignments as compared to the academic course.

### **ALGEBRA II – COURSE #421**

The course content, objectives, and activities prepare students to meet standards of the Algebra I and Algebra II curriculum outlined in the PA Academic Standards for Mathematics. This course will also give students background knowledge for SATs and college entrance exams in mathematics. The topics covered include the following: Properties of Real Numbers, Evaluating Algebraic Expressions, Solving Linear Equations, Using Problem Solving Strategies and Verbal Models, Solving Linear Inequalities (including Compound Inequalities), Solving Absolute Value Equations and Inequalities, Relations and Functions, Finding Slope and Rate of Change, Graphing Equations of Lines, Writing Equations of Lines, Modeling Direct Variation, Drawing Scatter Plots and Determining Lines of Best Fit, Graphing Linear Inequalities in 2 Variables, Solving Linear Systems by Graphing, Solving Linear Systems using Substitution, Solving Linear Systems using Elimination (Linear Combination), Use the Exponent Properties (Rules), Add, Subtract, and Multiply Polynomials, Factoring (6 Patterns), Using Factoring to Solve Equations, Graphing Quadratic Equations using 3 Forms (Standard, Vertex, and Intercept), Solving Quadratic Equations using Square Roots, Evaluating  $n^{\text{th}}$  roots using Rational Exponents, Applying Properties of Rational Exponents, Perform Basic Operations on Functions (Add, Subtract, Multiply, and Divide), Perform Composition of Functions, Model Direct, Inverse, and Joint Variation, Multiply and Divide Rational Expressions, Add and Subtract Rational Expressions, Solve Rational Equations, Apply the Distance and Midpoint Formulas, Apply the Counting Principles, Perform Permutations and Combinations, Define and Use Probability, Find Probabilities of Disjoint and Overlapping Events, Find Probabilities of Independent and Dependent Events, Find Measures of Central Tendency (Mean, Median, Mode, Range, Quartiles, Inter-Quartile Range, Box and Whisker Plots, and Stem and Leaf Plots), Define and Use Sequences, Analyze Arithmetic Sequences, Analyze Geometric Sequences, Perform Operations with Complex Numbers, Use Completing the Square to Solve Quadratic Equations, Use the Quadratic Formula to Solve Quadratic Equations, Find the Discriminant of a Quadratic Equation, Graph and Solve Quadratic Inequalities, and Write Quadratic Functions and Models.

### **INFORMAL GEOMETRY – COURSE #424**

Prerequisite: Successful completion of Algebra 1 or Algebra 1A/Algebra 1B.

Students will learn about: Points, Lines, and Planes; Midpoint and Distance Formulas; Segments and Angles; Parallel and Perpendicular Lines; Congruent Triangles; Triangle Relationships; Pythagorean Theorem, and Right Triangle Trigonometry; Quadrilaterals and Other Polygons; Circles (Circumference and Area Included); and Similarity. Emphasis will be placed on real world application problems and higher-level thinking word problems. Students may work both individually and in groups to achieve mastery of content.

### **HONORS WORLD CULTURES II – COURSE #231**

Prerequisite: student request, course and cumulative averages, and teacher recommendation.

World Cultures II is designed to give students a better understanding of world politics, wars, events, and rulers who sought to dominate the world. Students focus on how people in the past grappled with issues such as truth, justice, social and individual responsibilities. Students analyze the impact of geographical factors on the development of human and social systems, evaluate the influence of major religious and political belief systems, and analyze the major political, economic, and social developments that have shaped the history of our contemporary world. Topics include: The Age of Absolute Monarchs, The Enlightenment, The French Revolution, The Industrial Revolution, Revolutions of Latin America and Europe, Nationalism, Imperialism, World War I and its Aftermath, The Russian Revolution, The World between the Wars, World War II and its Aftermath, and the contemporary world since 1945.

### **WORLD CULTURES II – COURSE #230**

World Cultures II is designed to give students a better understanding of world politics, wars, events, and rulers who sought to dominate the world. Students focus on how people in the past grappled with issues such as truth, justice, social and individual responsibilities. Students analyze the impact of geographical factors on the development of human and social systems, evaluate the influence of major religious and political belief systems, and analyze the major political, economic, and social developments that have shaped the history of our contemporary world. Topics include: The Age of Absolute Monarchs, The Enlightenment, The French Revolution, The Industrial Revolution, Revolutions of Latin America and Europe, Nationalism, Imperialism, World War I and its Aftermath, The Russian Revolution, The World between the Wars, World War II and its Aftermath, and the contemporary world since 1945.

### **CHEMISTRY – COURSE #330**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP**

Chemistry is an introductory course for students interested in further study of the sciences. Chemistry focuses on the study of basic principles and theories of chemistry including stoichiometry, atomic and molecular structures, the periodic law and its application, basic concepts of chemical bonding, solutions, types of chemical reactions, and gas laws.

### **APPLIED SCIENCE 11 – COURSE #350**

A comprehensive course that focuses on exploring the individual science disciplines of Biology, Chemistry, Physics, and Earth Science. Students will learn about the influence of science and technology in their everyday lives, as well as review the Scientific Method, and setting up scientific experiments. Physics topics include Newton's Laws of Motion, Momentum, Heat Transfer, and Electricity and Magnetism. Also included in this course are Biology and Chemistry topics related to Cells, Origins of Life, Atoms, and Chemical Formulas. Earth Science topics include rocks and minerals, as well as plate tectonics. Students will explore how each of these scientific disciplines overlap and correlate to everyday life.

### **PHYSICAL EDUCATION – COURSE #941**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meeting the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

### **HEALTH 11 – COURSE #933**

Health 11 is designed to give students a basic knowledge and understanding of health, wellness, and the body. The course will cover a variety of different topics including Personal Health & Wellness, Food and Nutrition, Diets for individual Needs, Basic Anatomy, Injuries to Bones, Joints and Muscles, First Aid and CPR, HIV/AIDS, Reproduction and STD's. Successful completion of this course is required for graduation.

# **12<sup>TH</sup> GRADE – CURRICULUM GUIDE**

1. English Language Arts – full credit
2. Social Studies – full credit
3. Math elective – full credit
4. Science elective – full credit
- 5. TWO Elective Choices – full credit**
6. Physical Education – partial credit

## **AP ENGLISH LITERATURE AND COMPOSITION – COURSE #141**

Prerequisite: final grade of 93% or above in E.L.A. 11.

