



**NORTH ALLEGHENY SCHOOL DISTRICT**  
**2023-2024**  
**PROGRAM OF STUDIES**  
**GRADES 9-12**







NORTH ALLEGHENY SCHOOL DISTRICT

# 2023 – 2024 Program of Studies

## Course Selections for Grades 9-12

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Special thanks to the Principals, Department Chairs, and  
Executive Council Members who made this Program of Studies possible.

### Publication / Production:

Office of Secondary Education

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## An Introduction to the 2023–2024 Program of Studies from the Superintendent of Schools

This year North Allegheny launched a new comprehensive and strategic plan. This plan will serve as a roadmap for the District's educational and operational priorities for the next decade. There is no better time than now to focus our direction on the future. Just like a compass provides direction, our plan is guided by four key principles: The North Allegheny Experience, Engagement, Support Services, and a Welcoming Environment. The Program of Studies is an area of focus in The North Allegheny Experience section of the plan. Our goal is to expose all students to a well-rounded education that includes a modernized instructional model, encourages authentic and relevant post-secondary opportunities, and encourages all students to take full advantage of the breadth of our extracurricular and co-curricular opportunities to enrich their overall NA Experience.

As a School District, we are excited to share the 2023-2024 Program of Studies with you. Our academic program provides significant opportunities for students to engage in rigorous and meaningful coursework. I encourage our students and families to sit down together and review the course requirements for graduation, discuss the course selection process, and call the School Counseling Department with any questions or concerns you may have. The Plan Ahead Sheet on page 5 is an excellent planning tool to help you design an academic program that will help you meet your college, technical school, military, and career goals.

During the District's Curriculum Review Process for each Department, new courses may be recommended for the *Program of Studies*. Beginning with the 2023-2024 school year, the following course names have changed in the following Departments:

### **BUSINESS, COMPUTER AND INFORMATION TECHNOLOGY (BCIT)**

Change from Financial Literacy to **Personal Financial Literacy**

### **MATHEMATICS**

Academic Pre-Calculus with Trigonometry to **Academic Algebra 3 with Trigonometry**

### **MUSIC**

Change from Choral 1 to **9th Grade Chorus SA/TB**

Change from Choral 2 to **10th Grade Chorus SA/TB**

Change from Choral Ensemble to **NAI Honors Treble Singers**

Change from Treble Choral Ensemble to **NASH Honors Treble Singers**

Change from Concert Choir Female to **Concert Choir (SA)**

Change from Concert Choir Male to **Concert Choir (TB)**

Change from Music Theory and Composition 1 to **Music Production 1**

Change from Music Theory and Composition 2 to **Music Production 2**

Change from Honors Music Theory and Composition 3 to **Honors Music Production 3**

Electronic Music classes are now Music Technology and Songwriting 1 through 4

### **TECHNOLOGY AND ENGINEERING EDUCATION**

Change from Mechanical CADD to **Advanced CADD**

In this document, you will also find the Graduation Requirements for each graduating class. Students should review expectations related to the Keystone Exams based on their year of graduation. Since the Pennsylvania Department of Education continues to release new information related to the Keystone Exams, please visit the North Allegheny School District website for updates.

Best wishes to all students as you prepare for the 2023-2024 school year.

**Melissa R. Friez, Ed.D.**



## **Purpose of the Program of Studies**

North Allegheny School District is focused on preparing every student for success in a changing world. We strive to ensure educational experiences are dynamic, rigorous, and individualized based on student interests and future goals.

The purpose of our NASD Program of Studies is to provide students and their families with a comprehensive listing of courses available to students at the high school level along with a strategic overview of policies and procedures relevant to NASD graduation requirements.





**NORTH ALLEGHENY SCHOOL DISTRICT**  
**2023 – 2024 Program of Studies, Grades 9 – 12**  
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## General Information



NORTH ALLEGHENY SCHOOL DISTRICT

### Strategic & Comprehensive Plan 2022 - 2029

*The mission of the North Allegheny School District is to prepare all students for success in a changing world.*

This plan includes our strategic direction, focus areas, and strategic initiatives. Each initiative is defined by key objectives, as well as how they will be executed. Just like a compass provides direction, our plan is guided by four key principles: The North Allegheny Experience, Engagement, Support Services, and a Welcoming Environment. These areas are defined further in this plan; however, it is our hope that by following the direction of a compass our staff, students, and community will remember our guiding principles.



## GOALS

### The North Allegheny Experience

Expose all students to a comprehensive education that includes a modernized instruction model, post-secondary opportunities, and encourages all students to take full advantage of the breadth of our award-winning extracurricular opportunities to enrich their overall NA Experience.

### Engagement

Create opportunities for collaboration between key stakeholders to solve problems and improve the NA Experience for our students.

### Support Services

Foster an environment for teaching and learning that provides support services for students, staff, and the community while maintaining fiscal responsibility.

### Welcoming Environment

Create a culture and environment for teaching and learning where all students, staff, families, and community members feel safe, welcome, and included.

## General Information



NORTH ALLEGHENY SCHOOL DISTRICT

### 2023-2024 Scheduling Timeline

January 17 – 27, 2023	Teachers notify students of next year course approvals
Jan 30 – Feb 24, 2023	School Counselors share scheduling presentations with 8th – 11th grade students and will meet with 8th - 11th grade students individually.
February 28, 2023	Final course selections and waivers are due to the respective School Counseling Office for all grades 8 – 11 students.
March 3, 2023	Scheduling Letter with final course approvals and selections emailed home to parents.
March 8, 2023	Final changes submitted to the School Counseling Office (no changes accepted after this date).
August 2023	Schedules are available in the Student Information System for students and families.
August 21, 2023	First Day of School for Students
August 28, 2023	Last day to add / drop a course based upon availability and requirements as per the Program of Studies.



## General Information

### 2023-2024 Graduation Requirement

At North Allegheny, a minimum of 24 credits is required for graduation from high school.

#### These credits must include:

English (includes culminating projects)	4.0 credits
Social Studies	4.0 credits
Mathematics	3.0 credits
Science (includes Biology)	3.0 credits
S.T.E.M.	1.0 credit
Health & Physical Education (.5) credit/year	2.0 credits
Wellness for Life	0.5 credit
Electives	6.5 credits
<hr/>	
<b>Total Credits</b>	<b>24 credits</b>

#### **Additional Scheduling Requirements**

1. At least one additional credit must be taken in a S.T.E.M. related area (i.e., Science, Technology, Engineering, and Mathematics). The Program of Studies outlines specific courses that meet the S.T.E.M. designation.
2. Students must schedule a minimum of 7.0 credits each year. Students who deviate from this requirement must have the approval of the Building Principal and/or IEP Team.
3. Successful completion of a minimum of 12 credits is required to achieve junior standing. Students with deficiencies in English, Social Studies, Mathematics, or Science will require a review to be eligible for full time enrollment at the Senior High School.
4. There are eight (8) instructional periods at the Intermediate High School and Senior High School. Students are encouraged to take advantage of the many and varied elective courses offered by the District.
5. Students may not schedule more than the equivalent of one full year/full time study hall during the year.

#### Keystone Exam Requirements and Information

Keystone Exams are end-of-course assessments designed to assess proficiency in three subjects: Algebra I, Literature and Biology. Keystone Exams are one component of Pennsylvania's system of high school graduation requirements and help school districts guide students toward meeting state standards. Keystone Exams are typically taken during the spring of the year in which a student is enrolled in the given course. Students must demonstrate proficiency on each of the three Keystone Exams. If a student does not receive a score of "Advanced" or "Proficient", the student is permitted to retest during designated windows established by the Pennsylvania Department of Education. Through Act 158 of 2018 and Act 6 of 2017, students graduating from a Pennsylvania public high school in 2023 or later will have greater flexibility in reaching proficiency through five pathway options. For students who score below proficient on any Keystone Exam, the District will provide opportunities for all students to demonstrate mastery according page 39) to the pathways.

## General Information

### High School Course Sequence for Classes of 2024, 2025, 2026 and 2027

North Allegheny Intermediate High School Course Sequences	North Allegheny Senior High School Course Sequences
<p style="text-align: center;"><b><u>Grade 9 (2027)</u></b></p> <p><b>Required</b></p> <p>English 1.0 credit (specific required courses are on <a href="#">page 45</a>)</p> <p>Social Studies 1.0 credit (specific required courses are on <a href="#">page 106</a>)</p> <p>Mathematics 1.0 credit (see Mathematics course offerings listed on <a href="#">page 71</a>)</p> <p>Science 1.0 credit (specific required courses are on <a href="#">page 95</a>)</p> <p>Health &amp; Physical Education 0.5 credit</p> <p>Wellness for Life 0.5 credit</p> <p><b>Required Courses</b> <b>5.0 credits</b> <b>Elective Courses</b> <b>up to 3.0 credits</b></p> <p><i>(Must schedule at least 2.0 Elective Course credits)</i></p>	<p style="text-align: center;"><b><u>Grade 11 (2025)</u></b></p> <p><b>Required</b></p> <p>English 1.0 credit (specific required courses are on <a href="#">page 46</a>)</p> <p>Social Studies 1.0 credit (specific required courses are on <a href="#">page 106</a>)</p> <p>Mathematics * 1.0 credit</p> <p>Science * 1.0 credit</p> <p>Health &amp; Physical Education 0.5 credit</p> <p><b>Required Courses</b> <b>4.5 credits</b> <b>Elective Courses</b> <b>up to 3.5 credits</b></p> <p><i>(Must schedule at least 2.5 Elective Course credits)</i></p> <p><i>* At least three total credits each of Math and Science are required for graduation.</i></p>
<p style="text-align: center;"><b><u>Grade 10 (2026)</u></b></p> <p><b>Required</b></p> <p>English 1.0 credit (specific required courses are on <a href="#">page 45</a>)</p> <p>Social Studies 1.0 credit (specific required courses are on <a href="#">page 106</a>)</p> <p>Mathematics 1.0 credit (see Mathematics course offerings listed on <a href="#">page 71</a>)</p> <p>Science 1.0 credit (specific required courses are on <a href="#">page 95</a>)</p> <p>Health &amp; Physical Education 0.5 credit</p> <p><b>Required Courses</b> <b>4.5 credits</b> <b>Elective Courses</b> <b>up to 3.5 credits</b></p> <p><i>(Must schedule at least 2.5 Elective Course credits)</i></p>	<p style="text-align: center;"><b><u>Grade 12 (2024)</u></b></p> <p><b>Required</b></p> <p>English 1.0 credit (specific required courses are on <a href="#">page 46</a>) *</p> <p>Social Studies ** 1.0 credit</p> <p>Health &amp; Physical Education 0.5 credit</p> <p><b>Required Courses</b> <b>2.5 credits</b> <b>Elective Courses</b> <b>up to 5.5 credits</b></p> <p><i>(Must schedule at least 4.5 Elective Course credits)</i></p> <p><i>*A total of four credits in specific required English courses are required for graduation</i></p> <p><i>** Students who attend A.W. Beattie Career Center during their senior year are not required to take Grade 12 Social Studies electives. If students withdraw from Beattie during their senior year, they will be required to earn 4 credits of Social Studies</i></p>

***At least one additional credit must be taken in a S.T.E.M. related area (i.e., Science, Technology, Engineering, and Mathematics). In the Table of Contents for selected Departments, the Program of Studies outlines specific courses that meet the S.T.E.M. designation.***

## General Information

### Plan Ahead Sheet

While the District strongly encourages students to explore a broad range of course offerings in their high school experience, it is also important to communicate the potential for more specific career exploration and preparation. All students at North Allegheny will utilize the Naviance Student program to identify career interests. Some of the college majors and/or career opportunities are organized in the following clusters: Science & Technology Careers; Arts Careers; Social Service Careers; Technical Careers; and Administration & Sales Careers. If students have a strong interest in one of these areas, they should refer to the Career Clusters document on page 18 and/or contact their School Counselors for further discussion about important required and elective course selections.

Students should use the chart below to plan to meet the [required credits for graduation](#) and the elective courses that will help them reach their career goals.

Subject Field	9	10	11	12
English				
Social Studies				
Mathematics				
Science				
World Language				
Elective (S.T.E.M.)				
Elective				
Elective				
Elective				
Health & Physical Education				
Wellness for Life				
TOTAL				

## College Testing Terms

### Advanced Placement Exams (AP)

There are over 30 examinations offered by The College Board in the Advanced Placement (AP) Program. All AP exams contain both multiple-choice questions and free-response questions that require essay writing, problem-solving, and other skills. AP exams are given every year during two weeks in May.

Every exam receives an overall grade on a five-point scale: 5 (extremely well-qualified,) 4 (well-qualified,) 3 (qualified,) 2 (possibly qualified,) and 1 (no recommendation.) Upon student request, grade reports are sent in early July to each student's home address, school, and to his/her college. Many colleges grant credit and/or advanced placement to students whose AP exam grades are considered acceptable. Students are strongly encouraged to take the AP exam at the conclusion of the course. Students who choose to take an AP exam must register to do so and assume the related costs.

**NA will not offer any AP exams for courses not listed here:**

AP Course	AP Exam	AP Course	AP Exam	AP Course	AP Exam
<b>Art and Design</b>	2-D Art and Design 3-D Art and Design Drawing	<b>English 3</b>	English and Language Composition	<b>Physics 2</b>	Physics 2: Algebra Based
<b>Art History</b>	Art History	<b>English 4</b>	English Literature And Composition	<b>Physics 1 and 2</b>	Physics 1: Algebra Based Physics 2: Algebra Based
<b>Biology</b>	Biology	<b>European History</b>	European History	<b>Physics C</b>	Physics C: Electricity & Magnetism Physics C:Mechanics
<b>Calculus AB</b>	Calculus AB	<b>French</b>	French Language and Culture	<b>Psychology</b>	Psychology
<b>Calculus BC</b>	Calculus BC	<b>German</b>	German Language and Culture	<b>Spanish</b>	Spanish Language And Culture
<b>Chemistry</b>	Chemistry	<b>Human Geography</b>	Human Geography	<b>Statistics</b>	Statistics
<b>Computer Science Principles</b>	Computer Science Principles	<b>Latin</b>	Latin	<b>United States Government &amp; Comparative Politics</b>	Comparative Government and Politics  United States Government and Politics
<b>Computer Science</b>	Computer Science A	<b>Music</b>	Music Theory	<b>United States History</b>	United States History
<b>Economics</b>	Macroeconomics Microeconomics	<b>Physics 1</b>	Physics 1: Algebra Based		

# College Testing Terms

## ACT

The ACT measures a student's ability in the subject areas of English, Mathematics, Reading, Science Reasoning, and an optional Writing section. ACT scores are reported on a standard scale that ranges from 1 to 36. The arithmetic average of the scores on the first four tests is the ACT composite score, which is often used as a measure of overall academic ability. Scores are organized into Individual Student Profile Reports, which are sent to the students and to colleges.

- The English Test measures students' understanding and use of the basic elements of correct and effective writing in usage/mechanics and rhetorical skills.
- The Mathematics Test measures students' mathematical reasoning and problem-solving abilities.
- The Reading Test measures reading comprehension abilities in the following areas: Social Studies, Science, Arts, and Literature.
- The Science Reasoning Test measures students' critical reasoning and problem-solving skills required in the natural Sciences.
- The ACT writing test is an optional 40-minute essay test that measures your writing skills. The test consists of one writing prompt that will describe a complex issue and present three different perspectives on that issue. You are asked to read the prompt and write an essay in which you develop your own perspective on the issue. Your essay should analyze the relationship between your perspective and one or more other perspectives.

The ACT is given in September, October, December, February, April, and June of each year at North Allegheny Senior High School. High school students take the ACT for admission purposes typically during their junior year and can take it as late as the fall of senior year. Students who choose to take the ACT Assessment must register to do so and assume the related costs. Registration materials are available at [www.act.org](http://www.act.org).

## PSAT and the National Merit Scholarship Qualifying Text (NMSQT)

The PSAT is an assessment that is aligned to the SAT. It measures reading, writing and language, and mathematical abilities important for academic success in college. The test is useful as a practice test for the SAT. The PSAT is offered in October for juniors and serves as the National Merit Scholarship Qualifying Test in a nationwide competition for recognition, awards, and scholarships. Tenth graders may elect to take the PSAT 10 test for practice; however, their scores are not applicable to the NMSQT.

Students who choose to take the PSAT must register to do so and assume the related costs. Registration materials are available on the School Counseling website and offices at NAI and NASH.

## SAT

The SAT is an entrance exam used by most colleges and universities. It is typically taken by juniors in the spring and seniors in the fall. It is given at North Allegheny Senior High School in October, November, December, March, May, and June. Students who choose to take the exam must register to do so and assume the related costs. Registration materials are available at [www.collegeboard.com](http://www.collegeboard.com).

The SAT includes four parts: Reading, Writing and Language, and Mathematics. The exam is scored on a scale from 400-1600.

- All Reading Test questions are multiple-choice and based on passages. The test will include informational graphics, such as tables, graphs, and charts, but no mathematics is required. Prior topic-specific knowledge is not tested.
- The SAT Writing and Language Test asks students to be an editor and improve passages that were written specifically for the test — and that include deliberate errors. To answer some questions, students need to look closely at a single sentence. Others require reading the entire piece and interpreting a graphic.
- The Mathematics Test will focus in depth on the three areas of mathematics that play the biggest role in a wide range of college majors and careers: Heart of Algebra, which focuses on the mastery of linear equations and systems; Problem Solving and Data Analysis, which is about being quantitatively literate; and Passport to Advanced Math, which features questions that require the manipulation of complex equations. The Mathematics Test also draws on additional topics in Mathematics, including the geometry and trigonometry most relevant to college and career readiness.