This course is designed to comply with curricular requirements described in the AP English Course Description and will prepare students for the AP exam in English Literature and Composition. This course is an intensive study of representative works of British Literature as well as composition. A survey of significant British authors and their works are presented chronologically from 449AD to the present. Students will be required to read independently, analyze and interpret material, and form impressions and emotional responses that lead to understanding and independent assessment of literary works. All literary selections will include intensive vocabulary development to assist in comprehending the complexity of each work. In addition, assigned compositions emphasize writing as a process with standard English usage, agreement, sentence structure, and punctuation assessed in the context of the student's writing. Writing assignments reflect accordance with the Pennsylvania Core Standards as seen in the informative and argumentative modes and class research component, as well as analysis of class readings and literary concepts demonstrated by those works.

## **ENGLISH LANGUAGE ARTS 12 (ELA 12) – COURSE #140**

This course is a study of British Literature as well as composition. A survey of significant British authors and their works are presented chronologically from 449 AD to the present. Students analyze selections within their historical context and examine literary concepts as seen in each. In addition, assigned compositions emphasize writing as a process with standard English usage, agreement, sentence structure, and punctuation assessed in the context of the student's writing. Writing assignments reflect accordance with the Pennsylvania Core Standards as seen in the informative and argumentative modes, literary response, and class research component.

## **ENGLISH LANGUAGE ARTS 12A (ELA 12A) – COURSE #142**

This course is a study of British Literature as well as composition. A survey of significant British authors and their works are presented chronologically from 449 AD to the present. Students analyze selections within their historical context and examine literary concepts as seen in each. Composition emphasizes writing as a process with a grammar focus on usage, agreement, sentence structure, and punctuation in the context of the student's writings. In addition, assigned compositions emphasize writing as a process with standard English usage, agreement, sentence structure, and punctuation assessed in the context of the student's writing. Writing assignments reflect accordance with the Pennsylvania Core Standards as seen in the informative and argumentative modes, literary response, and class research component. Remediation for the general level is addressed in daily lessons as needed.



### **AP CALCULUS AB – COURSE #441**

**Prerequisite:** Successful completion of Precalculus/Trigonometry.

AP Calculus is available to students who have completed Honors Pre-Calculus/Trigonometry. AP Calculus is an advanced placement elective course, which is equivalent to a full academic's year of work in Calculus and related topics, comparable to courses in colleges and universities. Students must have a thorough knowledge of college preparatory mathematics algebra, trigonometry, and geometry. Students will be encouraged to take the Advanced Placement Calculus examination offered by Educational Testing Service (ETS) of the College Board. The course begins with a review of Pre-Calculus concepts essential to the study of Calculus. The concepts of limits and their properties are covered in detail. The two branches of Calculus, differentiation and integration, are covered extensively, along with chapters on the applications of both topics. The course concludes with more advanced integration techniques. Professional mathematics organizations have strongly endorsed the use of graphing calculators in mathematics instruction and consequently these calculators are also used throughout the course and are required for a portion of the AP exam AB. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by the Pennsylvania Education Code 22, Chapter 4 regulations. The course's objectives, content and activities prepare students for the AP Calculus AB exam.

### **PRE-CALCULUS/TRIGONOMETRY – COURSE #430**

**Prerequisites:** Successful completion of Algebra 1, Algebra 2, and Geometry

This course is for the student who has completed Algebra 1, Algebra 2, and Geometry. This course is broken into two parts: Pre-Calculus and Trigonometry. The first part of the course, Pre-Calculus, is designed to prepare students for topics covered in a Calculus course. It begins with a comprehensive study of functions and moves into an analysis of rudimentary calculus concepts such as the difference quotient and the notion of "taking a limit." In addition to introducing students to terminology and concepts essential to the study of Calculus, this course should also help students develop reasoning and analytical skills which may be applied to problems outside the typical realm of mathematics. The second part of the course, Trigonometry, focuses on trigonometric principles as an extension of algebraic and geometrical concepts. Students will study angles, arcs, the unit circle, right triangle trigonometry, the six trigonometric functions, inverse functions, fundamental trigonometric identities, verifying trigonometric identities, solving trigonometric equations, the law of sines, the law of cosines, vectors, and polar coordinates. Graphing calculators, scientific calculators and computer aides will be incorporated using the Pennsylvania and National Standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by the Pennsylvania Education Code 22, Chapter 4 regulations. The course's objectives, content and activities prepare students to meet the Pre-Calculus and Trigonometry benchmarks as outlined in the Pennsylvania Academic Standards for Mathematics.

### **PROBABILITY AND STATISTICS – COURSE #425**

Prerequisite: Sophomores – 90% average in both Honors Algebra 1 and Honors Geometry  
Juniors/Seniors – 85% average and above for Algebra 1, Geometry, and Algebra 2.

Probability and Statistics is a full-year dual enrollment course through Lackawanna College and Keystone College designed for students in Grades 10-12. An introductory Probability/Statistics course is necessary for students who plan to enter such fields as economics, business, psychology, sociology, biology, medicine, or mathematics. This course will help prepare a student for success in Grades 10-12 as a member of the Pennsylvania Junior Academy of Science as well as future advanced courses in Probability and Statistics. Students enrolled in this course need to have strong skills in mathematics.

Students will learn about: the nature of probability and statistics; organizing data; averages and variations; correlation and regression; elementary probability; binomial distributions; normal curves and sampling distributions; estimation; hypothesis testing; differences of means and proportions; and chi-squares. Emphasis will be placed on real-world application problems and higher-level thinking word problems. Students may work both individually and collaboratively through solving problems, reading higher level texts, and completing projects to achieve mastery of content.

### **FINANCIAL ALGEBRA – COURSE #440**

Financial Algebra is designed to develop a strong foundation in logical thinking and problem solving that will enable students to make informed decisions regarding matters of money and finance in their daily lives. This course furthers the development of functions, which include linear, piece-wise, quadratics, and step functions. Other topics studied include measures of center and spread, graphical representations of data, principles of finance economics, employment basics, payroll, taxes, banking, loans, compound interest, consumer credit, automobile ownership, stock market, investing, independent living, retirement, and budgets.