## ASVAB

The Armed Services Vocational Aptitude Battery (ASVAB) is a multiple-aptitude battery that measures developed abilities and helps predict future academic and occupational success in the military. It is administered annually to more than one million military applicants, high school, and post-secondary students. Visit the official ASVAB website to learn more: [www.officialasvab.com](http://www.officialasvab.com)

**Students interested in taking the ASVAB should contact the Air Force Junior ROTC Office or their assigned school counselor at NAI.**



# Scheduling Terms

## Scheduling Terms

### Acceleration

In the areas of Mathematics, Science, and World Language, students have the potential opportunity for acceleration through summer coursework in a face-to-face setting. Courses must be pre-approved by North Allegheny. In addition, students pursuing this option must earn a minimum grade in that course and on a comprehensive test developed by North Allegheny. The summer course will not show on the student's transcript. Students are required to see their School Counselor and the appropriate Department Chairperson for additional information about this potential option. It is extremely difficult to accelerate through a full year/full time course via a compacted summer program. Students and parents must recognize that this option should only be considered in rare circumstances. It is possible for a student to attempt acceleration and then fail to meet the course grade or cumulative test threshold for that acceleration to be accepted by the District. Any student who successfully accelerates through a course that is assessed by a Keystone Exam is reminded that he/she will still be required to take that Keystone Exam during the next available Keystone Exam testing window.

### Advanced Placement (AP) Program

The Advanced Placement Program gives students the opportunity to pursue college-level studies while still in high school. Students may receive advanced placement and/or credit upon entering college for their score on a national AP exam given in May. These exams are optional for students and are taken at the student's cost. AP courses are weighted (.25) in computing QPA. If a student does not pass the AP course, then AP weight will not be factored into the QPA. North Allegheny offers AP courses in:

Art and Design	English, Grades 11 & 12	US Government & Comparative Politics
Art History	French	Physics C
Biology	German	Physics 1
Calculus AB & BC	History: United States & European	Physics 2
Chemistry	Human Geography	Physics 1 – 2
Computer Science Principles	Latin	Spanish Language & Culture
Computer Science	Music	Statistics
Economics (Macro-Micro)	Psychology	

**Refer to individual course descriptions for additional information.**

### Auditing a Course

Occasionally, students may wish to learn about a subject area without officially enrolling in the course. It may be possible for a student to audit a course if space is available, the student is on track for graduation, and the student receives building administration's approval. While an audited course carries no grade or credit, all course requirements and attendance standards must be met. AUDIT will appear next to the course on the student's transcript and will not impact the student's GPA. **Requests to audit a course must be made prior to the start of the school year.** Students may not request to take the course for credit once it is approved to be audited.

### Credit

Credit is given as official acknowledgement that a student has successfully completed a designated number of hours of classroom instruction:

- 1.0 – One credit is earned for successful completion of classes meeting 5 times each week for 36 weeks, or 120 hours (2 semesters).
- .5 – One half credit is earned for successful completion of classes meeting 5 times each week for 18 weeks, or 60 hours (1 semester).
- .5 – One half credit is also earned for attending classes 2 or 3 times each week for 36 weeks (ex. physical education or Science lab courses).
- 1.5 – One- and one-half credits are earned for successful completion of classes meeting 5 times each week for 36 weeks and doing laboratory work 2 or 3 times each week for 2 semesters.

### Credit Recovery

The North Allegheny School District does not maintain its own summer school. However, students who have failed a core academic course may wish to recover the credit using Waterfront Learning at the family's expense. Waterfront Learning is the only District approved summer school program. Credit recovery is only for the purpose of replacing the failing grade with the letter grade "D" on the transcript. If a student fails an Honors or AP level course and completes a credit recovery course, the course title will be updated with an "Academic" course title on the student's transcript, and the student will not earn Honors and AP weight in their QPA.

## Scheduling Terms (continued)

### College in High School (CHS)

College in High School offers regional high school students the opportunity to earn both high school and college credit in courses taught in their high school classrooms. This program provides students the chance to participate in college-level learning experiences before they leave high school, while helping students to establish a collegiate transcript for potential transfer credits in the future. Students are NOT required to take the course for collegiate credit unless they wish to do so.

The following are courses offered for CHS credit. Please note that each college or university requires their own registration and independent payment procedures. Please talk with the teacher of the course at North Allegheny School District for more information. All courses listed below equate with three (3) collegiate credits unless otherwise noted. North Allegheny partners with the following institutions of higher learning: [Carlow University](#), [Duquesne University](#), [LaRoche University](#), [Rochester Institute of Technology](#), and the [University of Pittsburgh](#).

Should you have questions about whether a college or university will accept these credits toward the completion of a bachelor's degree, please contact the specific Admissions Office directly. Many families also review this database to review the likelihood of acceptance of transfer credits [http://eceapps.uconn.edu/credit\\_transfer\\_database/](http://eceapps.uconn.edu/credit_transfer_database/)

#### Business, Computers and Information Technology

Course	Course #	University
Business Communications	7902	La Roche University
Honors Advanced Accounting 1	7705	Carlow University
Honors Advanced Accounting 2	7805	Carlow University
Intro to Information Science	7906	University of Pittsburgh
Principles of Accounting 1	7505	Carlow University
Principles of Accounting 2	7605	Carlow University
Web Page Design	7908	La Roche University

#### English

Course	Course #	University
AP English 4: Lit & Comp	1012	La Roche University
Film Studies	1912	La Roche University
Honors Argument	1908	University of Pittsburgh
Journalism 11	1803	La Roche University
Speech	1805	La Roche University

#### Family and Consumer Science

Course	Course #	University
Child Psychology	8704	La Roche University

#### Mathematics

Course	Course #	University
AP Calculus BC	3022	La Roche University
AP Computer Science (4 Credits)	3011	La Roche University
AP Statistics	3014	La Roche University
Honors Calculus	3422	La Roche University
Honors PreCalc w/ Trigonometry	3421	La Roche University
Probability and Statistics	3812	La Roche University
Honors Linear Algebra	3032	La Roche University

#### Music

Course	Course #	University
AP Music	6301	La Roche University

#### Science

Course	Course #	University
AP Biology (4 Credits)	4011	La Roche University
AP Chemistry (4 Credits)	4012	La Roche University
AP Physics 1 & 2 (4 Credits)	4082	La Roche University

## Scheduling Terms (continued)

### Social Studies

Course	Course #	University
AP European History	2012	La Roche University
AP Psychology	2014	La Roche University
AP United States History	2011	La Roche University
Honore American Foreign Policy: 1945-Present	2611	La Roche University
Honors Modern American History and Politics	2111	La Roche University
Honors History of East Asia: 1945-Present	2711	La Roche University
Honors History of Europe & Russia: 1945-Present	2712	La Roche University
Multicultural Experience	2610	La Roche University
Sociology	2911	La Roche University
Honors Intro to Philosophy	2713	La Roche University

### Technology and Engineering Education

Course	Course #	University
Honors Intro to Engineering Design PLTW	9703	Rochester Institute of Technology (RIT)
Honors Digital Electronics PLTW	9701	Rochester Institute of Technology (RIT)
Honors Principles of Engineering PLTW	9702	Rochester Institute of Technology (RIT)
Honors Computer Integrated Manufacturing PLTW	9705	Rochester Institute of Technology (RIT)
Honors Civil Engineering and Architecture PLTW	9708	Rochester Institute of Technology (RIT)

\* Note: Project Lead the Way (PLTW) courses are not only eligible for college credit through Rochester Institute of Technology (RIT), but also many other colleges and universities that can be found on the PLTW student opportunities page at:

<https://www.pltw.org/experience-pltw/student-opportunities>

### Visual Arts

Course	Course #	University
AP Art History	6013	La Roche University
AP Art and Design	6011	La Roche University
Honors Art	6010	La Roche University
Photography 2	6605	La Roche University

### World Languages

Course	Course #	University
AP French	5411	La Roche University
AP German	5511	La Roche University
AP Latin	5611	Duquesne University
AP Spanish	5711	La Roche University
Honors French IV	5409	La Roche University
Honors German IV	5509	La Roche University
Honors Latin IV	5609	Duquesne University
Honors Spanish IV	5709	La Roche University
Honors French V	5410	La Roche University
Honors German V	5510	La Roche University
Honors Latin V	5610	Duquesne University
Honors Spanish V	5710	La Roche University

## Scheduling Terms (continued)

### Early Graduation Requirements

Students generally complete their graduation requirements at the completion of their senior year; however, a student interested in graduating early must still achieve 24.0 overall credits to be eligible to graduate early. Students interested in graduating early should begin this process before scheduling their 9th grade courses to achieve all needed requirements by the District. Those requirements include the following:

- Have a discussion with the 8th, 9th or 10th grade counselor to review the Early Graduation process.
- Schedule and maintain exactly eight credits each year to complete 16 credits prior to their junior year.
- Complete an Early Graduation form with the District to certify this process and to ensure that all parties agree. These are available in the School Counseling Office.
- Students should be aware that English is a full year course that requires four years of completion. For this reason, any student interested in graduating early will need to complete their junior and senior English course during their junior year.
- No outside credits will be counted toward any District graduation requirement.
- Completion of all District requirements must be obtained. (Credits / PA Keystones)

### Elective Courses

Elective courses are taken to enhance a particular subject area, for personal interest, or for career exploration and preparation. Elective courses are considered important for a well-rounded education. Each subject area offers numerous elective courses.

### Full Time Courses

Full time courses meet 5 times per week.

### Grade Replacement

In some cases, students may wish to repeat an entire course for the purpose of improving their grade. Grade replacement can only be provided if the student is able to schedule the exact same course the following year. Credit is only earned once for the course. The first grade and course will remain on the transcript; however, no credit will be given and the grade will not affect the QPA. Only the grade of the second attempt at a course will be factored into the QPA. Students must receive approval from their school counselor for this option prior to the student scheduling the course.

### Graduation Requirements / Keystone Exams

The North Allegheny School District's graduation requirements are highlighted in Board Policy #217. Specific course and credit requirements are also noted on page 4. Pennsylvania also requires all high school graduates to attain proficiency on three end-of-course Keystone Exams, Algebra I, Biology, and Literature. The Keystone Exams are typically taken during the spring of the year the student is enrolled in the corresponding course. If a student does not receive proficiency on a Keystone Exam, the student is permitted to take a re-test during designated windows established by the Pennsylvania Department of Education. If a student continues to receive a less than "Proficient" score on future retests, Act 158 of 2018 and Act 6 of 2017 provide alternatives to Pennsylvania's statewide requirement of attaining proficiency on the three Keystone Exams. 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.

### Honors Courses

Honors level courses have extended content and additional workload. This sets them apart from regular high school courses in the same subject. These courses have established prerequisites for admission and are weighted (.125) for the purpose of computing QPA. If a student does not pass the course, Honors weight will not be factored into the QPA.

### Independent Study

Independent Study is one possible way for students to satisfy their academic needs if they have encountered a scheduling conflict. When a requested course does not fit in a student's schedule due to a conflict, Independent Study may be available provided a teacher agrees to teach the course and the principal has approved this method. A student cannot earn more than 8 credits per academic year. Students may contract for no more than 1/2 credit of Independent Study per semester. AP courses are not eligible for independent study. Further information about Independent Study is available at the School Counseling Office or from the appropriate Department Chairperson.

### Level Change Procedure (No Waiver)

If a student is unable to meet the academic demands of a course, they can request a level change. For example, a student who is approved and scheduled for Honors Biology but unable to meet the demands of the course may be rescheduled into Academic Biology if seats are available in the class.

- Students have 20 school days to request this change with school counselors.
- When a student completes a level change within the first 20 school days, the student's grade will not carry over from the original course and will not appear on the student's transcript
- After day 20 of school, the student will receive a failing grade "E" if they choose to make a level change.
- Students who request a level change for a course they waived into will be held to the Waiver Procedure.

## Scheduling Terms (continued)

### Part Time Courses

Part time courses meet 2 or 3 times per week.

### Semester Courses

A semester is one-half of a school year or 18 weeks of classes. The first semester begins in August and ends late in January. The second semester begins late in January and ends in June. Many semester courses are available. Students should consult the course descriptions. Semester courses carry 0.5 credit.

### Schedule Changes

All students have an opportunity each year to select courses appropriate to their needs. Once selected, counselors will only make a schedule change for one of the reasons below if there is room in the newly requested class, the student has the prerequisites for the class, the student maintains a minimum of seven (7) credits, and the student remains on track for graduation. No new course additions to student schedules will be approved after the 4th day of the school year or the 4th day of the 2nd semester for 2nd semester class additions. Teacher change requests will not be honored. The following are the only reasons a schedule change may be granted:

- Mechanical/Computer error
- Replace a study hall with a course
- Meet a graduation requirement/college entrance requirement
- Level Changes (see Level Change Procedure)

### Waiver Procedure

A waiver is a contract between the student and parent/guardian and the School District. It provides a course placement which supersedes the originally approved level. Students who pursue a waiver should understand that this action carries with it responsibility and accountability. Neither curricular content nor performance expectations will be deleted or diminished to accommodate students who elect to waive into a course. Students who waive must adhere to these waiver guidelines:

- Students may not waive prerequisite courses in order to seek a course more advanced in the curricular sequence. For example, a student cannot waive into Honors Chemistry without having completed Honors or Academic Biology first.
- Students cannot waive two course levels. For example, a student approved for Honors Calculus cannot waive into AP Calculus BC.

If withdrawal from the waived course occurs on day 1-20 of school:

- The student will receive a "W" listed beside the dropped course on their transcript.
- The student will schedule a new course, and the grade from the original course will not carry over into the new course.

If withdrawal from the waived course occurs after day 20 of school:

- The student will receive a "E" on their high school transcript. The "E" will be factored into the QPA and no credit will be awarded.

### Withdrawal from Course(s)

If a student is able to maintain seven (7) scheduled credits and all of their graduation requirements, they may withdraw from a course and replace it with a study hall. Students have 10 school days to withdraw from a semester course and 20 school days to withdraw from a full-year course. Withdrawing from a course after the respective 10 day or 20 day period will result in the student receiving an "W/E" for the course, which will be included in the student's QPA calculation.



## Scheduling Terms (continued)

### NCAA Course of Study for Athletes

Parents and students should understand that if a student envisions playing intercollegiate athletics at either the Division I or II level, the student must begin as a freshman to pursue an NCAA accepted course of study.

If you are interested in competing at the collegiate level, please sign up for the NCAA monitoring course (NCAA). Although this course does not formally meet and carries no credit, enrollment will allow high school administrators, school counselors and coaching staff to guide you through the process of being cleared through the NCAA. Enrollment in this course in no way guarantees you will be eligible to compete at the collegiate level, however, this course will be used to share information with you and your parents.

To tell if a course meets NCAA eligibility, look for "NCAA" next to the course descriptions. The following are updates for any college-bound student-athlete first entering an NCAA Division I college or university on or after August 1, 2022. Students will need to meet new academic rules to receive athletics aid (scholarships), practice, or compete during their first year. Students may be considered either a Full Qualifier, Academic Redshirt, or a Non-qualifier. Please visit [www.eligibilitycenter.org](http://www.eligibilitycenter.org) for more details.

It is the students' (and parent(s)/guardian(s) responsibility to assure that the courses in which they enroll will be acceptable to the NCAA, and that they meet the other requirements as defined by that association. If a student or parent is unsure of course approval/non approval status, they should check with their school counselor prior to enrolling in the class. Student-athletes aspiring to play college Division I or Division II athletics should obtain a copy of the "NCAA Guide for the College-Bound Athlete" from the School Counseling Office or from the NCAA [website](http://www.ncaa.org).

The NCAA list of approved courses is also available on the NCAA [website](http://www.ncaa.org).

The NCAA can be reached by calling: **1-877-262-1492** Toll Free

The North Allegheny High School Code is: **393745**

In addition, the following individual CORE courses are NOT approved:

- Essentials of English 1,2,3,4
- Essentials of Algebra I Part I and Part II
- Essentials of Algebra II Part I and Part II
- Essentials of Geometry
- Applied Science I & Applied Science II
- Biology - IMPACT
- Honors History of Europe and Russia
- Honors History of East Asia

## Scheduling Terms (continued)



**ONE OPPORTUNITY.  
LIMITLESS POSSIBILITIES.**

If you want to play sports at an NCAA Division I or II school, start by registering for a Certification Account with the NCAA Eligibility Center at [eligibilitycenter.org](https://eligibilitycenter.org). If you want to play Division III sports or you aren't sure where you want to compete, start by creating a Profile Page at [eligibilitycenter.org](https://eligibilitycenter.org).

### ACADEMIC REQUIREMENTS

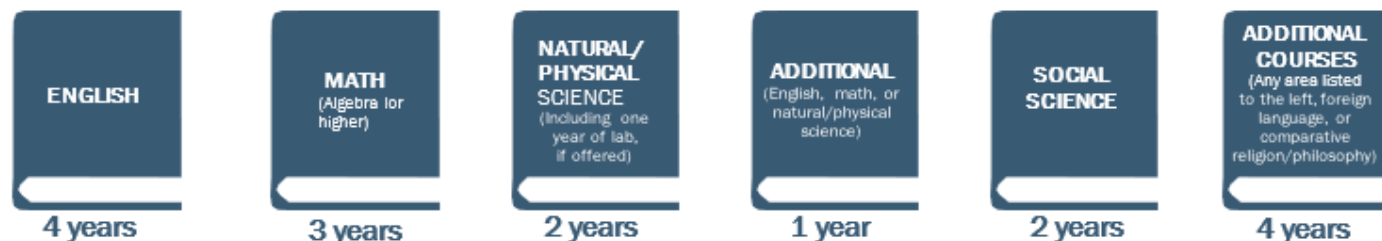
To play sports at a Division I or II school, you must graduate from high school, complete 16 NCAA-approved core-courses, earn a minimum GPA and earn an ACT or SAT score that matches your core-course GPA.

### CORE COURSES

Only courses that appear on your high school's list of NCAA core-courses will count toward the 16 core-course requirements visit: [eligibilitycenter.org/courselist](https://eligibilitycenter.org/courselist) for a full list of your high school's approved core-courses. Complete 16 core-courses in the following areas:

#### Division I

Complete 10 NCAA core-courses, including seven in English, math, or natural/physical science, before your seventh semester.



#### Division II



### GRADE-POINT AVERAGE

The NCAA Eligibility Center calculates your grade-point average based only on the grades you earn in NCAA-approved core-courses.

- DI requires a minimum 2.3 GPA.
- DII requires a minimum 2.2 GPA.

### SLIDING SCALE

Divisions I and II use sliding scales to match test scores and GPAs to determine eligibility. The sliding scale balances your test score with your GPA. If you have a low-test score, you need a higher GPA to be eligible. Find more information about test scores at [ncaa.org/test-scores](https://ncaa.org/test-scores).