### **CONSUMER MATH – COURSE #454**

Consumer Math is designed to prepare students for life after graduation by giving them a basic understanding of the mathematics they will encounter on a daily basis. This course explores the topics of Employment Basics, Banking Services, Credit Cards, Taxes, Automobile Purchases, Renting/Owning a Home, Budgeting, Retirement, and the Stock Market .

### **AP AMERICAN HISTORY – COURSE #242**

Prerequisite: final grade of 90% or above in World Cultures 2

This Advanced Placement course is designed to study the history of the United States chronologically, with emphasis on interpretation and analysis of the material by contemporary and modern historians. Through the use of primary and secondary sources the student not only acquires a basic understanding of the factual material but develops the analytical and interpretive skills necessary to deal with the subject in greater depth. At the end of the course, students will be given the opportunity to take the Advanced Placement Examination in American History.

### **STREET LAW/ECONOMICS – COURSE #243**

The *Street Law* portion of this course is an introduction to law and legal systems of the United States. The major focal points of this course include constitutional law, general legal principles, civil and criminal law, the courts, court procedures, and civil rights. Additional topics may include family law, housing law, and consumer law. Students engage in real-world experiences to deepen their personal understanding of government, individual rights, the legal system, and legal disputes. These learning experiences are characterized using case studies, mock trials, contemporary issues, current events, and legal research and applied to students' everyday lives. The *Economics* portion of the course will give the students a greater understanding of economics ranging from the viewpoint of the individual consumer or small business owner to the global economy. The course will study the law of supply and demand, forms of business, labor unions, government finances and influence on the economy, money and prices, inflation, and deflation cycles. The course relates history and politics to the study of economics.

### **AP CHEMISTRY – COURSE #331**

Prerequisite: final grade of 90% or above in Chemistry.

Advanced Placement Chemistry is a course designed for those students who have already shown a mastery of basic chemical concepts and calculations from chemistry. It is intended for those who wish to major in a STEM field at the collegiate level. This course provides a more in-depth study of those topics covered in chemistry, such as reactions in aqueous solutions, along with new topics of thermochemistry, atomic and molecular structures, intermolecular forces, acid – base equilibria, chemical kinetics and also an introduction to organic chemistry.

### **PHYSICS – COURSE #341**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP.**

Prerequisite: final grade of 90% or above in Algebra 2. Previously or currently enrolled in Precalculus/Trigonometry.

This course is a science elective for seniors. It entails the use of some basic trigonometry and extensive use of Algebra I and Real World Problems. Topics studied are: motion, time, position-time graphs, velocity, acceleration, free fall, force and motion, Newton's Laws, scalars, vectors, vectors in 1 dimension, vectors in 2 dimensions, friction, projectile motion, circular motion, relative velocity, planetary motion, gravitation, the law of universal gravitation, rotational motion, rotational dynamics, equilibrium, impulse, momentum, conservation of momentum, energy, work, simple machines, kinetic energy, potential energy, heat energy, temperature, thermodynamics, properties of fluids, periodic motion, and wave properties.

## **HONORS ANATOMY & PHYSIOLOGY – COURSE #342 [11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP.**

Prerequisite: 90% average in Biology and teacher recommendation.

The course is a detailed look at the 11 different systems that make up the Human Body. Those systems include: Integumentary, Endocrine, Muscular, Skeletal, Cardiovascular, Nervous, Reproductive, Lymphatic, Urinary, Respiratory and Digestive. Furthermore, the course focuses on the naming of the organs in each system (Anatomy) and how each system functions in the body (Physiology).

## **APPLIED SCIENCE 11 – COURSE #350**

A comprehensive course that focuses on exploring the individual science disciplines of Biology, Chemistry, Physics, and Earth Science. Students will learn about the influence of science and technology in their everyday lives, as well as review the Scientific Method, and setting up scientific experiments. Physics topics include Newton's Laws of Motion, Momentum, Heat Transfer, and Electricity and Magnetism. Also included in this course are Biology and Chemistry topics related to Cells, Origins of Life, Atoms, and Chemical Formulas. Earth Science topics include rocks and minerals, as well as plate tectonics. Students will explore how each of these scientific disciplines overlap and correlate to everyday life.

## **PHYSICAL EDUCATION – COURSE #941**

The Physical Education Program is designed to provide students with the knowledge and ability needed to maintain an active, healthy lifestyle. Participation in the physical activities offered in this course will be geared to meet the following goals: 1.) to help all students develop into physically educated individuals, 2.) to improve physical fitness levels, sports knowledge, and sports skills, and 3.) to help develop good sportsmanship, a sense of fair play, self-control, and cooperation. Successful completion of Physical Education in each grade level is required for graduation.

# **ELECTIVE COURSE OFFERINGS**

## **ENGLISH LANGUAGE ARTS**

- 141 AP English [12<sup>th</sup> grade only – Prerequisite: final grade of 93% or above in English 11]  
125 Advanced Composition [11<sup>th</sup> and 12<sup>th</sup> grades only]  
126 Yearbook [10<sup>th</sup> through 12<sup>th</sup> grades only]  
127 Battlefields of the Page: Analytical Approaches to War Literature [11<sup>th</sup> and 12<sup>th</sup> Grades Only]

## **SOCIAL STUDIES**

- 242 AP American History [12<sup>th</sup> grade only – Prerequisite: final grade of 90% or above in World Cultures II]  
243 Street Law/Economics [11<sup>th</sup> and 12<sup>th</sup> grades only]  
244 Psychology [11<sup>th</sup> and 12<sup>th</sup> grades only]

## **SCIENCE**

- 330 Chemistry [11<sup>th</sup> and 12<sup>th</sup> grades only] \* **Required for Schroeder Scholarship**  
331 AP Chemistry [12<sup>th</sup> grade only – Prerequisite: final grade of 90% or above in Chemistry]  
342 Honors Anatomy & Physiology [11<sup>th</sup> and 12<sup>th</sup> grades only – Prerequisite: final grade of 90% or above in Biology] \* **Required for Schroeder Scholarship**  
341 Physics [12<sup>th</sup> grade only – Prerequisite: final grade of 90% or above in Algebra II]. Previously or currently enrolled in Precalculus/Trigonometry \* **Required for Schroeder Scholarship**  
344 AP Biology [11<sup>th</sup> and 12<sup>th</sup> grades only] – Prerequisite: 90% or higher in Biology.  
350 Applied Science 11 [11<sup>th</sup> and 12<sup>th</sup> grades only]  
354 Astronomy [10<sup>th</sup> through 12<sup>th</sup> grades only]  
352 Introduction to Hydroponics [10<sup>th</sup> through 12<sup>th</sup> grades only]  
334 Virology [10<sup>th</sup> through 12<sup>th</sup> grades]  
358 Zoology [9<sup>th</sup> through 12<sup>th</sup> grades]