### TEST SCORES

You may take the SAT or ACT an unlimited number of times before you enroll full time in college. Every time you register for the SAT or ACT, use the NCAA Eligibility Center code 9999 to send your scores directly to us from the testing agency. We accept official scores only from the ACT or SAT and will not use scores shown on your high school transcript. If you take either test more than once, the best sub score from different tests is used to give you the best possible score.

## Scheduling Terms (continued)



### 9<sup>TH</sup> GRADE

#### PLAN

Start planning now!  
Take the right courses and  
earn the best grades possible.

- Find your high school's list of NCAA-approved core-courses at [www.eligibilitycenter.org/courselist](http://www.eligibilitycenter.org/courselist)
- Sign up for a free Profile Page at [www.eligibilitycenter.org](http://www.eligibilitycenter.org) for information on NCAA requirements.

### 10<sup>TH</sup> GRADE

#### REGISTER

If you fall behind academically,  
ask your counselor for help  
finding approved courses you  
can take.

- Register for a Profile Page or Certification Account with the NCAA Eligibility Center at [www.eligibilitycenter.org](http://www.eligibilitycenter.org)
- Monitor your Eligibility Center account for next steps.
- At the end of the year, ask your counselor at each high school or program you attended to upload your official transcript to your NCAA Eligibility Center account.

### 11<sup>TH</sup> GRADE

#### STUDY

Check with your counselor to  
make sure you are on track to  
complete the required  
number of NCAA-approved  
courses and graduate on  
time with your class.

- Take the ACT or SAT and submit your scores to the NCAA Eligibility Center using code 9999.
- Ensure your sports participation information is correct in your Eligibility Center account.
- At the end of the year, ask your counselor at each high school or program you attended to upload your official transcript to your NCAA Eligibility Center account.

### 12<sup>TH</sup> GRADE

#### GRADUATE

- Complete your final NCAA approved core courses as you prepare for graduation.

- Take the ACT or SAT again, if necessary, and submit your score to the NCAA Eligibility Center using code 9999.
- Request your final amateurism certification beginning April 1 (fall enrollees) or Oct. 1 (winter/spring enrollees) in your NCAA Eligibility Center account at [www.eligibilitycenter.org](http://www.eligibilitycenter.org)
- After you graduate, ask your counselor to upload your final official transcript with proof of graduation to your NCAA Eligibility Center account.
- Reminder: Only students on an NCAA Division I or II school's institutional request request list will receive a certification.

How to plan your high school courses to meet the 16 core-course requirements: **4 x 4 = 16**

### 9<sup>th</sup> Grade

(1) English  
(1) Math  
(1) Science  
(1) Social Science  
and/or additional

---

4 core courses

### 10<sup>th</sup> Grade

(1) English  
(1) Math  
(1) Science  
(1) Social Science  
and/or additional

---

4 core courses

### 11<sup>th</sup> Grade

(1) English  
(1) Math  
(1) Science  
(1) Social Science  
and/or additional

---

4 core courses

### 12<sup>th</sup> Grade

(1) English  
(1) Math  
(1) Science  
(1) Social Science  
and/or additional

---

4 core courses

For more information: [www.ncaa.org/playcollegesports](http://www.ncaa.org/playcollegesports) / [www.eligibilitycenter.org](http://www.eligibilitycenter.org)  
Search Frequently Asked Questions: [www.ncaa.org/studentfaq](http://www.ncaa.org/studentfaq)



## Academics

### Blended Learning

Technology continues to change the way students engage in new learning. At North Allegheny, we are committed to providing the very best educational experience to all students and this often means finding new ways to leverage new technologies. One way to do this is through blended learning. Blended learning combines elements of both face-to-face and online learning. Facilitated by both teacher to student and/or student-to-student interaction(s), this mode of learning enhances the utilization of technology to communicate, collaborate and connect with others and external resources; thereby, it maximizes learning opportunities beyond the traditional classroom setting. As our technology infrastructure and resources continue to grow through FOCUS 2020, more and more students will experience and engage in blended learning environments through their course work in the North Allegheny School District. Blackboard is the learning management system utilized in NASD secondary schools.

### Class Rank

Class rank is defined as a numerical calculation of a student's scholastic achievement in relation to that of his/her classmates. Students are ranked from highest to lowest according to a student's cumulative weighted Quality Point Average (Q.P.A.). All courses taken from the beginning of Grade 9 to the end of the current term are included. Class rank is listed as two numerals. For example, 383/650 indicates that the student ranks 383rd from the top in a class of 650 students.

**Class rank is not reported on student transcripts and is not disclosed by the District to any outside agency; however, students are able to self-report class rank in their college essays and/or other document submissions if they believe disclosure will benefit their potential selection.** The District only generates class rank internally. This provides School Counselors with the information necessary to confirm scholarship applications, military academy applications, etc., that may require class rank.

## Academics

### Weighting of Grades

**Grades used for the QPA formula:**

At mid-year, SEMESTER grades are used for full-year courses and FINAL grades are used for 1st semester classes. At the end of the year, only FINAL grades are used for both semester and full-year courses.

**Earned Credits** - Credit value of each course adjusted by half for full-year courses at mid-year, or the actual earned credits for each completed course.

**Grade Points** - Where A=4, B=3, C=2, D=1, E=0

**Quality Points** - Grade points X "Earned Credits"

**AP Factor** = .25 / earned credit

**Honors Factor** = .125 / earned credit

**AP/Honors Weight** = (Earned Credits X Appropriate Factor) / Number Semesters Completed

**Current Year QPA** - Includes ONLY courses taken during the current school year

**Cumulative QPA** - Included all qualified courses in grades 9 through 12

**Overall QPA** - Includes all courses

**Academic QPA** - Includes academic courses only - English, Mathematics, Social Studies, Science and World Language

**QPA for Ranking** = (Total Quality Points / Total Earned Credits) + Total AP/Honors Weight

### Grading System

Grades are to reflect the student's average of achievement in a particular course. Behavior comments are recorded separately on the report card. Achievement points cannot be lowered as a means of punishment for behavior. As indicated in the Secondary Grading Practices, student grades will be assigned as follows:

90-100 = A;

80-89 = B;

70-79 = C;

60-69 = D;

59 or below = Failure

### Transcript

An academic transcript is a summary of a student's educational history in high school. The official North Allegheny transcript includes demographic information, courses, grades, and credits commencing in grade 9. A cumulative quality point average is also included. Class rank is not listed on student transcripts.

A North Allegheny transcript is generated after a student has completed one full semester of study at North Allegheny Intermediate or Senior High Schools. Courses taken at a different high school will not appear on the North Allegheny transcript. When a student who enters the District after the start of 9th grade applies to college, the transcript(s) from the previous school(s) will be attached to the North Allegheny transcript.



## Career Clusters

Through a variety of resources, North Allegheny students explore post high school opportunities and careers. Introducing the elementary career portfolio, utilizing the [Pennsylvania Department of Education's Academic Standards for Career Education and Work](#), exposing students to Naviance Student in 6th grade and the Pre-ACT in grade 10, counselors and teachers guide students through the maze of examining potential career interests. North Allegheny provides a wide variety of content via all curricular areas to assist students in identifying potential career interests. As you consider course selections for the upcoming school year, please use this document to assist you with selecting courses that best fit your potential future career interests.



**ADMINISTRATION & SALES CAREERS**



**SOCIAL SERVICE CAREERS**



**TECHNICAL CAREERS**



**SCIENCE & TECHNOLOGY CAREERS**



**ARTS CAREERS**

## CAREER CLUSTERS

### Administration & Sales Careers

Persons with such interest might like to persuade, motivate, lead, and direct others – as in business management or sales.

#### College Majors

##### Business - 4 Year Programs:

Accounting and Related Services  
Agricultural business  
Business Administration and Management  
Business/Commerce General  
Finance and Financial Management  
Leadership  
Marketing  
Sales and Marketing Operations

##### Business - 2 Year Programs:

Accounting and Related Services  
Business Administration and Management  
Business/Commerce General  
Business Operations Support and Services  
Leadership  
Marketing

##### Communications - 4 Year Programs:

Journalism  
Communication and Media Studies  
Public Relations and Advertising  
Communication  
Radio, Television and Digital

#### Possible Careers/Occupations:

**Employment-Related Services** – Employee Benefits Manager; Employment Interviewer; Human Resources Manager; Labor Relations Specialist; Training/Education Manager

**Marketing & Sales** – Advertising Manager; Buyer; Insurance Agent; Real Estate Agent; Sales/Marketing Manager; Travel Agent

**Management** – Financial Manager; Foreign Service Officer; General Manager/Executive; Hotel/Motel Manager; Property/Real Estate Manager

**Regulation & Protection** – Customs Inspector; Detective (Police); FBI Agent; Food & Drug Inspector; Park Ranger; Police Officer

#### North Allegheny Elective Course Options

##### Aerospace Science and Leadership (AFJROTC):

**9-10**

Communications Awareness and Leadership

**11-12**

Management and Life Skills

##### Business, Computer and Information Technology:

**9-10**

Intro to Business  
Accounting 1 & 2  
Microsoft Office Applications 1

**11-12**

Accounting 1 & 2  
Business Communications  
Business Management  
Career Development  
Entrepreneurship  
Honors Advanced Accounting 1&2  
Honors Finance & Investments  
Honors International Business  
Marketing  
Personal Financial Literacy

##### English:

**9-10**

Leadership 1&2  
Intro to Journalism: NAEye News

Yearbook

Intro to Digital Media Production:

NAEye TV

Creative Writing

Intro to Theatre

Speech and Debate

**11-12**

Speech

Honors Journalism 11&12

Yearbook

Film and TV Production 1

Film and TV Production 2

Film and TV Production 3

Broadcasting

Acting 1&2

Honors Argument

##### Family & Consumer Sciences:

**9-10**

Adventures in Foods  
International Foods

**11-12**

The Real World  
Foods for You  
Foods Americana

##### Mathematics:

( Please refer to District Mathematics Sequence Chart)

##### Music:

**9-12**

Music Theory I&II  
Computer Multimedia Arts  
Electronic Music  
Advanced Electronic Music  
Honors Music Theory  
AP Music

##### Social Studies:

**9-10**

Economics

**11-12**

AP Economics  
Economics  
Honors Introduction to Philosophy

##### Technology & Engineering Education:

**9-12**

Exploring Creation and Innovation  
Creation and Innovation  
Game Development  
Advanced Game Development  
Honors Engineering Design and Development

##### Visual Arts:

**9-10**

Drawing & Painting 1,2&3  
Digital Imaging & Media Arts  
AP Art History

**11-12**

Senior High Drawing & Design  
Concepts  
Senior High Painting & Color  
Concepts  
Photography 1&2  
Graphic Design and Digital  
Illustration  
Computer Multimedia Arts  
Honors Art  
AP Art and Design

##### World Languages:

4-Year sequence of at least one language

**10-12**

A.W. Beattie Career Center

# CAREER CLUSTERS

## Technical Careers

Persons with such interest may like to use, repair, design tools, equipment, materials, etc.; raise crops or animals for market.

### Engineering - 4 Year Programs:

Chemical Engineering  
Civil Engineering  
Electrical/Communications Engineering  
Industrial Engineering  
Mechanical Engineering

### Engineering - 2 Year Programs:

Agricultural & Agricultural Operations  
Automotive Technology

### College Majors

Drafting/Design Technologies  
Electrical Engineering Technology  
Mechanical Engineering Technology

### Medicine & Allied Health - 2 Year Programs:

Allied Health Services & Sciences  
Medical Assisting  
Medical Laboratory/Technology  
Nursing

### Computer Science - 4 Year Programs:

Computer & Information Sciences  
Management Information Systems

### Computer Science - 2 Year Programs:

Computer & Information Sciences  
Computer Programming  
Management Information Systems

## Possible Careers/Occupations:

**Transport Operation & Related** – Aircraft Pilot; Astronaut; Bus Driver; Locomotive Engineer; Ship Captain; Truck Driver

**Agriculture, Forestry & Related** – Aquaculturist; Farm Manager; Forester; Nursery/Greenhouse Manager; Tree Surgeon (Arborist)

**Computer & Information Specialties** – Actuary; Archivist/Curator; Computer Programmer; Computer Systems Analyst; Website Developer

**Construction & Maintenance** – Carpenter; Electrician; Firefighter; Plumber; Security System Installer

**Crafts & Related** – Cabinetmaker; Chef/Cook; Jeweler; Tailor/ Dressmaker; Winemaker

**Manufacturing & Processing** – Printing Press Operator; Sheet Metal Worker; Tool & Die Maker; Water Plant Operator; Welder

**Mechanical & Electrical Specialties** – Locksmith; Millwright; Technicians in various fields (for example, Automotive, Avionics, Broadcast, Sound)

## North Allegheny Elective Course Options

### AFJROTC:

#### 9-10

Milestones in Aviation History

#### 11-12

Science of Flight

### Business, Computer and Information Technology:

#### 9-10

Microsoft Office App. 1

#### 11-12

Web Page Design  
Microsoft Office App. 1 & 2  
Intro to Information Science  
Career Development  
Cybersecurity and the Law

Personal Financial Literacy

### Family & Consumer Sciences:

#### 9-10

Adventures in Food  
International Foods  
Fashion & Design

#### 11-12

Foods Americana  
Foods for You  
Interior Design  
Intro to Digital Media Production:  
NAEye TV  
Creative Writing  
Intro to Theatre

Speech and Debate

#### 11-12

Speech  
Honors Journalism 11&12  
Yearbook  
Film and TV Production 1  
Film and TV Production 2  
Film and TV Production 3  
Broadcasting  
Acting 1&2  
Honors Argument

### Family & Consumer Sciences:

#### 9-10

Adventures in Foods  
International Foods

#### 11-12

The Real World  
Foods for You  
Foods Americana

### Mathematics:

AP Statistics  
Probability and Statistics  
AP Computer Science  
Honors Linear Algebra  
Computer Science A & B  
AP Computer Science Principles  
( Please refer to District Mathematics Sequence Chart)

### Music:

#### 9-12

Music Theory I&II

Computer Multimedia Arts  
Electronic Music  
Advanced Electronic Music  
Honors Music Theory  
AP Music

### Social Studies:

#### 9-10

Economics

#### 11-12

AP Economics  
Economics  
Honors Introduction to Philosophy

### Technology & Engineering Education:

#### 9-10

Exploring CADD  
Manufacturing 1  
Exploring Emerging Technologies  
Exploring Creation & Innovation  
Electricity and Electronics  
Exploring Robotic Engineering  
Honors Intro to Engineering  
Design  
Honors Principles of Engineering

#### 11-12

Exploring CADD  
Advanced CADD  
Emerging Technologies  
Creation & Innovation  
Robotic Engineering

#### 9-12

Exploring Creation and Innovation  
Creation and Innovation  
Game Development  
Advanced Game Development  
Honors Engineering Design and Development

### Visual Arts:

#### 9-10

Drawing & Painting 1,2&3  
Digital Imaging & Media Arts  
AP Art History

#### 11-12

Senior High Drawing & Design  
Concepts  
Senior High Painting & Color  
Concepts  
Photography 1&2  
Graphic Design and Digital  
Illustration  
Computer Multimedia Arts  
Honors Art  
AP Art and Design

### World Languages:

4-Year sequence of at least one language

#### 10-12

A.W. Beattie Career Center

# CAREER CLUSTERS

## Science & Technology Careers

Persons with such interest may like to learn about scientific facts and principles through reading, discussion, and research.

<b>College Majors</b>		
<b>Engineering - 4 Year Programs:</b>	<b>Medicine &amp; Allied Health - 4 Year Programs:</b>	<b>Science &amp; Math - 4 Year Programs:</b>
Chemical Engineering	Mechanical Engineering Technology	Animal Sciences
Civil Engineering	Communication Disorders	Biology
Electrical/Communications Engineering	Medicine	Plant Services
Industrial Engineering	Nursing	Chemistry
Mechanical Engineering		Geography & Cartography
		Mathematics & Statistics
		Science Education
<b>Engineering - 2 Year Programs:</b>	<b>Medicine &amp; Allied Health - 2 Year Programs:</b>	<b>Science &amp; Math - 2 Year Programs:</b>
Agricultural & Agricultural Operations	Allied Health Services & Sciences	Biological Sciences
Automotive Technology	Medical Assisting	
Drafting/Design Technologies	Medical Laboratory/Technology	
Electrical Engineering Technology	Nursing	

### Possible Careers/Occupations:

**Engineering & Technologies** – Architect, Engineers (for example, Aerospace, Civil, Mechanical) & Technicians (for example, Energy, Quality Control) in various fields; Production Planner; Surveyor

**Natural Science & Technologies** – Biologist; Food Technologist; Geologist; Meteorologist; Physicist

**Medical Technologies** – Dietician/Nutritionist; Optician; Pharmacist; Radiographer Technologists in various fields (for example, Medical, Surgical)

**Medical Diagnosis & Treatment** – Anesthesiologist; Dentist; Nurse Practitioner; Physical Therapist; Physician; Veterinarian