## **MATH**

- 441 AP Math [Prerequisites: Pre-Calculus/Trigonometry]  
425 Probability & Statistics [10<sup>th</sup> through 12<sup>th</sup> grade only]  
Prerequisite for Grade 10: 90% or higher in Honors Algebra 1 and Honors Geometry.  
Prerequisite for Grade 11/12: 85% or higher in Algebra 1, Geometry, and Algebra 2.  
430 Pre-Calculus/Trigonometry [Prerequisites: Algebra I, Algebra II, and Geometry]  
440 Financial Algebra [12<sup>th</sup> grade only]  
454 Consumer Math [12<sup>th</sup> grade only]

## **COMPUTER SCIENCE**

- 404 AP Computer Science Principles [11<sup>th</sup> and 12<sup>th</sup> Grade only]  
405 Introduction to Computer Science [10<sup>th</sup> through 12 Grade]

## **FAMILY & CONSUMER SCIENCE**

- 766 Nutrition, Wellness, & Independent Living [11<sup>th</sup> and 12<sup>th</sup> grades only]

## **FOREIGN LANGUAGE**

- 591 French I    522 French II    533 French III  
595 Spanish I    526 Spanish II    537 Spanish III    548 Spanish IV

## **ART**

- 701 – Advanced Art I  
702 – Advanced Art II  
703 – Advanced Art III

## **THEATER ARTS**

- 736 Intro to Theater Arts (9 to 12)  
737 Theater Arts II (10 to 12)

## **BUSINESS**

- 634 Accounting I [11<sup>th</sup> and 12<sup>th</sup> grade only – cannot be used to fulfill math graduation requirement]  
651 Introduction to Business/Entrepreneurship [11<sup>th</sup> and 12<sup>th</sup> grade only]

## **MUSIC**

- 729 General Music 9 [9<sup>th</sup> grade only]    724 Advanced Chorus  
723 Chorus    734 Band    735 Advanced Band

## **ENGLISH LANGUAGE ARTS ELECTIVES**

### **AP ENGLISH LITERATURE AND COMPOSITION – COURSE #141 [12<sup>TH</sup> GRADE]**

Prerequisite: final grade of 93% or above in ELA 11.

This course is designed to comply with curricular requirements described in the AP English Course Description and will prepare students for the AP exam in English Literature and Composition. This course is an intensive study of representative works of British Literature as well as composition. A survey of significant British authors and their works are presented chronologically from 449AD to the present. Students will be required to read independently, analyze and interpret material, and form impressions and emotional responses that lead to understanding and independent assessment of literary works. All literary selections will include intensive vocabulary development to assist in comprehending the complexity of each work. In addition, assigned compositions emphasize writing as a process with standard English usage, agreement, sentence structure, and punctuation assessed in the context of the student's writing. Writing assignments reflect accordance with the Pennsylvania Core Standards as seen in the informative and argumentative modes and class research component, as well as analysis of class readings and literary concepts demonstrated by those works.

### **ADVANCED COMPOSITION – COURSE #125 [11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

Prerequisite: Students must have completed their previous year's English course with a minimum average of 85 and the recommendation of that English teacher.

Advanced Composition is an elective course that engages students in the writing process to proficiently develop original pieces of personal and expressive writing, observation and description, narrative and literary response, informative exposition, and analysis in accordance with Pennsylvania Core Standards. Students will be expected to write in various genres, including, but not restricted to, college application essays, memoirs, pictorial essays, song lyrics, eyewitness reports, as well as short story, dramatic scene, and research writing. Students will compose essays following standard MLA format. They will further apply independent editing and revision skills, as well as peer review of each assignment, to develop a wide-ranging vocabulary, a variety of sentence structures, and logical organizational skills. Discussed at length are shifting perspectives, language and craft, focus on the writer, and making story connections. Students will compile a working portfolio of their writing throughout the year, while selecting and revising one original piece per quarter to submit in a final portfolio at the end of the school year.

Since publishing written work is a component of the writing process, students will also be responsible for submitting one piece of writing per quarter to the on-line literary magazine *TeenInk*. Students may submit the work of their choosing, but they must present proof to the teacher by a specified due date that a piece of writing was submitted.

## **BATTLEFIELDS OF THE PAGE: ANALYTICAL APPROACHES TO WAR**

**LITERATURE - COURSE #127**

**[11<sup>th</sup> – 12<sup>th</sup> GRADES ONLY]**

Prerequisite: Students hoping to take this course should have achieved a C or higher in the following courses: ELA 9, Honors Civics, Civics, ELA 10, Honors World Cultures I, World Cultures, Psychology

This course will take a deeply analytical look at various pieces of war-related fiction from different eras and centering on different conflict to better understand the human experience during war and peace times, as well as the damaging effects of war on the human psyche (both individual and collective).

## **YEARBOOK/NEWSPAPER – COURSE #126**

**[10<sup>TH</sup> through 12<sup>TH</sup> GRADES]**

Pre-requisite: Satisfactory Completion of English courses and Teacher Recommendation

The objective of this course is not only to create the school yearbook, but also to prepare students for a journalistic profession. The course involves direct experience with these journalistic skills: organization, drawing and design, layout, financing, and production, as well as writing, editing, and proofreading. Students taking this course should plan to follow through the production cycle through the spring semester.

This course is designed to develop students' skills in writing articles, captions, headlines, photography, desktop publishing, and technology tools for media production. Throughout the course, students will take on the roles of writers, photographers, and editors. Students will also be required to attend events beyond the school day to acquire eyewitness accounts and in the moment photos of events. Students will also engage in conducting interviews. Editions of the newspaper will be published on the school's website quarterly, and the yearbook will be published by the end of the school year.

## **SOCIAL STUDIES ELECTIVES**

### **AP AMERICAN HISTORY – COURSE #242**

**[12<sup>TH</sup> GRADE]**

Prerequisite: final grade of 90% or above in World Cultures 2.

This Advanced Placement course is designed to study the history of the United States chronologically, with emphasis on interpretation and analysis of the material by contemporary and modern historians. Through the use of primary and secondary sources the student not only acquires a basic understanding of the factual material but develops the analytical and interpretive skills necessary to deal with the subject in greater depth. At the end of the course, students will be given the opportunity to take the Advanced Placement Examination in American History.

**STREET LAW/ECONOMICS – COURSE #243****[11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

The *Street Law* portion of this course is an introduction to law and legal systems of the United States. The major focal points of this course include constitutional law, general legal principles, civil and criminal law, the courts, court procedures, and civil rights. Additional topics may include family law, housing law, and consumer law. Students engage in real-world experiences to deepen their personal understanding of government, individual rights, the legal system, and legal disputes. These learning experiences are characterized using case studies, mock trials, contemporary issues, current events, and legal research and applied to students' everyday lives. The *Economics* portion of the course will give the students a greater understanding of economics ranging from the viewpoint of the individual consumer or small business owner to the global economy. The course will study the law of supply and demand, forms of business, labor unions, government finances and influence on the economy, money and prices, inflation, and deflation cycles. The course relates history and politics to the study of economics.

**PSYCHOLOGY – COURSE #244****[11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

The psychology course is designed to give students an introduction to the field of psychology and the opportunity to learn more about themselves and others, human behaviors, and why people behave, think, and feel the way that they do. This is an interdisciplinary elective that will combine approaches from science, history, reading/writing, and social sciences.

This course will be broken up into several different modules. The main modules are:

- Scientific Inquiry, Biopsychology, Development and Learning, Sociocultural Psychology, Cognition, Individual Variations, and Applications of Psychological Science

**SCIENCE ELECTIVES****CHEMISTRY – COURSE #330****[11<sup>TH</sup> GRADE]**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP**

Chemistry is an introductory course for students interested in further study of the sciences. Chemistry focuses on the study of basic principles and theories of chemistry including stoichiometry, atomic and molecular structures, the periodic law and its application, basic concepts of chemical bonding, solutions, types of chemical reactions, and gas laws.

**AP CHEMISTRY – COURSE #331****[12<sup>TH</sup> GRADE]**

Prerequisite: final grade of 90% or above in Chemistry.

Advanced Placement Chemistry is a course designed for those students who have already shown a mastery of basic chemical concepts and calculations from chemistry. It is intended for those who wish to major in a STEM field at the collegiate level. This course provides a more in-depth study of those topics covered in chemistry, such as reactions in aqueous solutions, along with new topics of thermochemistry, atomic and molecular structures, intermolecular forces, acid – base equilibria, chemical kinetics and also an introduction to organic chemistry.



**AP BIOLOGY – COURSE #344****[11<sup>th</sup> AND 12<sup>th</sup> GRADES]**

Prerequisite: 90% or higher in Biology or Teacher recommendation.

This course is an elective biology course available for students in 11<sup>th</sup> and 12<sup>th</sup> grade. This course will connect AP-directed big ideas, such as Evolution, Energetics, Information Storage and Transmission, and Systems Interactions, with the eight testing topics of the chemistry of life, cell structure and function, cellular energetics, cell communications, the cell cycle, heredity, gene expression and regulation, natural selection, and ecology. Students will be provided with a deeper understanding of the objectives of biology in preparation for the AP exam. Students will have the option to take the AP Exam.

**PHYSICS – COURSE #341****[12<sup>TH</sup> GRADE ONLY]**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP.**

Prerequisite: final grade of 90% or above in Algebra 2. Previously or currently enrolled in Precalculus/Trigonometry.

This course entails the use of some basic trigonometry and extensive use of Algebra I and Real World Problems. Topics studied are: motion, time, position-time graphs, velocity, acceleration, free fall, force and motion, Newton's Laws, scalars, vectors, vectors in 1 dimension, vectors in 2 dimensions, friction, projectile motion, circular motion, relative velocity, planetary motion, gravitation, the law of universal gravitation, rotational motion, rotational dynamics, equilibrium, impulse, momentum, conservation of momentum, energy, work, simple machines, kinetic energy, potential energy, heat energy, temperature, thermodynamics, properties of fluids, periodic motion, and wave properties.

**HONORS ANATOMY & PHYSIOLOGY – COURSE #342****[11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

- **REQUIRED FOR SCHROEDER SCHOLARSHIP**

Prerequisite: 90% average in Biology and teacher recommendation.

The course is a detailed look at the 11 different systems that make up the Human Body. Those systems include: Integumentary, Endocrine, Muscular, Skeletal, Cardiovascular, Nervous, Reproductive, Lymphatic, Urinary, Respiratory and Digestive. Furthermore, the course focuses on the naming of the organs in each system (Anatomy) and how each system functions in the body (Physiology).

**APPLIED SCIENCE 11 – COURSE #350****[11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

A comprehensive course that focuses on exploring the individual science disciplines of Biology, Chemistry, Physics, and Earth Science. Students will learn about the influence of science and technology in their everyday lives, as well as review the Scientific Method, and setting up scientific experiments. Physics topics include Newton's Laws of Motion, Momentum, Heat Transfer, and Electricity and Magnetism. Also included in this course are Biology and Chemistry topics related to Cells, Origins of Life, Atoms, and Chemical Formulas. Earth Science topics include rocks and minerals, as well as plate tectonics. Students will explore how each of these scientific disciplines overlap and correlate to everyday life.

**ASTRONOMY – COURSE #354****[10<sup>TH</sup> through 12<sup>TH</sup> GRADES]**

This course is an elective course for students in grades 9-12. This course will provide students with a study of the universe and the conditions, properties, and motions of bodies in space. Coursework includes the history of astronomy, gravity, in-depth surveys of planets, exoplanets, and stars, the nature of planetary systems with a focus on our Solar System, as well as the nature and evolution of stars, galaxies and the universe, space exploration, and space technology. The scientific process and research skills are emphasized in this course. This course is designed for students who are curious about the mysteries of the universe. The space program, rocketry, constellations, celestial navigation, life cycle of stars, organization and dynamics of the solar system, galaxies and their interactions, black holes and the warping of time and space. Students who have taken Space Science may not take Astronomy.