**Social Science** – Anthropologist; Criminologist; Political Scientist; Experimental Psychologist; Sociologist

### North Allegheny Elective Course Options

<b>AFJROTC:</b> <b>9-10</b> Milestones in Aviation History	<b>11-12</b> Focus on Fitness	Academic Chemistry Honors Chemistry AP Chemistry Honors Environmental Science Honors Astronomy Honors Meteorology	AP Biology Honors Astronomy
<b>11-12</b> Science of Flight	<b>Mathematics:</b> AP Computer Science Principles AP Statistics Probability & Statistics AP Computer Science Computer Science A&B Honors Linear Algebra ( Please refer to District Mathematics Sequence Chart)	(For Allied Health and Medicine) <b>9-10</b> Honors Biology	<b>Social Studies:</b> <b>9-10</b> Psychology
<b>Business, Computer and Information Technology:</b> <b>9-10</b> Microsoft Office App. 1	<b>Music:</b> <b>9-12</b> Music Theory I&II Choir Band Orchestra	<b>11-12</b> Honors Organic Chemistry Honors Anatomy & Physiology Academic Anatomy & Physiology AP Biology Honors Environmental Science	<b>11-12</b> AP Psychology Psychology Sociology Law and Justice Honors History of East Asia Honors History of Europe Honors American Foreign Policy Honors Intro to Philosophy Multicultural Experience
<b>Family &amp; Consumer Sciences:</b> <b>9-10</b> International Foods Adventures in Food Intro to Sports Nutrition Child Psychology	<b>11-12</b> Music Theory I&II Computer Multimedia Arts Honors Music Theory AP Music	(For Mathematics & Science) <b>Social Studies:</b> <b>9-10</b> Honors Biology Honors Chemistry	<b>Technology &amp; Engineering Education:</b> <b>9-10</b> Exploring CADD Manufacturing 1 Exploring Emerging Technologies Exploring Creation & Innovation Electricity and Electronics Exploring Robotic Engineering Honors Intro to Engineering Design Honors Principles of Engineering
<b>11-12</b> Foods Americana Foods for You Sports Nutrition Interior Design Child Psychology	<b>Science:</b> <b>9-10</b> Honors Chemistry	<b>11-12</b> Academic Concepts of Physics Honors Physics AP Physics 1 AP Physics 2 AP Physics 1&2 AP Physics C Academic Chemistry Honors Chemistry Honors Organic Chemistry AP Chemistry Honors Meteorology Honors Astronomy & Physiology	<b>11-12</b> Exploring CADD Advanced CADD Emerging Technologies Creation & Innovation Robotic Engineering
<b>Health &amp; Physical Education:</b> <b>9-10</b> Advanced Physical Education	<b>11-12</b> Academic Physics Honors Physics AP Physics 1 AP Physics 2 AP Physics 1&2 AP Physics C		



## CAREER CLUSTERS

### Science & Technology Careers (continued from page 21)

Advanced State Technology & Production  
Honors Intro to Engineering Design  
Honors Principles of Engineering  
Honors Digital Electronics  
Honors Computer Integrated Manufacturing  
Honors Civil Engineering and Architecture  
Honors Engineering Design & Development

#### **Technology & Engineering Education:**

**(For Mathematics and Science)**

#### **9-10**

Exploring Emerging Technologies  
Game Development  
Electricity and Electronics

#### **11-12**

Game Development  
Emerging Technologies  
Creation and Innovation

Advanced Game Development  
Intro to Engineering Design

#### **Visual Arts:**

#### **9-10**

Drawing & Painting 1,2,&3  
Digital Imaging & Media Arts  
AP Art History

#### **11-12**

Senior High Drawing & Design Concepts  
Senior High Painting & Color Concepts

Photography 1 & 2  
Graphic Design and Digital Illustration  
Computer Multimedia Arts  
Honors Art  
AP Art & Design

#### **World Languages:**

4-Year sequence of at least one language

#### **10-12**

A.W. Beattie Career Center

## Art Careers

Persons with such interest may like to express thoughts or feelings through painting, writing, designing, music, drama, signing, music, drama, etc.; go to art museums, concerts, plays, read novels, poetry, etc.

#### **Art - 4 Year Programs:**

Design & Applied Arts  
Communications & Media Studies  
Drama/Theatre Arts  
English Language & Literature  
Fine and Studio Arts

#### **College Majors**

Foreign Language & Literatures  
Language Arts Education  
Music - Music Education

#### **Arts - 2 Year Programs:**

Design & Applied Arts

#### **Communications - 4 Year Programs:**

Communications & Media Studies  
Journalism  
Leadership  
Public Relations & Advertising  
Radio, TV & Digital Communication

#### **Possible Careers/Occupations:**

**Applied Arts (Visual)** – Animator; Fashion Designer; Graphic Artist (Software); Photographer; Set Designer

**Creative & Performing Arts** – Actor; Composer (Music); Dancer/ Choreographer; Fashion Model; Musician; Writer/Author

**Applied Arts (Written & Spoken)** – Advertising Copywriter; Columnist; Editor; Interpreter; Librarian; Reporter/Journalist

#### **North Allegheny Elective Course Options**

#### **Business, Computer and Information Technology:**

#### **11-12**

Career Development  
Marketing  
Personal Financial Literacy  
Web Page Design

#### **English:**

#### **9-10**

Intro to Journalism: NAEye News Yearbook  
Leadership 1&2  
Intro to Digital Media Production: NAEye TV

Intro to Theatre  
Intro to Film  
Speech & Debate  
Creative Writing

#### **11-12**

Yearbook Speech  
Honors Journalism 11,12  
Acting 1&2  
Honors Argument  
Creative Writing 1&2(Poetry)  
Creative Writing 1&2(Fiction)

Film and TV Production 1  
Film and TV Production 2  
Film and TV Production 3  
Film Studies  
Broadcasting

#### **Family & Consumer Sciences:**

#### **9-10**

Fashion & Design

#### **11-12**

Fashion Art & Merchandising  
Interior Design

#### **Mathematics:**

( Please refer to District Mathematics Sequence Chart)

#### **Music:**

#### **9-12**

Song Writing I&II  
Electronic Music  
Advanced Electronic Music  
Music Theory 1&2  
Choir  
Band

#### **Orchestra**

Computer Multimedia Arts

#### **11-12**

Computer Multimedia Arts  
Honors Music Theory  
AP Music  
Honors Chamber Choir

#### **Technology & Engineering Education:**

#### **9-10**

Exploring Creation & Innovation  
Game Development  
Advanced Game Development

#### **11-12**

Game Development  
Advanced Game Development  
Creation and Innovation  
Stage Technology & Production  
Honors Intro to Engineering Design  
Honors Civil Engineering and Architecture  
Honors Engineering Design and Development

#### **Visual Arts:**

#### **9-10**

Drawing & Painting 1,2&3  
Arts & Crafts  
Intro to Pottery & Sculpture  
Digital Imaging & Media Arts  
AP Art History

#### **11-12**

Honors Art  
AP Art and Design  
Pottery 1&2  
Photography 1&2  
Graphic Design and Digital Illustration  
Computer Multimedia Arts  
Senior High Drawing & Design  
Senior High Painting & Color Sculpture  
Jewelry & Metalsmithing

#### **World Languages:**

4-Year sequence of at least one language

#### **10-12**

A.W. Beattie Career Center

# CAREER CLUSTERS

## Social Services Careers

Persons with such interest may like to help, inform, or serve others through teaching, counseling, human services, work, etc., learn about social issues.

### College Majors

#### Social Sciences - 4 Year Programs:

Criminology  
Economics  
History  
Political Science/Government  
Psychology  
Sociology

#### Social Sciences - 2 Year Programs:

Psychology  
Social Sciences, General

#### Education - 4 Year Programs:

Elementary Education  
Health & Physical Education/Fitness  
Kindergarten/Preschool Education  
Mathematics Education  
Secondary Education

#### Education - 2 Year Programs:

Teacher Education:Elementary/Secondary

#### Community Services - 4 Year Programs:

Criminal Justice/Corrections  
Family & Consumer Sciences  
Human Development & Family Studies  
Parks, Recreation & Leisure Studies  
Social Work  
Textiles & Clothing

#### Community Services - 2 Year Programs:

Criminal Justice/Corrections

### Possible Careers/Occupations:

**Health Care** – Athletic Trainer; Dental Hygienist; Health Services; Administrator; Psychiatric Technician; Recreational Therapist  
**Education** – Athletic Coach; College/University Faculty; Educational Administrator; Teachers in various specialties (for example, Art, Foreign Language, Music)  
**Community Services** – Counselors in various specialties (for example, Mental Health, Rehabilitation); Director (Social Service); Lawyer; Social Worker  
**Personal Services** – Barber; Flight Attendant; Gaming Occupations Worker; Hairstylist/Cosmetologist

### North Allegheny Elective Course Options

#### Business, Computer and Information Technology:

**11-12**  
Career Development  
Personal Financial Literacy  
Sports & Entertainment Management

#### English:

**9-10**  
Leadership 1&2  
Speech & Debate

**11-12**  
Speech  
Honors Argument

#### Family & Consumer Sciences:

**9-10**  
Introduction to Child Development  
International Foods

**11-12**  
Child Psychology (CHS)  
The Real World  
Foods for You  
Preschool Practicum

#### Mathematics:

AP Statistics  
Probability & Statistics  
( Please refer to District Mathematics Sequence Chart)

#### Music:

**11-12**  
Music Theory 1&2  
Computer Multimedia Arts  
Honors Music Theory  
AP Music

#### Health & Physical Education:

**9-10**  
Advanced Physical Education

**11-12**  
Focus on Fitness

#### Social Studies:

**9-10**  
Psychology  
Economics

**11-12**  
AP European History  
AP Economics  
AP Psychology  
Psychology  
Sociology  
Economics  
Honors American Foreign Policy  
Honors History of Europe & Russia  
Honors History of East Asia  
Law and Justice  
Honors Introduction to Philosophy  
Multicultural Experience

#### Visual Arts:

**9-10**  
Drawing & Painting 1,2&3  
Digital Imaging & Media Arts

**11-12**  
Honors Art  
AP Art and Design  
Photography 1&2  
Computer Multimedia Arts  
Senior High Drawing & Design Concepts  
Senior High Painting & Color Concepts

#### World Languages:

4-Year sequence of at least one language

**10-12**  
A.W. Beattie Career Center

## Course Descriptions

### Aerospace Science and Leadership (AFJROTC)

If you want to improve your leadership skills, serve your community, travel to local military bases and experience curriculum in action while participating in extracurricular activities like Space Exploration, Honor Guard, Air Rifle Competitions and even fly in an airplane, then this is the course for you.

The Air Force Junior ROTC (AFJROTC) mission aspires to develop citizens of character dedicated to serving their nation and community. AFJROTC is not a recruiting program for the military, but an academic program designed to instill the values of citizenship, service to the United States, and personal responsibility through education and mentoring for students in grades 9-12. This military-based centered instruction combines academics and leadership development requirements with a curriculum that includes an introduction to aviation history, aviation and space science, college and career readiness, global studies, practical leadership, and health and wellness.

In addition to classroom academics, leadership components include the wearing of the AFJROTC cadet uniform. The weekly uniform wear requirement is designed to teach attention to detail, discipline, and dedication to duty. Uniforms will be issued at no cost. Students will participate in Drill and Ceremony affording students to apply individual skills as a team fostering esprit de corps and unit cohesion. Students who participate in AFJROTC should also be prepared to adhere to United States Air Force Junior ROTC grooming (hair) standards within the first four (4) weeks of school.

To encourage greater commitment to community service, cadets will be expected to participate in a minimum of 12 community service hours. Cadets will be afforded a variety of AFJROTC opportunities throughout the academic year to earn these hours which often involve after school activities.

**\*NO MILITARY OBLIGATION IS IMPOSED, EXPECTED OR INCURRED, FOR PARTICIPATING STUDENTS**

AFJROTC ASL 100 Gr. 9 .....# 9414  
AFJROTC ASL 200 Gr. 10 .....# 9415

AFJROTC ASL 300 Gr. 11 .....# 9416  
AFJROTC ASL 400 Gr. 12 .....# 9417

**AFJROTC ASL 100:**  
**Full Year/Full Time**  
**Grade 9**

**No. 9414**  
**Credit 1.0**

The aerospace science component, *Milestones in Aviation History*, focuses on the development of flight throughout the centuries. It starts with ancient civilizations and flight, then progresses through time to future developments in aerospace, with an introduction into cyber technologies. The objective of this course is to bring alive the significant discoveries in flight. The textbook tells a story of why we are so proud of our Air Force heritage – laying the foundation for future aerospace science courses. Throughout the course, 21<sup>st</sup> Century learning is adopted with readings, video clips, hands-on learner centered activities, and chapter project-based learning opportunities. The leadership education component, *Traditions, Wellness, and Foundations of Citizenship* will introduce cadets to history, organization, mission, traditions, goals, and objectives of JROTC in all services. It introduces key military customs and courtesies, how to project a positive attitude and examine the principles of ethical and moral behavior. It provides strategies for academic study and note taking as well as practicing effective methods to recognize bullying and advocate for the prevention of that type of behavior. Cadets will also study citizenship through knowledge of civics at the local, state, and national levels. Military drill and ceremonies will be taught at the followership level. THE AFJROTC 30 DRILL SEQUENCE will be performed by cadets at this level. Wellness will be conducted one day per week, focusing on improvement; using the instructor identified exercises from the AFJROTC Physical Fitness Test (Instructions), at the beginning and end of the academic year. *This is a blended class, experienced with 10<sup>th</sup> grade cadets. Curriculum associated with ASL 100 and 200 will be rotated each year to ensure cadets receive a well-rounded AFJROTC experience*



## Course Descriptions

### Aerospace Science and Leadership (AFJROTC)

#### **AFJROTC ASL 200:**

**Full Year/Full Time**  
**Grade 10**

**No. 9415**

**Credit 1.0**

The aerospace science component, *Milestones in Aviation History*, focuses on the development of flight throughout the centuries. It starts with ancient civilizations and flight, then progresses through time to future developments in aerospace, with an introduction into cyber technologies. The objective of this course is to bring alive the significant discoveries in flight. The textbook tells a story of why we are so proud of our Air Force heritage – laying the foundation for future aerospace science courses. Throughout the course, 21<sup>st</sup> Century learning is adopted with readings, video clips, hands-on learner centered activities, and chapter project-based learning opportunities. The leadership education component, *Traditions, Wellness, and Foundations of Citizenship* will introduce cadets to history, organization, mission, traditions, goals, and objectives of JROTC in all services. It introduces key military customs and courtesies, how to project a positive attitude and examine the principles of ethical and moral behavior. It provides strategies for academic study and note taking as well as practicing effective methods to recognize bullying and advocate for the prevention of that type of behavior. Cadets will also study citizenship through knowledge of civics at the local, state, and national levels. Performance of THE AFJROTC 30 DRILL SEQUENCE will be commanded/led by cadet leaders at this level. Wellness will be conducted one day per week, focusing on improvement; using the instructor identified exercises from the AFJROTC Physical Fitness Test (Instructions), at the beginning and end of the academic year. *This is a blended class, experienced with 9<sup>th</sup> grade cadets. Curriculum associated with ASL 100 and 200 will be rotated each year to ensure cadets receive a well-rounded AFJROTC experience.*

#### **AFJROTC ASL 300:**

**Full Year/Full Time**  
**Grade 11**

**No. 9416**

**Credit 1.0**

The aerospace science component of this course, *The Science of Flight: A Gateway to New Horizons* is an introductory aviation course which has a customized textbook that focuses on how planes fly, how weather conditions affect flight, flight, flight and the human body (aerospace physiology), and flight navigation. The course is designed to complement materials taught in math, physics, and other science-related courses. It is aligned with the National Science and Education Standards, the Math Standards and Expectations, and ISTE; National Educational Technology Standards for Students. The leadership education component, *Principles of Management*, provides cadets exposure to the fundamentals of management. The text contains many leadership topics that will benefit students as well as provide them with some of the necessary skills needed to put into practice what they have learned during their time in AFJROTC. This course, along with the practical application opportunities afforded them in AFJROTC, will equip them with the qualities needed to serve in leadership positions within the corps. The curriculum offers ethical dilemmas, case studies, and role play activities built into the lessons. These activities are based on real life experiences and will allow the students the opportunity to practice what they learn by getting involved in discussions and through expressing their opinions while listening to the opinions of others. Command characteristics used with military drill and ceremony teams will be experienced. Performance of THE AFJROTC 30 DRILL SEQUENCE will be taught by cadet leaders at this level. Wellness will be conducted one day per week, focusing on improvement; using the instructor identified exercises from the AFJROTC Physical Fitness Test (Instructions), at the beginning and end of the academic year. *This is a blended class, experienced with 12<sup>th</sup> grade cadets. Curriculum associated with ASL 300 and 400 will be rotated each year to ensure cadets receive a well-rounded AFJROTC experience.*

## Course Descriptions

### Aerospace Science and Leadership (AFJROTC)

**AFJROTC ASL 400:***Full Year/Full Time**Grade 12***No. 9417*****Credit 1.0***

The aerospace science component of this course, *The Science of Flight: A Gateway to New Horizons* is an introductory aviation course which has a customized textbook that focuses on how planes fly, how weather conditions affect flight, flight, flight and the human body (aerospace physiology), and flight navigation. The course is designed to complement materials taught in math, physics, and other science-related courses. It is aligned with the National Science and Education Standards, the Math Standards and Expectations, and ISTE; National Educational Technology Standards for Students. The leadership education component, *Principles of Management*, provides cadets exposure to the fundamentals of management. The text contains many leadership topics that will benefit students as well as provide them with some of the necessary skills needed to put into practice what they have learned during their time in AFJROTC. This course, along with the practical application opportunities afforded them in AFJROTC, will equip them with the qualities needed to serve in leadership positions within the corps. The curriculum offers ethical dilemmas, case studies, and role play activities built into the lessons. These activities are based on real life experiences and will allow the students the opportunity to practice what they learn by getting involved in discussions and through expressing their opinions while listening to the opinions of others. Command characteristics used with military drill and ceremony teams will be experienced. Performance of THE AFJROTC 30 DRILL SEQUENCE will be evaluated by cadet leaders at this level. Wellness will be conducted one day per week, focusing on improvement; using the instructor identified exercises from the AFJROTC Physical Fitness Test (Instructions), at the beginning and end of the academic year. *This is a blended class, experienced with 11<sup>th</sup> grade cadets. Curriculum associated with ASL 300 and 400 will be rotated each year to ensure cadets receive a well-rounded AFJROTC experience.*

## Course Descriptions

### Business, Computer and Information Technology

#### Grade 9,10 - Electives

Introduction to Business-----	#7403
Microsoft Office Applications 1*-----	#7406

#### Grade 10 - Electives

Principles of Accounting 1* (CHS)-----	#7505
Principles of Accounting 2* (CHS)-----	#7605

#### Grades 11, 12 - Electives

Microsoft Office Applications 1*-----	#7406
Microsoft Office Applications 2*-----	#7410
Web Page Design * (CHS)-----	#7908
Introduction to Information Science * (CHS)-----	#7906
Cybersecurity and the Law *-----	#7909
Business Communications (CHS)-----	#7905
Sports and Entertainment Management-----	#7506
Business Management-----	#7606
Personal Financial Literacy-----	#7929
Principles of Accounting 1* (CHS)-----	#7505
Principles of Accounting 2* (CHS)-----	#7605
Honors Advanced Accounting 1* (CHS)-----	#7705
Honors Advanced Accounting 2* (CHS)-----	#7805
Honors International Business-----	#7508
Honors Finance and Investments-----	#7509
Entrepreneurship-----	#7907
Marketing-----	#0403

#### Grades 12 - Electives

Career Development-----	#0438
Co-op-----	Refer to course description

\* These courses may be used towards satisfying the one credit S.T.E.M.\* (Science, Technology, Engineering and Math) requirement (details on pages 3 and 4).