**INTRODUCTION TO HYDROPONICS – COURSE #352 [10<sup>TH</sup> through 12<sup>TH</sup> GRADES]**

Hydroponics utilizes cutting edge technologies married with ancient concepts of agriculture to engage students in career opportunities including farmer, engineer, marketing specialist, advertising representative, conservationist, and biologist just to name a few. Students will maintain the system to grow food crops as well as experiment with varying growing techniques and conditions in order to fully interact with the technology.

Introduction to Hydroponics is a course that will introduce students to the field of hydroponics/aeroponics. Students will get hands-on experience growing their own food, including different varieties of lettuce and basil, while also learning how to properly maintain a hydroponic system. Students will also learn about basic plant anatomy, plant nutrition (use of fertilizer), plant disorders, current trends in the industry and types of hydroponic systems and the scientific principles and techniques involved in sustainable agriculture and hydroponic crop production.

**VIROLOGY – COURSE #334****[10<sup>TH</sup> through 12<sup>TH</sup> GRADES]**

This course is an elective science course available for students in grades 10, 11, and 12. This course will provide students with a study of how viruses were discovered, their subsequent vaccines, and eradications throughout history. Coursework includes an in-depth look at animal, plant, RNA and DNA viruses and bacteriophages, viral reproduction and pathogenicity, characteristics and identification methods, and side effects of treatments and cures. Students will also be informed and able to choose a side of the great virus debate, which includes whether they are living or nonliving organisms. Students may take this with no pre-requisite.

**ZOOLOGY – COURSE #358****[9<sup>TH</sup> THROUGH 12<sup>TH</sup> GRADES]**

This course introduces zoology. Zoology is a course that will survey the nine major phyla of the kingdom Animalia beginning with the simplest animals and progressing to the most complex. Zoology is the study of animal life including their anatomy and interrelationships, their physiology and genetics, and their distributions and habitats. This course will include a dissection as well as other hands-on labs. Students will also investigate how humans are influencing these animals.

## **MATH ELECTIVES**

### **AP CALCULUS AB – COURSE #441**

**[12<sup>TH</sup> GRADE ONLY]**

Prerequisite: completion of Precalculus/Trigonometry.

AP Calculus is available to students who have completed Honors Pre-Calculus/Trigonometry. AP Calculus is an advanced placement elective course, which is equivalent to a full academic's year of work in Calculus and related topics, comparable to courses in colleges and universities. Students must have a thorough knowledge of college preparatory mathematics algebra, trigonometry, and geometry. Students will be encouraged to take the Advanced Placement Calculus examination offered by Educational Testing Service (ETS) of the College Board. The course begins with a review of Pre-Calculus concepts essential to the study of Calculus. The concepts of limits and their properties are covered in detail. The two branches of Calculus, differentiation, and integration, are covered extensively, along with chapters on the applications of both topics. The course concludes with more advanced integration techniques. Professional mathematics organizations have strongly endorsed the use of graphing calculators in mathematics instruction and consequently these calculators are also used throughout the course and are required for a portion of the AP exam AB. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by the Pennsylvania Education Code 22, Chapter 4 regulations. The course's objectives, content and activities prepare students for the AP Calculus AB exam.

### **PRE-CALCULUS/TRIGONOMETRY – COURSE #430**

**[11<sup>TH</sup> GRADE]**

Prerequisite: Completion of Algebra 1, Algebra 2, and Geometry.

This course is for the student who has completed Algebra 1, Algebra 2, and Geometry. This course is broken into two parts: Pre-Calculus and Trigonometry. The first part of the course, Pre-Calculus, is designed to prepare students for topics covered in a Calculus course. It begins with a comprehensive study of functions and moves into an analysis of rudimentary calculus concepts such as the difference quotient and the notion of "taking a limit." In addition to introducing students to terminology and concepts essential to the study of Calculus, this course should also help students develop reasoning and analytical skills which may be applied to problems outside the typical realm of mathematics. The second part of the course, Trigonometry, focuses on trigonometric principles as an extension of algebraic and geometrical concepts. Students will study angles, arcs, the unit circle, right triangle trigonometry, the six trigonometric functions, inverse functions, fundamental trigonometric identities, verifying trigonometric identities, solving trigonometric equations, the law of sines, the law of cosines, vectors, and polar coordinates. Graphing calculators, scientific calculators and computer aides will be incorporated using the Pennsylvania and National Standards. The course curriculum, instruction and assessment are aligned with the Pennsylvania Academic Standards for Mathematics as mandated by the Pennsylvania Education Code 22, Chapter 4 regulations. The course's objectives, content and activities prepare students to meet the Pre-Calculus and Trigonometry benchmarks as outlined in the Pennsylvania Academic Standards for Mathematics.

## **PROBABILITY AND STATISTICS – COURSE #425 [10<sup>TH</sup>, 11<sup>TH</sup> AND 12<sup>TH</sup> GRADES]**

**Prerequisite:** Sophomores – 90% average in both Honors Algebra 1 and Honors Geometry  
Juniors/Seniors – 85% average and above for Algebra 1, Geometry, and Algebra 2.

Probability and Statistics is a full-year dual enrollment course through Lackawanna College and Keystone College designed for students in Grades 10-12. An introductory Probability/Statistics course is necessary for students who plan to enter such fields as economics, business, psychology, sociology, biology, medicine, or mathematics. This course will help prepare a student for success in Grades 10-12 as a member of the Pennsylvania Junior Academy of Science as well as future advanced courses in Probability and Statistics. Students enrolled in this course need to have strong skills in mathematics.

Students will learn about: the nature of probability and statistics; organizing data; averages and variations; correlation and regression; elementary probability; binomial distributions; normal curves and sampling distributions; estimation; hypothesis testing; differences of means and proportions; and chi-squares. Emphasis will be placed on real-world application problems and higher-level thinking word problems. Students may work both individually and collaboratively through solving problems, reading higher level texts, and completing projects to achieve mastery of content.

## **FINANCIAL ALGEBRA – COURSE #440 [12<sup>TH</sup> GRADE]**

Financial Algebra is designed to develop a strong foundation in logical thinking and problem solving that will enable students to make informed decisions regarding matters of money and finance in their daily lives. This course furthers the development of functions, which include linear, piece-wise, quadratics, and step functions. Other topics studied include measures of center and spread, graphical representations of data, principles of finance economics, employment basics, payroll, taxes, banking, loans, compound interest, consumer credit, automobile ownership, stock market, investing, independent living, retirement, and budgets.