(CHS) Indicates College in High School Course

## Course Descriptions

### Business, Computer and Information Technology

#### **INTRODUCTION TO BUSINESS**

**No. 7403**

*Full Year/Full Time*

*Grades 9, 10*

*Credit 1.0*

#### **Requirements:**

- None

*Introduction to Business* explores current business topics, types of business organization, economic systems, and personal financial planning. Decision-making skills, economics, entrepreneurship, management styles, investment securities, consumerism, banking, money management and taxes will be studied in this dynamic course. In addition, students will participate in a web-based simulation, Family Financial Management. Making wise decisions while establishing short- and long-term financial goals are essential "life skills" that young people often fail to benefit from during their early wealth-building years.

#### **MICROSOFT OFFICE APPLICATIONS 1**

**No. 7406**

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

*Microsoft Office Applications 1* is a hands-on course in which students will use Microsoft Office and the Windows operating environment. An online interactive textbook will personalize the experience with assignments that guide students to analyze, apply, and improve critical thinking skills, while measuring outcomes utilizing Word, Excel, and PowerPoint. The course will include three components of the Microsoft Office suite: Word where students will become proficient in completing basic and advanced applications such as document formatting, tabs, tables, graphics, research papers, and basic web integration; Excel, where students create spreadsheets and graphs to analyze and solve business-related applications; and PowerPoint, where students learn how to create presentation slides combining text, charts, drawings, and clip art. Students will acquire software skills that prepare them for college and beyond.

#### **MICROSOFT OFFICE APPLICATIONS 2**

**No. 7410**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

#### **Requirements:**

- A minimum of 70% in Microsoft Office Applications 1 (7406)

*Microsoft Office Applications 2* will take skills acquired in Microsoft Office Applications 1 to a higher level. In this course students will complete advanced applications in Word, Excel, and PowerPoint. The course will include three components of the Microsoft Office suite: Word, where students become proficient in creating a resume, templates, and using the mail merge feature to generate letters, labels and directories; Excel, where students create, sort and query tables, as well as generate spreadsheets and workbooks with amortization schedules; and PowerPoint, where students will learn how to create and format information graphics, collaborate on and deliver presentations while navigating hyperlinks and action buttons. Students will acquire software skills that prepare them for college and beyond.

## Course Descriptions

### Business, Computer and Information Technology

#### **WEB PAGE DESIGN (CHS)**

**No. 7908**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

*Web Page Design* introduces students to basic web design using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). This course teaches how to create webpages from scratch using the most current standards. Throughout the course students plan and design effective web pages; implement web pages by writing HTML and CSS code; enhance web pages with the use of page layout techniques, basic JavaScript, text formatting, graphics, images, and multimedia; and produce a functional, multi-page website. Students will also learn to apply responsive design principles for an optimal viewing experience across a range of devices to achieve multi platform display. Prior knowledge of HTML or web design is not required.

In addition, students may obtain three college credits through La Roche University. To obtain college credit, the student must successfully complete the course as specified by the University, and pay tuition charged by the University.

#### **INTRO TO INFORMATION SCIENCE (CHS)**

**No. 7906**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

*Intro To Information Science* provides students insight into challenges that IT professionals face in the modern workplace. Information Science looks at the balance between technology helping solve problems vs creating more problems. While technology may modernize business efficiency, enhance creativity, and assist humans with everyday tasks, it also collects troves of data which may breach privacy. Topics include Human Computer Interaction, Representing Information Digitally, Computer Operations, Privacy and Digital Security, and Databases.

In addition, students may obtain three college credits through the University of Pittsburgh. To obtain college credit, the student must successfully complete the course as specified by the University, and pay tuition charged by the University.

#### **CYBERSECURITY AND THE LAW**

**No. 7909**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

Much of today's society exists within the digital world. Business operations, financial institutions, health information, and critical infrastructure all live in cyberspace, the new frontier, where complex cyberattacks are becoming more frequent each day. *Cybersecurity And The Law* will examine cybersecurity, specifically preventative techniques used to protect networks, programs and data from attack, damage, or unauthorized access. Students will gain basic knowledge of the present-day cyber security landscape across different sectors, including cyber threats, targets, attacks, and preventative measures. Career options in the cybersecurity field are vast – with job openings in almost every industry. Students taking this course do not need a background in information technology.

## Course Descriptions

### Business, Computer and Information Technology

#### **BUSINESS COMMUNICATIONS (CHS)**

**No. 7905**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

Effective communication skills are vital to both business and personal success. They foster cooperation, productivity, and teamwork within an organization. With the surge in technology, young people need to learn and practice successful speaking skills for the business environment. Students may be able to text, tweet, and post a thought yet have difficulty speaking it. Possessing essential interpersonal and presentation skills will enhance one's opportunities in life. Developing the ability to effectively and appropriately express a point in different situations to a varied audience is essential for growth and advancement in the business world and in life.

*Business Communications* explores barriers to effective communication and ways to overcome these barriers, successful listening and presentation skills, and the use of technology and social media in business. Students learn to analyze and relate to varied audiences, and to understand the impact gender and cultural diversity can have on communication. Modern technology tools will be used for communicating and students will understand the concept of building their brand. This course teaches effective communication skills that will help students achieve goals, secure employment, and adapt to environments.

In addition, students may obtain three college credits through La Roche University. To obtain college credit, the student must successfully complete the course as specified by the University, and pay tuition charged by the University.

#### **SPORTS AND ENTERTAINMENT MANAGEMENT**

**No. 7506**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

Offered in over 500 universities, *Sports & Entertainment Management* has become one of the most popular fields of study at the college level. This introductory course emphasizes basic management concepts and principles as they relate to the business of sports & entertainment. Students will be introduced to topics including marketing and promotions, management and supervision, ethics, and event planning. There is focus on amateur vs professional sports; Title IX, the NIL, and leadership in the entertainment industry. Students will develop critical thinking skills and improve decision-making and communication abilities. College exploration and career outlook will be researched. Current and future trends in the sports & entertainment industry will be explored, and job shadowing opportunities offered. Incorporated into this curriculum will be field trips and speakers from industry organizations such as professional, college, and amateur sports teams as well as the local entertainment sector. The mission of this course is to provide future managers in the field with a solid business foundation as well as knowledge of the unique facets of the Sports and Entertainment Industries.

#### **ENTREPRENEURSHIP**

**No. 7907**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

##### **Requirements:**

- **None**

This course introduces students to the fundamental principles of entrepreneurship. Students learn the process for conceiving, creating, and managing their own business venture. From an entrepreneurial perspective, students gain skills in finance, accounting, marketing, management, and general business skills. Students will see the economic and social contributions entrepreneurs provide to society. *Entrepreneurship* is an excellent course for students who think they would like to start or manage a business

## Course Descriptions

### Business, Computer and Information Technology

#### **BUSINESS MANAGEMENT**

**No. 7606**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

*Business Management* is an introduction to business concepts, management skills, and management theories. This course covers four functions of management: planning, organizing, leading, and controlling. Students learn how to think strategically to achieve organizational goals and maximize resources in the business environment. Understanding issues involved in managing a business as well as being managed will be discussed. Students will gain first-hand experience developing skills necessary to be effective contributors within an organization. Decision-making techniques and positive leadership qualities will be reinforced. Additional topics include: the global business environment, the economy, mergers and acquisitions, ethics and social responsibility, stock market and securities, and current trends in management practice and theory.

#### **PERSONAL FINANCIAL LITERACY**

**No. 7929**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

*Personal Financial Literacy* equips students with introductory personal financial skills and knowledge needed for success in today's economy. Students learn how to create a personal budget, choose and manage a credit card, understand credit scoring and credit reports, and prepare basic personal tax forms. In addition, this course explores true costs associated with automobiles, home mortgages and postsecondary education.

Upon completion of the course, students will have developed a personal financial plan. Having basic financial planning skills can help individuals and families meet their short-term obligations and maximize their long-term financial well-being. All assessments are individualized and project-based, allowing the course to be authentic to each learner. This course is highly recommended for every student.

#### **PRINCIPLES OF ACCOUNTING 1 (CHS)**

**No. 7505**

*First Semester/Full Time*

*Grades 10, 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

Accounting is an integral part of business that has been referred to as the "language of business." *Principles of Accounting 1* provides students with an understanding of the complete accounting cycle as it applies to a proprietorship. This course will benefit students who plan to major in Accounting, Marketing, Business Management, or Finance in college, since the subject is a core requirement for business majors. This course provides foundations in accounting principles, applications, and terminology. Computer integration is also incorporated using Microsoft Excel. Upon successful completion of Principles of Accounting 1 and 2, students are eligible to enroll in Honors Advanced Accounting 1 and 2.

In addition, the student may obtain three college credits through the Carlow University College in High School program. To obtain this credit, the student must also take Principles of Accounting 2 in the same school year, successfully complete the course as specified by the University, and pay the tuition charged by the University.

## Course Descriptions

### Business, Computer and Information Technology

#### **PRINCIPLES OF ACCOUNTING 2 (CHS)**

*Second Semester/Full Time*

*Grades 10, 11, 12*

**No. 7605**

*Credit 0.5*

##### **Requirements:**

- **A minimum of 70% in Principles of Accounting 1 (7505)**

*Principles of Accounting 2* expands on topics learned in *Principles of Accounting 1* while adding new topics about managerial accounting, cost accounting, financial analysis, and corporate accounting procedures. Emphasis is placed on accounting for a merchandising business organized as a corporation. For problem-solving, students continue applications of accounting principles using Microsoft Excel. This course is beneficial if considering a major in accounting or business at the college-level. Upon successful completion of *Principles of Accounting 2*, students are eligible to enroll in *Honors Advanced Accounting 1 and 2*.

In addition, the student may obtain three college credits through the Carlow University College in High School program. To obtain this credit, the student must also take *Principles of Accounting 1* in the same school year, successfully complete the course as specified by the University, and pay the tuition charged by the University.

#### **HONORS ADVANCED ACCOUNTING 1 (CHS)**

*First Semester/Full Time*

*Grades 11, 12*

**No. 7705**

*Honors Wt.*

*Credit 0.5*

##### **Requirements:**

- **A minimum of 70% in Principles of Accounting 2 (7605)**

*Honors Advanced Accounting 1* is course 1 of 2 in accounting principles. It teaches students accounting concepts and principles and their underlying theories. This course begins with a review of the Accounting Cycle and the financial statements for a Sole Proprietorship. Greater emphasis is placed on analysis of data used in decision-making. In-depth coverage of course topics include merchandising operations and the accounting for inventory and plant assets.

In addition, the student may obtain three college credits through the Carlow University's College in High School program. To obtain this credit, the student must also take *Honors Advanced Accounting 2* in the same school year, successfully complete the course as specified by the University, and pay the tuition charged by the University.

#### **HONORS ADVANCED ACCOUNTING 2 (CHS)**

*Second Semester/Full Time*

*Grades 11, 12*

**No. 7805**

*Honors Wt.*

*Credit 0.5*

##### **Requirements:**

- **A minimum of 70% in Honors Advanced Accounting 1 (7705)**

*Honors Advanced Accounting 2* is a continuation of *Honors Advanced Accounting 1*. In-depth coverage of course topics include the disposal of plant assets and intangibles, current liabilities with an emphasis on accruals and long-term liabilities (Bonds), and corporations paid-in capital and their balance sheet. Students will also learn accounting for cash dividends, corporations' effects on retained earnings and their income statement, accounting for stock dividends and treasury stock, cash flow statements, and partnerships.

In addition, the student may obtain three college credits through the Carlow University's College in High School program. To obtain this credit, the student must also take *Honors Advanced Accounting 1* in the same school year, successfully complete the course as specified by the University, and pay the tuition charged by the University.



## Course Descriptions

### Business, Computer and Information Technology

#### **HONORS INTERNATIONAL BUSINESS**

*Semester/Full Time*  
*Grades 11, 12*

**No. 7508**

*Honors Wt.*  
*Credit 0.5*

#### **Requirements:**

- **A minimum of 80% in prior Social Studies Course**

*Honors International Business* provides an up-to-date and complete exploration of international business issues and practices. With a strong foundation of international business theory, this course includes current examples, case studies, and insights showing how global businesses apply these concepts. The impact and controversies of international business practices on countries, corporations, and individuals will be discussed. Content will examine the role and significance of culture and include an exploration of world maps, time zones, and currencies in order to help students develop and refine a global perspective. This course incorporates a global approach, with attention given to topics essential for an international manager in the global business environment.

#### **HONORS FINANCE AND INVESTMENTS**

*Semester/Full Time*  
*Grades 11, 12*

**No. 7509**

*Honors Wt.*  
*Credit 0.5*

#### **Requirements:**

- **A minimum of 80% in prior Mathematics Course**

*Honors Finance and Investments* introduces students to the three areas of the finance discipline: Financial Institutions, Investments, and Business Finance. Finance is the study of money and its management. Although finance is a separate academic discipline, its roots are in accounting and economics. This course provides a breadth of knowledge of finance and gives a solid foundation to build in other areas of business. Topics include, but are not limited to, the role of financial markets, the role of money, the role of interest rates, the role of investment banks, financial regulations, banking, the Federal Reserve, monetary policy, currency, the time value of money, the features of stock, stock valuation, the features of bonds, bond pricing and yields, convertible securities, investment risk, investment returns, and investment companies. Students will compete amongst their classmates in a virtual stock market challenge and will learn the importance of developing a diversified portfolio to maximize growth potential while protecting their wealth.

#### **MARKETING**

*Full Year/Full Time*  
*Grades 11, 12*

**No. 0403**

*Credit 1.0*

#### **Requirements:**

- **None**

More than half of all branded emails are opened on mobile devices. The digital age we live in has created new challenges for marketers. This course includes the core functions of marketing, as well as up-to-date marketing trends essential for the operation of a business. Students will have an opportunity to apply marketing concepts through interactive enrichment activities, while improving their interpersonal and communication skills. The many career opportunities available in this broad field of study will be explored. Upon finishing this course, students will have the skills necessary to research job leads, complete employment applications, and successfully interview for a job with a working resume in hand. This class is recommended for students considering a Marketing/Business Major in college or for those who would like to become a better informed consumer.

## Course Descriptions

### Business, Computer and Information Technology

#### **CAREER DEVELOPMENT**

**No. 0438**

*Full Year/Full Time*

*Grade 12*

*Credit 1.0*

#### **Requirements:**

- **None**

Developing life skills in a changing world is very important, yet often overlooked. The more prepared students are to handle the daily stresses of becoming an adult, the more successful they will become. In the *Career Development* business course offering, students gain practical experience through course topics that include: career exploration and advancement, resume writing, interviewing skills, time management, banking, money management, apartment pursuits, and more. These skills will be explored in-depth and give students an understanding of future needs. The importance of effective communication skills in developing positive personal and career-related relationships will be addressed. Students will have the opportunity to participate in a job shadowing experience related to their career interest.

For an additional credit each semester, students have the opportunity to work at an approved job for an average of 15 hours per week and may be released early from school each day under the supervision of the co-op coordinator.

Co-op work experience is NOT REQUIRED for students to take the class. Students with a full schedule can participate in co-op as well. This is a beneficial course for all students.

#### **Co – Op**

*Semester/Full Time*

*Grade 12*

*Credit 1.0*

#### **Requirements:**

- **Simultaneous enrollment in Career Development (0438) is required**

For an additional credit, students enrolled in Career Development can receive early release from school each day to fulfill the requirements of *Co-op*. Students must work an average of 15 hours per week at an approved training facility. It is encouraged to work at a job related to their career goals. The assistance of a North Allegheny Co-op coordinator can be used as a resource for students when trying to find employment. The work experience is supervised by both the school's coordinator as well as the student's onsite manager. If students have a full academic schedule, they may still participate in Co-op (refer to No. 0436 and 0437 for period 10 – No Early Release). Select the course numbers that correspond to the work release time requested.

**Co – op**

**No. 0433**

*Semester 1 Period 9 Full Time*

**Co – op**

**No. 0431**

*Semester 1 Periods 8-9 Full Time*

**Co – op**

**No. 0429**

*Semester 1 Periods 7-9 Full Time*

**Co – op**

**No. 0427**

*Semester 1 Periods 6-9 Full Time*

**Co – op**

**No. 0425**

*Semester 1 Periods 5-9 Full Time*

**Co – op**

**No. 0434**

*Semester 2 Period 9 Full Time*

**Co – op**

**No. 0432**

*Semester 2 Periods 8-9 Full Time*

**Co – op**

**No. 0435**

*Semester 2 Periods 7-9 Full Time*

## Course Descriptions (continued)

### Business, Computer and Information Technology

**Co-op** **No. 0428**  
*Semester 2 Periods 6-9 Full Time*

**Co-op** **No. 0426**  
*Semester 2 Periods 5-9 Full Time*

**Co-op** **No. 0436**  
*Semester 1 Period 10 Full Time*

For those students who have a full schedule, but would like to participate in Co-op.

**Co-op** **No. 0437**  
*Semester 2 Period 10 Full Time*

For those students who have a full schedule, but would like to participate in Co-op.

# Course Descriptions

## Computer Education

### Grade 9,10,11,12 - Electives

Beginning Computer Applications\*----- #0289

### Other Courses Using Computers as A Primary Focus:

#### Grade 9,10 - Electives

Microsoft Office Applications 1* -----	#7406(See Business, Computer and IT Section)
Computer Science A*-----	#3523(See Mathematics Section)
Computer Science B*-----	#3524(See Mathematics Section)
AP Computer Science Principles-----	#3010(See Mathematics Section)
Digital Imaging and Media Arts*-----	#6202(See Visual Arts Section)
Exploring CADD (Computer-Aided Drawing & Design)*	#9806(See Tech and Engineering Ed Section)
-----	#9505(See Tech and Engineering Ed Section)
Game Development*-----	#9605(See Tech and Engineering Ed Section)
Advanced Game Development*-----	

#### Grades 11,12 - Electives

Microsoft Office Applications 1* -----	#7406(See Business, Computer and IT Section)
Microsoft Office Applications 2* -----	#7410(See Business, Computer and IT Section)
Web Page Design* (CHS)-----	#7908(See Business, Computer and IT Section)
Intro to Information Science* (CHS)-----	#7906(See Business, Computer and IT Section)
Cybersecurity and the Law*-----	#7909(See Business, Computer and IT Section)
Computer Science A*-----	#3523(See Mathematics Section)
Computer Science B*-----	#3524(See Mathematics Section)
AP Computer Science1-----	#3011(See Mathematics Section)
Exploring CADD (Computer-Aided Drawing & Design) *-----	#9806(See Tech and Engineering Ed Section)
Advanced CADD (Computer-Aided Drawing & Design) *--	#9411(See Tech and Engineering Ed Section)
Game Development*-----	#9412(See Tech and Engineering Ed Section)
Advanced Game Development*-----	#9605(See Tech and Engineering Ed Section)
Computer Multimedia Arts*-----	#6201(See Visual Arts Section)

\* These courses may be used towards satisfying the one credit S.T.E.M.\* (Science, Technology, Engineering and Math) requirement (details on pages 3 and 4).

(CHS) Indicates College in High School Course

## Course Descriptions

### Computer Education

**BEGINNING COMPUTER APPLICATIONS / FT**  
*Semester/Full Time*  
*Grades 9,10*

**No. 0289**  
*Elective*  
*Credit .5*

**Requirements:**

- None

Beginning Computer Applications is a hands-on course providing an opportunity for students to learn practical software applications for use both in their other classes and in their personal lives. The course will be taught using PCs with one student per computer. Skills learned will be highly beneficial to the student in college or in the workplace. Content is similar to that of the Advanced Computer Applications course, but topics are introduced at a more basic level and are not covered as extensively.

Topics include: creating and updating web pages, database creation and management, and using spreadsheets for data analysis and charting, creating graphics presentations, digital photography and scanning, photo manipulation and enhancement, desktop publishing, and creating drawings. Graphics and Internet searches are integrated into many of these projects. Time permitting, additional applications will be introduced to further enhance your experience.

# Course Descriptions

## English Language Arts

### Grade 9 - One (1) Credit Required

Essentials English 1 *	#1209
English 1	#1409
Academic English 1	#1509
Honors English 1	#1109

### Grade 10 - One (1) Credit Required

Essentials English 2 *	#1210
English 2	#1410
Academic English 2	#1510
Honors English 2	#1110

### Grade 9,10 - Electives

Creative Writing	#1703
Introduction to Digital Media Production: <i>NAEye TV</i>	#1910
Introduction to Film	#1206
Introduction to Journalism: <i>NAEye News</i>	
Grade 9	#1403
Grade 10	#1603
Introduction to Theatre	#1909
Leadership 1	#1905
Leadership 2	#1906
Speech and Debate	#1907
Yearbook	
Grade 9	#1503
Grade 10	#1506

### Grade 9,10 - Special Options

English as a Second Language	#1009
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\* These courses are connected to the IMPACT program and require a specific recommendation through the program coordinator or school counselor.

(CHS) Indicates College in High School Course

# Course Descriptions

## English Language Arts

### Grade 11 - One (1) Credit Required

Essentials English 3-----	#1211
English 3 -----	#1611
Academic English 3-----	#1711
Honors English 3-----	#1015
AP English 3: Language and Composition -----	#1011

### Grade 12 - One (1) Credit Required

Essentials English 4 -----	#1212
English 4 -----	#1512
Academic English 4-----	#1712
Honors English 4-----	#1017
AP English 4: Language and Composition (CHS) -----	#1012

### Grade 11,12 - Electives

Acting 1: Taking the Stage-----	#1405
Acting 2: Drama in Motion -----	#1505
Broadcasting-----	#1112
Contemporary Novels-----	#1715
Creative Writing 1: Fiction-----	#1704
Creative Writing 2: Fiction-----	#1714
Creative Writing 1: Poetry-----	#1604
Creative Writing 2: Poetry-----	#1614

Honors Argument (CHS) -----	
Honors Journalism 11,12	#1908
Grade 11(CHS)-----	#1803
Grade 12-----	#1404
Film and TV Production 1-----	#1111
Film and TV Production 2-----	#1113
Film and TV Production 3-----	#1114
Film Studies (CHS) -----	#1912
Speech (CHS) -----	#1805
Yearbook	
Grade 11-----	#1903
Grade 12-----	#1504

### Grade 11,12 - Special Options

English as a Second Language-----	#1009
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(CHS) Indicates College in High School Course

# Course Descriptions

## English Language Arts

### **ESSENTIAL ENGLISH 1 (IMPACT)**

**No. 1209**

*Full Year/Full Time*

*Grade 9*

*Credit 1.0*

#### **Requirements:**

- This course is reserved for students who qualify for and are accepted into the IMPACT Program.

In Essential English 1, students will work to improve their language arts skill set. The main areas of study include reading comprehension, analysis, writing, grammar, vocabulary development, speaking, and listening. Instruction is differentiated to meet students' individual needs and readiness and is designed to help students make connections between reading, writing, literature, and their own lives. Students can expect to receive extra teacher support, small group instruction, and individual remediation time to improve their areas of deficiency. The course will move at a slower pace compared to the other 9th grade English courses, but it will cover the same curriculum. Through various modern and classic pieces of literature- including short stories, novels, films, poems, and non-fiction articles- students will work to increase their knowledge and apply the skills learned.

### **ENGLISH 1**

**No. 1409**

*Full Year/Full Time*

*Grade 9*

*NCAA*

*Credit 1.0*

#### **Requirements:**

- Completion of English Language Arts 8

In this college preparatory communications course, students develop their reading, writing, listening, speaking, and critical thinking skills. To enhance vocabulary skills, students familiarize themselves with words from within the contexts of various reading assignments. Students study grammar, usage, and mechanics integrated within reading and composition. Students also read and analyze fiction, non-fiction, poetry, the novel, and drama. Students follow the writing process while composing core writing assignments and timed writing prompts. This course's units are organized around narrative, persuasive, and informational modes of writing. Students also apply their knowledge of the library and its technology in a workshop setting.

### **ACADEMIC ENGLISH 1**

**No. 1509**

*Full Year/Full Time*

*Grade 9*

*NCAA*

*Credit 1.0*

#### **Requirements:**

- Minimum of 75% in English Language Arts 8

Academic English I is a college preparatory course in which students will read, analyze, and compose essays about a wide variety of literature, while also making sophisticated, meaningful connections between that literature and their own lives. The class is structured with a great deal of writing, group work, and inquiry-based discussions, in which knowledgeable participation is imperative. Students explore Unit Questions through inquiry-based practices and project-based learning. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.



# Course Descriptions

## English Language Arts

### **HONORS ENGLISH 1**

***Full Year/Full Time***

***Grade 9***

***NCAA***

#### **Requirements:**

- **Minimum of 93% in English Language Arts 8**

This is a survey course that features advanced study of fiction and nonfiction texts and narrative, informational, and argumentative modes of writing. Students should be comfortable with independent reading and higher order thinking tasks. Students will work independently and collaboratively throughout the year on research, analysis, formal writing, project-based activities, and inquiry-based discussions, in which knowledgeable participation is imperative. As an honors level course, students will be held to higher expectations and should expect the course to move at a faster pace. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

**No. 1109**

***Honors Wt.***

***Credit 1.0***

### **ESSENTIALS ENGLISH 2 (IMPACT)**

***Full Year/Full Time***

***Grade 10***

#### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

In Essential English 2, students will focus on improving reading, writing, speaking, and listening skills through a variety of texts that are geared toward students' abilities and interests in a highly structured atmosphere. Students participate in directed-reading activities, in class discussions, guided paragraph and essay writing, and vocabulary exercises centered on context clues, roots, and prefixes to increase vocabulary knowledge and usage. Through high interest and classical literature—including short stories, non-fiction, drama, poetry, film, and novels—students increase knowledge, comprehension, application, analysis, and evaluation skills. All students will take the Literature Keystone Exam at the end of the course.

**No. 1210**

***Credit 1.0***

### **ENGLISH 2**

***Full Year/Full Time***

***Grade 10***

***NCAA***

#### **Requirements:**

- **Minimum of 92% in Essentials English 1**

In this college preparatory course, students continue to develop their reading, writing, listening, speaking, and critical thinking skills. Students study grammar, usage, and mechanics integrated within reading and composition. Students also read and analyze fiction, non-fiction, poetry, the novel, and drama. Students follow the writing process while composing core writing assignments and timed writing prompts. This course utilizes the same rigorous academic content featured in the Academic English 2 curriculum but with additional support in place for students.

**No. 1410**

***Credit 1.0***

# Course Descriptions

## English Language Arts

### **ACADEMIC ENGLISH 2**

***Full Year/Full Time***

***Grade 10***

***NCAA***

**No. 1510**

***Credit 1.0***

#### **Requirements:**

- **Minimum of 70% in Academic English 1**  
**OR**
- **Minimum of 95% in English 1**

Academic English 2 will take students through a comprehensive study of literature and composition. Students will explore and improve various styles and types of writing in this college preparatory course. Students will develop, refine, and polish writing skills through informational writing, persuasive writing, and narrative writing. Grammar and vocabulary skills will be strengthened through an integrated approach to reading and writing. Longer texts include a variety of genres such as literary nonfiction, dystopian fiction, memoir, vignette, and drama. Students will complete timed reading and writings in preparation for the Keystone Literature Exam. All students will take the Keystone Literature Exam at the end of this course. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### **HONORS ENGLISH 2**

***Full Year/Full Time***

***Grade 10***

***NCAA***

**No. 1110**

***Honors Wt.***

***Credit 1.0***

#### **Requirements:**

- **Minimum of 88% in Honors English 1**  
**OR**
- **Minimum of 97% in Academic English 1**

This course undertakes a comparative analysis of literature from and about a variety of cultures, including classical Greek and Roman, as well as medieval, Elizabethan, and various pieces of world literature. Students develop their writing craft through rigorous practice in various modes supported by a series of writers' workshops. Added emphasis is placed on close reading, 21st century communication (collaborative presentations, podcasting, website building, video creation), and in-class discussions. All students will take the Literature Keystone Exam at the end of the course. Honors English 2 is designed for students interested in a challenging, accelerated study of literature and who intend to advance to Honors English 3 or AP English 3. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### **CREATIVE WRITING**

***Semester/Full Time***

***Grades 9, 10***

**No. 1703**

***Credit .5***

#### **Requirements:**

- **None**

This elective course is open to all North Allegheny Intermediate students who are interested in developing and expressing their own creative voice through language. Students will have the opportunity to explore a variety of writing that includes different types of poetry and short stories, as well as experiment with new topics, genres, and media of interest. Students will also become part of a writing community through activities and workshops.

# Course Descriptions

## English Language Arts

### INTRODUCTION TO DIGITAL MEDIA PRODUCTION: NAEYE TV

No. 1910

*Semester/Full Time*

*Grades 9, 10*

*Credit .5*

#### Requirements:

- None

This course provides students with an introduction to aspects of modern digital media creation and design. Students explore elements of video and audio design, production, and editing; television broadcasting; podcasting; and more. Students should be comfortable with the basics of operating audio-visual equipment and appearing on camera. The course collaborates closely with Intro to Journalism to publish multimedia content for the school newspaper, *The NAEye*.

### INTRODUCTION TO FILM

No. 1206

*Semester/Full Time*

*Grades 9, 10*

*Credit .5*

#### Requirements:

- None

This course introduces students to the art of analysis and how to approach a film with a critical eye. Students will be exposed to various genres of film while learning different frameworks for interpretation and investigation. Throughout the course, students will investigate the narrative structure of movies and how the cinematic and theatrical elements work together to produce motion pictures as literature. Students can expect to learn the background and history of the various genres. As they actively view, they will take notes and complete analysis assignments that will be used to create project-based summative assessments after each unit of study. Major highlights of the class include the opportunity to explore screenwriting, producing and directing your own short film, and sharing your published film with the class as the end-of-semester final project. Ultimately, this course will give students an opportunity to explore how films are a reflection of various cultures and how they shape society.

### INTRODUCTION TO JOURNALISM: NAEYE NEWS

GRADE 9

No. 1403

GRADE 10

No. 1603

*Full Year/Part Time*

*Credit .5*

#### Requirements:

- None

Students explore the tenets and skills of modern journalism through the management and publication of NAI's online student newspaper, *The NAEye*. Students should be comfortable with writing and researching independently, conducting face-to-face interviews, and seeing their writing through multiple revisions as part of the writing and publishing process. Interest and previous experience in journalistic writing, podcasting, and photography are encouraged, but not required. Exemplary student writings are submitted for local and national recognition in the field of student journalism.

# Course Descriptions

## English Language Arts

### **INTRODUCTION TO THEATER**

**No. 1909**

**Semester/Full Time**

**Grades 9, 10**

**Credit .5**

#### **Requirements:**

- None

This course is an introduction to the basic elements of theater from the history of theater to the wide world of acting and stage presence. Students can expect to be actively involved in their learning from participating in actors' workshops to researching and leading their own lessons and even directing dress rehearsals. There is no prior acting experience required to take this course, but students should be aware that they need to spend time memorizing their lines and learning stage directions and blocking. Throughout the semester, students will explore the following units: the history of theater, physical acting, vocal acting, improvisation, pantomime, monologues, group scenes, dramatic poetry readings, parody/satirical acting, screenwriting, and directing. The semester will culminate with students working together to perform one-act plays.

### **LEADERSHIP 1**

**No. 1905**

**Semester/Full Time**

**Grades 9, 10**

**Credit .5**

#### **Requirements:**

- None

In this semester course, students learn elements of leadership with an emphasis on skills that promote their success in leadership situations. Students will explore units on goal setting, leadership styles, project planning, time management, and communication. All students will plan, implement, and evaluate a leadership project that will be presented to their peers. This course is entirely hands-on and class participation is a portion of each student's grade. Students who thrive in this course have a strong academic foundation, possess strong written and oral communication skills, are comfortable speaking in front of groups, and are self-motivated and full of initiative.

### **LEADERSHIP 2**

**No. 1906**

**Semester/Full Time**

**Grade 10**

**Credit .5**

#### **Requirements:**

- Minimum of 80% in Leadership 1

Using a team approach, Leadership 2 students apply learned Leadership 1 skills as both leaders and followers in school-wide projects. Students explore experiences in motivation, group dynamics, team building, facilitating, giving feedback, decision-making, problem-solving, and risk-taking. Student leaders experience numerous application activities via icebreakers, in-class projects, and "hands-on" experiences.

## Course Descriptions

### English Language Arts

#### **SPEECH AND DEBATE**

**No. 1907**

*Semester/Full Time*

*Grades 9, 10*

*Credit .5*

**NCAA**

#### **Requirements:**

- None

This course is designed to help students gain confidence in public speaking skills, improve communication skills, and strengthen critical thinking skills. Students will present a variety of speeches, including prose reading, impromptu/extemporaneous speaking, dramatic/humorous interpretation, original oratory, and Lincoln-Douglas Debate. Students are required to memorize a 6-10 minute speech. Student participation in competitive tournaments is encouraged, but not required. This course is highly recommended for all levels.

#### **YEARBOOK**

**GRADE 9**

**No. 1503**

**GRADE 10**

**No. 1506**

*Full Year/Full Time*

*Grades 9, 10*

*Credit 1.0*

#### **Requirements:**

- None

The NAI Yearbook Staff is responsible for the time capsule that is the traditional high school yearbook. Students are responsible for every piece of content, from graphic design and layout to photography and text. Beyond the fleeting scope of social media, students will create an artifact that captures their experience at NAI. Completed yearbooks are distributed to students who paid for them upon completion in the spring.

#### **ENGLISH AS A SECOND LANGUAGE**

**No. 1009**

*Full Year/Full Time*

*Grades 9, 10*

*Credit 1.0*

English as a Second Language is an academic discipline that is designed to teach English Language Learners academic language and social skills, as well as cultural aspects of the English language necessary to succeed in the academic environment. English as a Second Language involves teaching reading, writing, speaking, and listening at appropriate developmental and proficiency levels with little or no use of the native language. English as a Second Language course replaces a student's required participation in English and is aligned with PA Academic Standards. Students must meet District criteria and undergo an evaluation to determine eligibility for the program. Based on the Basic Education Circular of July 2001, Non-English-speaking students receive 10 to 15 hours of ESL instruction per week, Beginning Level students receive 10 hours per week, Intermediate Level students receive 5 to 7 ½ hours per week, and Advanced Level students receive 5 hours per week.

#### **ESSENTIAL ENGLISH 3**

**No. 1211**

*Full Year/Full Time*

*Grade 11*

*Credit 1.0*

#### **Requirements:**

- None

Essential English 3 focuses on American Literature by connecting students with the literature and the culture of America as a whole. Students will enhance their reading comprehension skills through reading, comparisons, and reflections. Students will reinforce fundamental writing techniques, including grammar, organization, and content. Through literary study, research, writing, grammar, and vocabulary development, students will become proficient readers and writers, preparing them for all future endeavors.

# Course Descriptions

## English Language Arts

### ENGLISH 3

**No. 1611**

*Full Year/Full Time*

*Grade 11*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- Minimum of 92% in Essentials English 2  
OR
- Minimum of 60% in English 2

English 3 focuses on American Literature and studies it in a way that allows students to see how it connects to themselves, as well as to American culture as a whole. Students will enhance their reading comprehension skills through close-reading, comparisons, and reflections. Additionally, a key component of the course is the reinforcement of fundamental writing techniques, including grammar, organization, and content. Through literary study, writing, grammar, and vocabulary development, students will become proficient readers and writers, fully prepared for whatever they decide to do upon graduation.