## **CONSUMER MATH – COURSE #454 [12<sup>TH</sup> GRADE]**

Consumer Math is designed to prepare students for life after graduation by giving them a basic understanding of the mathematics they will encounter on a daily basis. This course explores the topics of Employment Basics, Banking Services, Credit Cards, Taxes, Automobile Purchases, Renting/Owning a Home, Budgeting, Retirement, and the Stock Market.

## **COMPUTER TECHNOLOGY ELECTIVES**

### **INTRODUCTION TO COMPUTER SCIENCE – COURSE #405 [GRADES 10 TO 12]**

In this course students will learn the basics of computer programming along with the basics of computer science. The emphasis is on computational thinking and will help students develop their ability to solve complex problems. This course uses code-along videos to build the necessary skills for students to gain a deeper understanding of computer science and programming. The primary language used is Python and students will learn to program basic number calculations, use repetition and loops, program to create graphics, functions, arrays, 2D arrays, with some programming in EarSketch which adds music to their programs.

## **AP COMPUTER SCIENCE PRINCIPLES – COURSE #404 [GRADES 11 AND 12]**

This course introduces students to the five [5] big ideas in computer science. These ideas are the creative aspects of programming, abstractions, algorithms, large data sets, the internet, cybersecurity and how computers impact our world. This course is project-based using collaborative learning as a tool to address real-world problems. Computational thinking practices developed by students in this course include designing and evaluating solutions for purpose, developing and implementing algorithms, and programs that incorporate abstractions, evaluating and testing algorithms and programs, investigating computing innovations and using responsible computing in a safe, collaborative, and ethical manner.

## **WORLD LANGUAGES ELECTIVES**

### **SPANISH**

#### **SPANISH I – COURSE #595**

This course is an introduction to the Spanish language. It provides basic understanding of the Spanish language and culture through reading, writing, speaking and listening. Students focus on pronunciation, basic vocabulary (including school, city and family vocabulary) and simple grammatical structures. To begin to develop the ability to communicate effectively in Spanish, students work together with partners or small groups to develop basic conversations and ask/answer questions. Students are introduced to the Spanish-speaking countries, their holidays and customs. They also look at Puerto Rico and the countries of Mexico and the Dominican Republic more extensively.

#### **SPANISH II – COURSE #526**

This course reinforces and builds upon the knowledge gained in Spanish I through reading, writing, speaking and listening. While continuing to focus on pronunciation and constructing grammatically correct sentences and questions, students are introduced to a more extensive vocabulary (including pastimes, celebrations, house and chores, weather and food vocabulary). To further develop the students' ability to communicate effectively in Spanish, students begin to look at more complex grammatical structures and continue to work together to converse and practice their listening and speaking skills. Students are required to present brief reports in Spanish as well as construct written reports in Spanish using the appropriate vocabulary and grammatical structures. Students continue to explore the customs of Spanish-speaking countries with a focus on the countries of Costa Rica, Nicaragua, Venezuela, Colombia, Argentina and Chile.

#### **SPANISH III – COURSE #537**

This course continues to reinforce and build upon the knowledge gained in Spanish I and Spanish II through reading, writing, speaking and listening. While continuing to focus on pronunciation and constructing grammatically correct sentences and questions, students expand upon their extensive vocabulary (including clothing, vacation, technology, daily routine, city, shopping and animals vocabulary). Students develop their knowledge and usage of more complex grammatical structures. To further enhance the students' ability to communicate effectively in Spanish, students learn to use a wide variety of verb tenses in their speaking and writing and continue to work together to converse and practice their listening and speaking skills.

Students continue to explore the customs of Spanish-speaking countries with a focus on the countries of Mexico, El Salvador, Honduras, Cuba and Puerto Rico. Students explore the history of the Kuna Indians and their artwork “Las Molas” as well as the artwork of Mexican artists.

#### **SPANISH IV – COURSE #548**

This course continues to reinforce and build upon the knowledge gained in Spanish I, II, and III through reading, writing, speaking and listening. While continuing to focus on pronunciation and constructing grammatically correct sentences and questions, students expand upon their extensive vocabulary (including supermarket, clothing store, extended house, rules, news and airport vocabulary). To further enhance the students’ ability to communicate effectively in Spanish, students expand their knowledge and usage of more advanced grammatical structures, continue to use a wide variety of verb tenses in their speaking and writing, and continue to work together to converse and practice their listening and speaking skills. Students explore the customs of Spanish-speaking countries with a focus on the countries of Spain, Paraguay, Uruguay, Bolivia, Colombia and Ecuador.

### **FRENCH**

#### **FRENCH I – COURSE #591**

This course is an introduction to the French language. It concentrates on the fundamentals of the French language and culture through reading, writing, speaking, and listening comprehension. To develop basic communication skills for written and spoken French, students learn foundational vocabulary, verb conjugation, and grammatical structures. In addition, students practice pronunciation through aural/oral repetition and construct basic communicative responses to questions. Students will begin the study of the French and Francophone culture.

#### **FRENCH II – COURSE #522**

This course builds upon knowledge and skills acquired in French I to move students toward developing greater fluency in speaking and writing the French language. Students acquire more extensive vocabulary and more complex grammatical structures to enhance their ability to communicate effectively in spoken and written French. In addition, this course continues to integrate reading and listening activities to reinforce students’ knowledge and understanding of acquired vocabulary and sentence patterns and improve their ability to appropriately translate and comprehend written and spoken French. Students continue to practice pronunciation through aural/oral repetition and construct communicative responses to more involved questions, as well as gain increased understanding of the French and Francophone culture.

#### **FRENCH III – COURSE #533**

This course continues to reinforce and build upon the knowledge and skills acquired in French I and II through reading, writing, speaking, and listening comprehension. To advance the students’ ability to communicate effectively in French, students continue to acquire and apply common and specialized vocabulary and phrases, as well as complex grammatical constructions. Likewise, they initiate and respond appropriately to increasingly involved conversations to demonstrate greater fluency in speaking and writing. Reading and listening skills also advance to the intermediate level to demonstrate an increased knowledge and understanding of the French language. Students further deepen their study of the French and Francophone culture with analysis and comparison of distinct customs and perspective.

## **PRACTICAL ARTS ELECTIVES**

### **ACCOUNTING I– COURSE #634**

**[GRADES 11 AND 12]**

This course is designed to help students understand the basic principles of the accounting cycle. Emphasis is placed on analysis and recording the basic principles of the preparation and interpretation of financial statements; accounting systems; banking and payroll activities; basic types of business ownership; and accounting career orientation. Mathematical skills and critical thinking are reinforced.

### **INTRO TO BUSINESS/ENTREPRENEURSHIP – COURSE #651 [GRADES 11 AND 12]**

This course will familiarize students with the basics of terminology of the business and work world. It will also serve as a background for other business courses in high school, college, or any business training facility. The most relevant business topics to be covered include the role of entrepreneurship in the global economic recovery. Topical data on how to conduct research and the importance of research as part of entrepreneurship are also covered.

## **FINE ARTS ELECTIVES**

### **ART I – COURSE #701**

**[GRADES 9 TO 12]**

Art I is a full credit course that meets for one class period daily for the entire school year. It is an introductory course that combines studio production (learning to make art), art history (learning about art), and criticism/aesthetics (learning about art). It begins with an introduction to visual vocabulary. Emphasis is placed on helping the student to develop a working knowledge of art elements and principles and basic drawing and painting skills. This is accomplished through a series of lectures and teacher demonstrations that culminates in studio activities. It allows students to experience working with a variety of media as they explore the link between artistic theory and individual creativity.

### **ART II – COURSE #702**

**[GRADES 10 TO 12]**

Art II is a full credit course that meets for one class period daily for the entire school year. This course combines studio production (learning to make art), art history (learning about art), and criticism/aesthetics (learning about art). It begins with a review of basic visual vocabulary. Emphasis is placed on helping the student to further develop a working knowledge of art elements and principles and strengthening basic drawing and painting skills. This is accomplished through a series of lectures and teacher demonstrations that culminates in studio activities. It allows students to experience working with a variety of media as they explore the link between artistic theory and individual creativity and self-critique.

### **ART III – COURSE #703**

**[GRADES 11 AND 12]**

Art III is a full credit course that meets for one class period daily for the entire school year. This course combines studio production (learning to make art), art history (learning about art), and criticism/aesthetics (learning about art). It begins with a brief review of basic visual vocabulary and is followed with the introduction of advanced visual vocabulary. Emphasis is focused on helping the student to further develop and assess the use of art elements and principles in their work and the work of others. Use of color, shading and personal style development is emphasized. This is accomplished through a series of lectures and teacher demonstrations that culminates in studio activities. It allows students to experience working with a variety of media

as they explore, compare, and contrast the link between artistic theory, individual creativity/style and self-critique.

### **INTRODUCTION TO THEATER ARTS – COURSE #736 [9<sup>TH</sup> through 12<sup>TH</sup> GRADES]**

This course provides students with a brief study of the origins and history of theatre from the ancient Greeks to the present, acting techniques and improvisation, stage directing, play analysis, character development, playwrighting, theatre production, and performance. Throughout this course, students will participate in collaborative classroom activities, read and analyze play scripts, learn how to communicate meaning through the voice and body, research various jobs in theatre, analyze dramas/musicals, and learn about famous contributors to theatre and acting. Students will learn to construct written critiques of professional and student productions, reflect upon theater's connection to their own lives and the world at large, and examine various Theater Arts careers.

### **THEATER ARTS II – COURSE #737 [10<sup>th</sup> through 12<sup>th</sup> GRADES]**

This course focuses on deepening students' understanding of the dramatic arts by building upon foundational acting skills through advanced techniques in voice, movement, improvisation, script analysis, character development, directing, and play critique, often culminating in student-directed performances showcasing their refined abilities.

Pre-Req would be Theatre Arts I.

## **MUSIC ELECTIVES**

### **ADVANCED BAND – COURSE #735**

Advanced band is designed to provide students with a performance experience with music at the easy-medium to medium-hard level and will include both new and old compositions from the wind band repertoire, in addition to continue developing fundamental music elements to help strengthen students' musical abilities in a performance setting. Instruction areas include proper instrument techniques, proper fingerings/slide positions for each instrument, development of quality tone production and performance range, basic music theory, major scales, and performing in modes, all the while gaining a strong understanding of performing as an ensemble. Playing exams will be conducted during each grading period to include excerpts from the music being performed in class and scales. Student lessons will be available during the day and will be graded on attendance. Students are expected and encouraged to practice their instrument at home and must be available for evening concerts and performances, as it is part of the student's grade. Dress rehearsals will be held before each concert, which are also part of the student's grade. Pre-requisite: Prior instrumental music study in elementary and beginning band is encouraged in addition to a positive attitude and genuine desire to contribute to a musical performing ensemble. The Advanced Band consists of students in 9th grade who wish to perform in an instrumental ensemble and for those who wish to continue their instrumental music performing experience.



### **CHORUS – COURSE #723**

Chorus provides an opportunity for participating students to become acquainted with two, three, and four-part harmony, solo performance, group participation, community involvement, organizational skill, public performance and self-esteem. Students will also become familiar with conventional musical selections, familiar with world songs, foreign pieces and more unconventional texts and pieces (including holiday, classical, show tunes, standards, etc.). Students will also learn to work as a “team” and to work with each other’s talents and excitement for the art of singing.

### **ADVANCED CHORUS – COURSE #724**

Advanced Chorus, a full credit course, provides an opportunity for participating students to study, rehearse, and perform choral music. In doing so, proper techniques for healthy, intelligent singing are discussed and demonstrated through performance of the choral literature. A basic understanding of music theory is gained through daily rehearsals. Students learn and improve on music reading ability during daily sight-reading exercises and periodic sight-reading tests. Students have the opportunity to audition for and/or participate in All-State Choirs, All-County Choirs, NEIU19 District Chorus, District Solo and Ensemble Festival, Community Performances and Music Honor Society. After school, evening, and weekend activities are part of the course requirements.

## **FAMILY AND CONSUMER SCIENCE ELECTIVE**

### **Nutrition, Wellness, and Independent Living – COURSE #766 [Grades 10 through 12]**

This course prepares students for the future by understanding today’s foods and eating trends, learning to evaluate nutritional information to make informed decisions about basic food preparation and food choices for a long and healthy lifestyle. Students will explore personality development and the responsibilities of being a mature person, building communication, and decision-making skills. They will develop strategies for handling family challenges and creating positive relationships. They will learn about managing finances, making housing decisions, family responsibilities, and caring for children in preparation for life after high school.