### ACADEMIC ENGLISH 3

**No. 1711**

*Full Year/Full Time*

*Grade 11*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- Minimum of 70% in Academic English 2  
OR
- Minimum of 95% in English 2

Academic English 3 is a college and career preparatory course where juniors will study American literature and non-fiction works. Students will analyze the literature in conjunction with the social, historical, and cultural forces, which influence writers, as well as use and develop their reading, listening, speaking, and composition skills. Students will consistently work on improving formal writing skills through smaller writing responses as well as completing large, textual evidence essays throughout the units. In this course, students will have prominent SAT vocabulary words each 9 weeks, and at the end of the course, each student will have developed their college essay or resume depending on their future plans. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### HONORS ENGLISH 3

**No. 1015**

*Full Year/Full Time*

*Honors Wt.*

*Grade 11*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- Minimum of 88% in Honors English 2  
OR
- Minimum of 97% in Academic English 2

Honors English 3 is a year-long course that follows the progression of American literature from its inception to modern times. It focuses on each literary time period through a variety of novels, poems, short stories, and plays. Students will participate in regular reading quizzes, Socratic Seminars, group projects, presentations, research writing, and literary analysis on a more challenging and advanced level. The course will focus specifically on formal writing at a college level in preparation for future courses. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

# Course Descriptions

## English Language Arts

### **AP ENGLISH 3: LANGUAGE AND COMPOSITION**

*Full Year/Full Time*

*Grade 11*

*NCAA*

#### **Requirements:**

- Minimum of 93% in Honors English 2  
OR
- Minimum of 97% in Academic English 2

**No. 1011**

*AP Wt.*

*Credit 1.0*

AP3 is a college-level course that requires students to bring a high level of industry overall and also a strong competency in expository composition across all domains. Students should expect an increased demand and rigor applied to critical reading. The course will focus heavily on the three writing modes of Rhetorical Analysis, Argumentation, and Synthesis. Analysis will focus heavily on timed (in-class) writing. Students are expected (but not required) to take the College Board AP Language and Composition test in May. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### **ESSENTIAL ENGLISH 4**

*Full Year/Full Time*

*Grade 12*

#### **Requirements:**

- None

**No. 1212**

*Credit 1.0*

Essential English 4 focuses on literature that highlights varied perspectives by connecting students with the literature and various cultures and the world. Students will enhance their reading comprehension skills through reading, comparisons, and reflections. Students will reinforce fundamental writing techniques, including grammar, organization, and content. Through literary study, research, writing, grammar, and vocabulary development, students will become proficient readers and writers, preparing them for all future endeavors.

### **ENGLISH 4**

*Full Year/Full Time*

*Grade 12*

*NCAA*

#### **Requirements:**

- Minimum of 92% in Essential English 3  
OR
- Minimum of 60% in English 3

**No. 1512**

*Credit 1.0*

English 4 focuses on literature that highlights diverse perspectives and cultures throughout the world. Students will study literature in a way that connects them historically and personally in order to enhance them academically and eventually, professionally. Students will improve their research and writing skills through a variety of different writing modes that reinforce grammar, sentence structure, and style.

# Course Descriptions

## English Language Arts

### **ACADEMIC ENGLISH 4**

*Full Year/Full Time*

*Grade 12*

*NCAA*

**No. 1712**

*Credit 1.0*

#### **Requirements:**

- Minimum of 70% in Academic English 3  
OR
- Minimum of 95% in English 3

Academic English 4 is a challenging, college-preparatory course where seniors will study world literary and non-fiction works. Students will analyze the literature in conjunction with the social, historical, and cultural forces which influence writers, as well as use and develop their reading, listening, speaking, and composition skills. Added emphasis is placed on expository, persuasive, and analytical writing with a focus on critical thinking skills, mechanics, style, and voice. Students will complete an in-depth term paper that includes documented research as a culmination of the course. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### **HONORS ENGLISH 4**

*Full Year/Full Time*

*Grade 12*

*NCAA*

**No. 1017**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- Minimum of 88% in Honors English 3  
OR
- Minimum of 97% in Academic English 3

This year-long senior course is designed for distinguished language arts students interested in fortifying their skills in preparation for further, extensive study at the college-level. With a focus on world literature, writers are critically analyzed in relation to their cultural and historical influences. Intense and higher levels of outside readings will serve as components of this course. Composition assignments build sequentially upon the writing process as students work to advance their research and expository writing skills, including revision for elevated style and tone. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.

### **AP ENGLISH 4: LITERATURE AND COMPOSITION (CHS)**

*Full Year/Full Time*

*Grade 12*

*NCAA*

**No. 1012**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- Minimum of 88% in AP English 3  
OR
- Minimum of 93% in Honors English 3

Advanced Placement English 4 is a college-level course for students with superior reading and writing skills as well as an interest in a challenging, fast-paced environment. Students will read a variety of whole texts and engage in discussion and analysis. Seventy-five percent of the course grade entails timed, in-class essay writing; such emphasis on writing is reinforced with intense studies of language, structure, the nature of literary analysis, and literary theory. The course also explores poetry, with a focus on poetic language, devices, form, and function. Students are expected (but not required) to take the College Board AP Literature and Composition test in May. Students who enroll in this course will be required to complete assigned summer reading prior to the start of the school year.



## Course Descriptions

### English Language Arts

#### **ACTING 1: TAKING THE STAGE**

*Semester/Full Time*

*Grades 11, 12*

##### **Requirements:**

- None

**No. 1405**

*Credit .5*

This course calls all actors interested in performance ranging from improvisation to scene work. Discussion and analysis will focus on going beyond obvious textual inferences to the role nonverbal communication plays in interpretation. Ultimately, this course will help to provide each student with skills for speaking and presenting in public forums.

#### **ACTING 2: DRAMA IN MOTION**

*Semester/Full Time*

*Grades 11, 12*

##### **Requirements:**

- Successful completion of Acting 1: Taking the Stage

**No. 1505**

*Credit .5*

Based on Pulitzer Prize winning authors, students will analyze whole scripts as a large group and apply key elements by participating in paired scene work. Ultimately, the course is geared for those students who enjoy analyzing “what is said between the lines” and interpreting that on the stage.

#### **BROADCASTING**

*Full Year/Full Time*

*Grades 11, 12*

##### **Requirements:**

- None

**No. 1112**

*Credit 1.0*

Situated in the NATV Studio, this full-year course places students at the controls of the NASH Morning Show. The hands-on learning in this course attracts students who have an interest in communications or film/video production, as well as students who simply wish to spend a year producing a daily broadcast for the student body. This course is ideal for students who either prefer to work behind the scenes with technical equipment or in front of the camera as news anchors. Typically, there is ample time in this course for students to produce their own videos when they are not assigned to a role in the morning show broadcast.

#### **CONTEMPORARY NOVELS**

*Semester/Full Time*

*Grades 11, 12*

##### **Requirements:**

- None

**No. 1715**

*Credit .5*

Contemporary Novels is a semester-long elective course that models a “book club” as a graded class. This class is for students who enjoy reading modern novels in different genres such as realistic fiction, romance, horror, thriller, fantasy, and science fiction. Students will vote on novel selections, and while Actively Learn and libraries may have the novels available, students may be responsible for securing a copy of the novel on their own. Class activities will include large and small group discussions, creative writing opportunities, film to novel comparisons, projects, and movies. This class will foster a love for reading and the promotion of life-long readers.

# Course Descriptions

## English Language Arts

### **CREATIVE WRITING 1: FICTION**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

#### **Requirements:**

- None

**No. 1704**

*Credit .5*

This course is open to juniors and seniors interested in storytelling and the process of writing fictional pieces. Students enrolled in the course will experience opportunities to read, respond to, and create a variety of fictional pieces. A collaborative course design complete with in-class workshops and peer-to-peer discussion offers students an environment to develop their writing skills and confidence. Students enrolled in this course will be encouraged to write daily.

### **CREATIVE WRITING 2: FICTION**

*Semester/Full Time*

*Grades 11, 12;*

#### **Requirements:**

- Successful completion of Creative Writing 1: Fiction.

**No. 1714**

*Credit .5*

This course is open to juniors and seniors and requires completion of Creative Writing 1: Fiction as a prerequisite. Creative Writing 2: Fiction builds upon and expands the interests and skills developed through Creative Writing 1: Fiction. Writers who are interested in more deeply exploring the basics of fiction introduced in Creative Writing 1: Fiction and in expressing creativity through the art of storytelling are encouraged to take this course. Students enrolled in this course will be encouraged to write daily.

### **CREATIVE WRITING 1: POETRY**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

#### **Requirements:**

- None

**No. 1604**

*Credit .5*

In this course, creative writers explore a variety of poetic structures and techniques, as well the nature of sound and language through reading a diverse selection of poetry and by writing their own. Extensive peer review is a core of the class, with students reacting to the work of their classmates' and offering suggestions for strengthening. Students with a strong background in English Language Arts are encouraged to take the course and should expect to read and write daily during the semester.

### **CREATIVE WRITING 2: POETRY**

*Semester/Full Time*

*Grades 11, 12*

#### **Requirements:**

- Successful completion of Creative Writing 1: Poetry

**No. 1614**

*Credit .5*

Creative Writing 2: Poetry builds upon the foundations established in Creative Writing 1: Poetry by continuing to explore the genre in more deliberate and in-depth ways. In addition to writing, submitting, and reading original works of poetry, students will be expected to play more active leadership roles in peer review sessions and to lead student workshops in class. Creative Writing 2: Poetry students will be much more engaged in developing their own style and voice in their poetry as they further explore the genre.

# Course Descriptions

## English Language Arts

### **FILM AND TV PRODUCTION 1**

**No. 1111**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- None

Situated in the NATV Studio, this hands-on course introduces students to cinematography, digital editing, and multi-camera news broadcasting. Using professional equipment and software, students learn to produce both creative and journalistic pieces. No prior experience with filmmaking is necessary. Successful students are encouraged to continue their involvement in the program by taking Film and TV Production 2 and/or Broadcasting.

### **FILM AND TV PRODUCTION 2**

**No. 1113**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- Successful completion of Film and TV Production 1  
OR
- Special approval by teacher

Situated in the NATV Studio, this course expands upon the principles and techniques taught in Film and TV Production 1. Students in this course learn to improve their storyboarding, scripting, and shot composition skills using professional video and audio equipment. This course challenges students to produce longer videos than the ones they produced in Film and TV Production 1, and assignments include both creative and documentary films. Students who are already proficient with video production and who have not taken Film and TV Production 1 may see the teacher to request placement in Film and TV Production 2.

### **FILM AND TV PRODUCTION 3**

**No. 1114**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- Successful completion of Film and TV Production 2

Situated in the NATV Studio, this course enables advanced students to fully explore their interest in video production. Emphasis is placed upon fine-tuning the craft of filmmaking, with special attention to careful pre-production, advanced shot composition, and post-production. The principles learned in Film and TV Production 1 and 2 serve as the foundation to the creative and independent work done in this course. Top student productions will be submitted to local and national competitions.

### **FILM STUDIES (CHS)**

**No. 1912**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- None

Students will examine how the medium artistically represents history and how scholarly criticism elevates landmark films to the status of literary art. The course will focus on film as a mechanism for reflecting two angles: how art reflects life, and how life can reflect art. Students will also engage in critical readings and response writing. As some of the films are R-rated, permission slips will be required for all enrolled students.

## Course Descriptions

### English Language Arts

#### **HONORS ARGUMENT (CHS)**

*Semester/Full Time*

*Grades 11, 12*

##### **Requirements:**

- None

**No. 1908**

*Honors Wt.*

*Credit .5*

This course introduces the fundamentals of argumentation in both theory and practice. Honors Argument has a CHS (College in High School) option. There will be a minimum of three performance based debates and a moderate research component. Students will practice eloquence and become sensitive to the intricacies of debate and discourse.

#### **HONORS JOURNALISM 11, 12**

**GRADE 11 (CHS)**

**GRADE 12**

*Full Year/Full Time*

##### **Requirements:**

- None

**No. 1803**

**No. 1404**

*Credit 1.0*

Students in this workshop course are placed at the controls of the NASH student media site, *The Uproar*. The principles and ethics of online journalism serve as ongoing topics of study, while students write, revise, and publish articles ranging from news and opinions to entertainment, sports, and special interest topics. Journalistic photography and social media are also key components of the course, and students are encouraged to incorporate new media platforms such as podcasting into their work. The desire and ability to meet regular deadlines is an essential aspect of this course. Exemplary student productions are submitted for local and national recognition in the field of student journalism.

#### **SPEECH (CHS)**

*Semester/Full Time*

*Grades 11, 12*

##### **Requirements:**

- None

**No. 1805**

*Credit .5*

This is a public speaking course where the focus is on individual growth as a presenter. Academic success centers on the individual's ability to take chances and learn through experience. Each speech topic will be generated by the individual, and self-expression and creativity are highly encouraged. Ultimately, every student should leave at the end of the semester competent in managing the nonverbal aspects of presentation and experienced in developing written speeches across a variety of domains.

#### **YEARBOOK**

**GRADE 11**

**GRADE 12**

*Full Year/Full Time*

##### **Requirements:**

- None

**No. 1903**

**No. 1504**

*Credit 1.0*

In this workshop course, students are expected to plan, write, organize, and design the high school yearbook, *Safari*, under the supervision of the yearbook adviser. Students learn basic principles of yearbook production and develop skills that include writing copy, captions and headlines; digital photography; desktop publishing and using appropriate technology tools for media production. Due to the workload and multiple production deadlines, after-school meetings are sometimes required.

## Course Descriptions

### English Language Arts

#### **ENGLISH AS A SECOND LANGUAGE**

***Full Year/Full Time***

***Grades 9, 10***

**No. 1009**

***Credit 1.0***

English as a Second Language is an academic discipline that is designed to teach English Language Learners academic language and social skills, as well as cultural aspects of the English language necessary to succeed in the academic environment. English as a Second Language involves teaching reading, writing, speaking, and listening at appropriate developmental and proficiency levels with little or no use of the native language. English as a Second Language course replaces a student's required participation in English and is aligned with PA Academic Standards. Students must meet District criteria and undergo an evaluation to determine eligibility for the program. Based on the Basic Education Circular of July 2001, Non-English-speaking students receive 10 to 15 hours of ESL instruction per week, Beginning Level students receive 10 hours per week, Intermediate Level students receive 5 to 7 ½ hours per week, and Advanced Level students receive 5 hours per week.

## Course Descriptions

### Family and Consumer Sciences

#### Grade 9,10 - Electives

Adventures in Food-----	#8403
Introduction to Child Development-----	#8705
Fashion and Design-----	#8703
International Foods-----	#8503
Introduction to Sports Nutrition-----	#8507

#### Grades 11, 12 - Electives

The Real World-----	#8505
Foods Americana-----	#8504
Foods for You-----	#8604
Sports Nutrition-----	#8607
Interior Design-----	#8904
Child Psychology (CHS)-----	#8704
Fashion Art & Merchandising-----	#8702

#### Grade 12 Only - Electives

Preschool Practicum-----	#8804
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(CHS) Indicates College in High School Course

## Course Descriptions

### Family and Consumer Sciences

#### **ADVENTURES IN FOOD**

**No. 8403**

*Semester/Full Time*

*Grades 9, 10*

*Credit 0.5*

**Requirements:**

- **None**

Develop an understanding of food and basic nutrition, kitchen safety and sanitation, and build upon culinary skills while working on more challenging recipes. Get out of your comfort zone by trying new foods and advanced techniques. Examine and incorporate social food trends including food in the social media world and social food issues, such as food waste, sustainability, and farm to table.

#### **INTRODUCTION TO CHILD DEVELOPMENT**

**No. 8705**

*Semester/Full Time*

*Grades 9, 10*

*Credit 0.5*

**Requirements:**

- **None**

Become a more confident and attentive caregiver by learning the skills needed to encourage healthy, happy babies and supportive, loving families. Investigate a variety of topics related to infants and children with opportunities for hands-on experiences, including the Real Care baby simulator. Learn about the whole child, including physical, social, emotional, intellectual development, health and safety, and caring for children.

#### **FASHION & DESIGN**

**No. 8703**

*Semester/Full Time*

*Grades 9,10*

*Credit 0.5*

**Requirements:**

- **None**

Explore the creative world of design from the designer's perspective. Apply the principles of design while sketching and creating pieces for a clothing line. In this student driven, project based class students will construct multiple designs using the sewing machine. Other aspects of design in our lives will be explored through individual projects that focus on student interests.

#### **INTERNATIONAL FOODS**

**No. 8503**

*Semester/Full Time*

*Grades 9, 10*

*Credit 0.5*

**Requirements:**

- **None**

Prepare foods from around the world as you explore international customs and cuisines. Discover the principles of food science and its relationship to healthy individuals, families, and communities. Communication, organization, conservation, and money management skills are emphasized.

## Course Descriptions

### Family and Consumer Sciences

#### **INTRODUCTION TO SPORTS NUTRITION**

**No. 8507**

*Semester/Full Time*

*Grades 9, 10*

*Credit 0.5*

**Requirements:**

- **None**

Improve your performance by learning the basics of nutrient use in exercise and how to apply nutrition strategies to meet your wellness goals. Examine the relationship between physical activity, proper nutrition, sports performance, and overall health. Prepare healthy foods, modify recipes, and analyze personal eating habits.

#### **THE REAL WORLD**

**No. 8505**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

**Requirements:**

- **None**

Writing a check, paying taxes, how to ace the interview, managing stress, and creating easy, healthy meals are some of the topics covered in this course on “how to adult.” Learn skills needed for the real world and life after graduation with a focus on organization, personal finance, overall wellness, and career preparation.

#### **FOODS AMERICANA**

**No. 8504**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

**Requirements:**

- **None**

Discover interesting and iconic foods from different regions around the USA. Investigate the cultural backgrounds that influence cuisine, as well as college and career opportunities within those regions. Use various kitchen appliances, meal planning strategies, and practice food safety and sanitation as you cook throughout the semester.

#### **FOODS FOR YOU**

**No. 8604**

*Semester/Full Time*

*Grades 11, 12*

*Credit 0.5*

**Requirements:**

- **None**

Practice skills related to health, nutrition, and kitchen management prior to entering adulthood. Adopt strategies to make smart food choices and how to respond to health situations that may arise in the future. This is a hands-on “adulting in the kitchen” class to cook and try new recipes throughout the semester.



## Course Descriptions

### Family and Consumer Sciences

#### **SPORTS NUTRITION**

*Semester/Full Time*

*Grades 11, 12*

**No. 8607**

*Credit 1.5*

#### **Requirements:**

- **None**

Passionate about playing sports? Student athletes will gain knowledge to fuel up properly for high-performance by maximizing nutrient intake based on sport-specific needs. Increasing muscle mass, reducing body fat, eating on the road, timing of eating, and dietary supplements will be covered, as well as special concerns for the student athlete including eating disorders, steroid use, and alcohol abuse. Prepare and sample lightened versions of foods in this hands-on class that is a perfect fit for those looking to enhance their wellness and function at their best.

#### **INTERIOR DESIGN**

*Semester/Full Time*

*Grades 11, 12*

#### **Requirements:**

**No. 8904**

*Credit 0.5*

- **None**

Immerse yourself in the field of interior design as you practice creating designs that incorporate both function and beauty, including a capstone room makeover project. History of housing and architecture, universal design, and sustainability in the built environment will be investigated. Students will apply their learning in self directed hands-on projects throughout the class.

#### **CHILD PSYCHOLOGY (CHS)**

*Semester/Full Time*

*Grades 11, 12*

#### **Requirements:**

**No. 8704**

*Credit 0.5*

- **None**

Explore the typical and atypical development of children from conception through age three. Gain insight into positive and negative influences on human development and the impact we have on the health, safety, and overall development of a child. Opportunities to explore careers working with children, such as medicine and education, as well as hands-on learning activities such as the Real Care baby are included in the class.

#### **FASHION ART & MERCHANDISING**

*Semester/Full Time*

*Grades 11, 12*

#### **Requirements:**

**No. 8702**

*Credit 0.5*

- **None**

Study the ever changing world of the fashion industry while applying the principles of art and design as you create student directed hands-on projects using textiles. Discover the inner workings of the fashion industry and how our clothes are made, from fibers to wearable designs. Learn about the how and why of clothing, the fashion cycle and fashion throughout modern history, and contemporary issues in the industry. Career opportunities will be investigated.

## Course Descriptions

### Family and Consumer Sciences

#### **PRESCHOOL PRACTICUM**

*Semester/Full Time*

*Grade 12*

**No. 8804**

*Credit 0.5*

#### **Requirements:**

- **Class is for seniors only.**

Interact with preschoolers throughout this semester course which includes a preschool lab that meets 3 days a week. Explore and apply advanced child development concepts and theories while planning and leading classroom activities that promote child development for the preschooler, including lessons in art, music, wellness, science, literacy and math. Seniors who choose this course need to have an interest in working directly with children and striving to build positive relationships with them.

## Course Descriptions

### Health and Physical Education

#### Grade 9 and 10

##### **.5 Credit Required of Wellness for Life and .5 Credit Required of Health and Physical Education**

Wellness for Life Grade 9 or 10 (SEM/FT) -----	#8409
Wellness for Life Grade 9 or 10 (FY/PT)-----	#8410
Health and Physical Education (FY/PT)-----	#7401

##### **Grades 9 and 10 - Health and Physical Education Alternates (meet H/PE requirements)**

Advanced Physical Education (FY/FT)-----	#7409
Adaptive Physical Education-----	#7209

#### Grade 11 and 12

##### **.5 Credit Required of Health and Physical Education**

Health and Physical Education (FY/PT)-----	#7401
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##### **Grades 11 and 12 - Health and Physical Education Alternates (meet H/PE requirements)**

Adaptive Physical Education-----	#7209
Health and Physical Education (Semester/FT)-----	#7501
Focus on Fitness-----	#7601
Health and Physical Education with Lifeguarding Option-----	#7301

#### Grade 11 and 12 Elective

Wellness Leadership-----	#7600
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## Course Descriptions

### Health and Physical Education

**WELLNESS FOR LIFE**  
*Semester/Full Time*  
*Grade 9 or 10*

**No. 8409**

*Credit .5*

This is the preferred Wellness course for students. WELLNESS FOR LIFE No. 8410 Full Year/Part Time Grade 9 or 10 Credit .5 may be scheduled in lieu of #8409 when necessitated by certain scheduling scenarios. Wellness for Life is designed to provide students with an opportunity to learn and practice skills revolving around the physical, mental/emotional, and social aspects of Wellness. An emphasis is placed on the importance of practicing health skills including; analyzing influences, accessing resources, interpersonal communication, decision making, goal setting, practicing health enhancing behaviors, and advocacy skills that will lead to a higher quality of life. Course information is presented in a practical manner incorporating current health trends and concerns. Content areas will include: Personality, Stress, Mental Disorders, Relationships (bullying prevention), Wellness, Nutrition, Non-infectious Disease, Human Growth and Development, A.I.D.S. and other STD'S, Alcohol, Tobacco, and Other Drugs, Personal Safety and CPR.

**HEALTH AND PHYSICAL EDUCATION**  
*Full Year/Part Time*  
*Grades 9, 10*

**No. 7401**

*Credit .5*

The goal of Physical Education is to facilitate students in improving their quality of life through promotion of life-long, health-enhancing physical activity. Physical activity is not only a leisure time luxury – it is an essential component of a healthy lifestyle for all individuals. At NAI, students will learn why regular planned physical activity is important, how to develop a personal plan for being physically active, and concepts necessary for successful participation in regular physical activity. The course will emphasize each student working throughout the course to reach their personal fitness and activity goals while integrating health information relating to; nutrition, mental health, analyzing influences, goal setting, interpersonal communication,. The curriculum focus is on lifetime fitness activities including; Aerobic Fitness: running technique and hiking - Biking & Spinning - Strength Training - Adventure Education: teambuilding, geocaching, and adventure racing - Pickleball

**ADAPTIVE PHYSICAL EDUCATION**  
*Full Year/Part Time*  
*Grades 9, 10, 11, 12*

**No. 7209**

*Credit .5*

Adaptive Physical Education is similar to regular physical education classes except that class size is smaller to permit concentrated development in coordination, strength, flexibility, and improved physical fitness. Skills for individual and team activities will be adjusted to individual needs.

**ADVANCED HEALTH & PHYSICAL EDUCATION**  
*Full Year/Full Time*  
*Grades 9, 10*

**No. 7409**

*Credit 1.0*

This physical education class is for those students who want to make a serious commitment to their physical well-being. Advanced Physical Education may be scheduled in place of Course #7401 for the 9th and 10th grades only. The class emphasizes cardiorespiratory efficiency, muscular strength, and muscular endurance. It is designed to enhance flexibility, help students understand body composition, develop positive attitudes, and responsible habits. The course will cover the regular physical education curriculum and will include additional time allotted to workouts focused on improving individual fitness levels.

## Course Descriptions

### Health and Physical Education

#### HEALTH & PHYSICAL EDUCATION

*Full Year/Part Time*

*Grades 11, 12*

**No. 7401**

*Credit .5*

Physical Education at the Senior High School involves both fitness and lifetime activities. Students will engage in activities that promote fitness, increase participation, develop knowledge of skills and fitness concepts, and appreciate the benefits of being active. Junior year curriculum is oriented toward fitness activities and concepts. Senior year curriculum is focused on introducing students to activities they can do for a lifetime. Students will demonstrate the best and safest practices recommended for participation in recreational and fitness activities.

#### Junior Year Curriculum:

Aquatic Fitness

Muscular Fitness

Badminton

Cardiovascular Fitness

#### Senior Year Curriculum:

Golf

Boating and Personal Water Safety

Rock Climbing

Tennis

#### HEALTH & PHYSICAL EDUCATION

*Semester/Full Time*

*Grades 10, 11, 12*

**No. 7501**

*Credit .5*

Students taking physical education full time will have the same requirements as part-time students (#7401), but they will complete these units during one semester. Criteria for Selection – Students scheduled for A. W. Beattie Career Center, Early Graduation at the conclusion of grade 11, 10th graders carrying 8 credits, and School Counselor approval.

#### FOCUS ON FITNESS

*Full Year/Part Time*

*Grades 11, 12*

**No. 7601**

*Credit .5*

The course will focus on fitness, placing a higher emphasis on personal fitness than the traditional high school physical education curriculum. The students can expect to be challenged on varying aspects of fitness using the specific activities of each unit to enrich the targeted fitness areas. Students will be exposed to a plethora of methods to advance their personal fitness, developing flexibility, muscular fitness, and cardio-respiratory endurance using advanced training methods. They will also have an opportunity to apply sport and recreation activities for the attainment of the fitness objectives. The skill taught and practiced in each lifetime activity unit will be greatly reduced in comparison to the normal curriculum, to focus on the fitness objectives of the course. Unit activities will focus towards meeting personal fitness objectives. Students seriously committed to advancing their personal fitness levels will appreciate this course. This course will satisfy the requirements of physical education in 11th and 12th grades.

## Course Descriptions

### Health and Physical Education

#### **HEALTH & PHYSICAL EDUCATION WITH LIFEGUARDING OPTION**

**No. 7301**

*Full Year/Part Time*

*Grade 11 or 12*

*Credit .5*

This course will follow the regular physical education curriculum and philosophy with the understanding that during the pool portion of the curriculum the students will have the opportunity to earn their American Red Cross Lifeguarding Certification. Students will learn basic water safety as well as proper protocol when dealing with any emergencies around water. Students will be expected to demonstrate proper surveillance and rescue skills, and also be taught CPR and First Aid, all of which are aligned with the American Red Cross Lifeguarding course curriculum. Course Details: • American Red Cross certification fees should be expected and will be the responsibility of the student • Students must be 15 years-old • Students must pass a prerequisite skill evaluation which includes: Swimming 300 yards continuously Tread water for two minutes using only your legs Complete timed event in one minute and 40 seconds Starting in the water swim 20 yards Surface dive, feet-first, or head-first, retrieve a 10-pound object Return to the surface and swim 20 yards on your back and return to the starting point with both hands on the object • Independent online learning portion outside of class • Proper execution of in-water saves must be demonstrated for certification • Students must attain a passing grade of 80 percent on the final written exam for certification This course will provide personal growth and job ready certification for community pool employment, in addition to the lifetime fitness learning opportunities in the traditional curriculum.

#### **LEADERSHIP IN WELLNESS**

**No. 1209**

*Full Year/Full Time*

*Grade 9 Phase 1*

*Credit 1.0*

Leadership in Wellness will examine health and wellness strategies for leaders. This course will promote higher level achievement of National Health Standards focusing on applying health skills through project-based learning and advocacy. The focus of the course will include practical principles for incorporating healthy habits into the leader's personal life. The course will also address theories of leadership that when employed will empower leaders to advocate for a culture of wellness within their community or organization. All content will be learned through hands-on projects focusing on health. Teachers and students will address challenging health problems by designing student projects where students can work to form solutions that benefit both the student, the school, and possibly the community.

## Mathematics

## North Allegheny School District Mathematics Sequence Chart

Pathway	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade	9th Grade	10th Grade	11 Grade	12 Grade
M4 PLUS	5TH Grade Elementary Math	Advanced Math 6	Advanced Pre-Algebra	Advanced Algebra 1	Honors Geometry	Honors Algebra 2	Honors Precalculus with Trigonometry	AP Calculus BC AP Calculus AB Honors Calculus Math Electives	AP Calculus BC AP Calculus AB Honors Calculus Math Electives
M4			Advanced Math 6	Advanced Pre-Algebra	Advanced Algebra 1	Honors Geometry	Honors Algebra 2	Honors Pre-Calculus with Trigonometry	AP Calculus BC AP Calculus AB Honors Calculus Math Electives
M3			Academic Math 6	Academic Pre-Algebra	Academic Algebra 1	Academic Geometry	Academic Algebra 2	Academic Algebra 3 With Trigonometry  <hr/> Academic Algebra 3	Foundations of Calculus  Trigonometry with Functions  Math Elective  <hr/> Honors Pre-Calculus with Trigonometry  Academic Algebra 3 with Trigonometry  Trigonometry with Functions  Math Elective
M3						Academic Algebra 1	Academic Geometry	Academic Algebra 2	Honors Pre-Calculus with Trigonometry  Academic Algebra 3 with Trigonometry  Trigonometry with Functions  Math Elective
M2			Essentials Math 6	Essentials Pre-Algebra	Essentials Algebra 1 (Part 1)	Essentials Algebra 1 (Part 2)	Essentials Geometry	Essentials Algebra 2 (Part 1)	Essentials Algebra 2 (Part 2)

**MATHEMATICS ELECTIVES INCLUDE:** Computer Science A, Computer Science B, AP Computer Science, AP Computer Science Principles, AP Statistics, Probability and Statistics, and Honors Linear Algebra.

**LEGEND: (M4 PLUS) = Advanced Academic, (M4) = Advanced at Grade Level, (M3) = at Grade Level, and (M2) = Concepts and Skills at Grade Level**

**IMPORTANT NOTE: BASED ON A STUDENT'S PERFORMANCE, THE CURRENT MATHEMATICS TEACHER MAY RECOMMEND THAT THE STUDENT MOVE TO A DIFFERENT PATHWAY**

# Course Descriptions

## Mathematics

### Grade 9 - One (1) Credit Required

Essentials of Algebra 1 (Part 2) *	#3333
Essentials of Algebra 1 (Part 2)	#3301
Academic Algebra 1	#3101
Honors Algebra 2	#3202
Academic Algebra 2	#3103
Honors Geometry	#3201
Academic Geometry	#3102
Honors Pre-Calculus with Trigonometry	#3421

### Grade 10 - One (1) Credit Required

Essentials of Geometry *	#3334
Essentials of Geometry	#3302
Honors Geometry	#3201
Academic Geometry	#3102
Honors Algebra 2	#3202
Academic Algebra 2	#3103
Honors Pre-Calculus with Trigonometry (CHS)	#3421
Honors Calculus (CHS)	#3422
AP Calculus AB	#3012
AP Calculus BC (CHS)	#3022
Academic Algebra 3 with Trigonometry	#3104

### Grade 9,10 - Electives

Computer Science A	#3523
Computer Science B	#3524
AP Computer Science Principles	#3010

\* These courses are connected to the IMPACT program and require a specific recommendation through the program coordinator or school counselor.

(CHS) Indicates College in High School Course



# Course Descriptions

## Mathematics

### Grade 11 - One (1) Credit Required in either Grade 11 or Grade 12

Essentials of Algebra 2 (Part 1) -----	#3303
Academic Algebra 3-----	#3623
Academic Algebra 3 with Trigonometry.....	#3104
Honors Pre-Calculus with Trigonometry (CHS)-----	#3421
Honors Calculus (CHS)-----	#3422
AP Calculus AB-----	#3012
AP Calculus BC (CHS)-----	#3022

### Grade 12 - One (1) Credit Required in either Grade 11 or Grade 12

Essentials of Algebra 2 (Part 2)-----	#3304
Academic Algebra 2-----	#3103
Trigonometry with Functions-----	#3624
Academic Algebra 3 with Trigonometry.....	#3104
Honors Pre-Calculus with Trigonometry (CHS)-----	#3421
Foundations of Calculus (Academic)-----	#3105
Honors Calculus (CHS)-----	#3422
AP Calculus AB-----	#3012
AP Calculus BC (CHS) -----	#3022

### Grade 11,12 - Electives

Probability & Statistics (CHS)-----	#3812
AP Statistics (CHS)-----	#3014
Honors Linear Algebra (CHS)-----	#3032
Computer Science A-----	#3523
Computer Science B-----	#3524
AP Computer Science (CHS)-----	#3011

All Mathematics/Computer Science courses may be used towards satisfying the one credit S.T.E.M.\* (Science, Technology, and Engineering Education, and Mathematics) requirement (details on pages 3 and 4).

(CHS) Indicates College in High School Course

# Course Descriptions

## Mathematics

### GRADE 9 COURSE SELECTIONS

#### **ESSENTIALS OF ALGEBRA 1 (PART 2)(IMPACT)**

**No. 3333**

*Full Year/Full Time*

*Grade 9*

*Credit 1.0*

##### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**
- **Minimum of 60% in Essentials of Algebra 1 (Part 1) (3082) (prior to Grade 9).**

This is the second year of the Essentials Mathematics sequence. Students enrolled in this course will utilize the Foundations of Algebra 1 curriculum, which addresses all the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction lessons. This program exposes students to a solid foundation in Algebra 1.

A smaller class setting is used to provide more individualized instruction and remediation. Additional attention is given to assist students in the acquisition of more abstract topics. The purpose of this course is to meet the needs of students requiring more assistance. The content of Algebra 1 is organized around families of functions, with emphasis on linear, exponential, polynomial, quadratic, radical, and rational functions. As students learn about each family of functions, they will learn to represent them in multiple ways. The student will also learn to model real-life situations using functions to solve problems arising from those situations. All students will take the Algebra 1 Keystone Exam at the end of this course.

#### **ESSENTIALS OF ALGEBRA 1 (PART 2)**

**No. 3301**

*Full Year/Full Time*

*Grade 9*

*Credit 1.0*

##### **Requirements:**

- **Minimum of 60% in Essentials of Algebra 1 (Part 1) (3082) (prior to Grade 9).**

This is the second year of the Essentials Mathematics sequence. Students enrolled in this course will utilize the Foundations of Algebra 1 curriculum which addresses all the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction lessons. This program exposes students to a solid foundation in Algebra 1.

A smaller class setting is used to provide more individualized instruction and remediation. Additional attention is given to assist students in the acquisition of more abstract topics. The purpose of this course is to meet the needs of students requiring more assistance. The content of Algebra 1 is organized around families of functions, with emphasis on linear, exponential, polynomial, quadratic, radical, and rational functions. As students learn about each family of functions, they will learn to represent them in multiple ways. The student will also learn to model real-life situations using functions to solve problems arising from those situations. All students will take the Algebra 1 Keystone Exam at the end of this course.

#### **ACADEMIC ALGEBRA 1**

**No. 3101**

*Full Year/Full Time*

*Grade 9*

*Credit 1.0*

**NCAA**

##### **Requirements:**

- **Minimum of 90% in Essentials of Algebra 1 (Part 1) (3082).**

**NOTE:** Students who do not meet the minimum of 70% in Academic Algebra 1 (3083) (prior to grade 9) will be approved to repeat Academic Algebra 1 (3101) in 9th grade.

Academic Algebra 1 is the first formally structured course of the Academic sequence. The content is organized around the families of functions, with special emphasis on linear and quadratic functions, along with representing functions in multiple ways through inquiry-based learning in real-world situations. In addition to its Algebra content, the course offers lessons on probability and data analysis as well as numerous examples and exercises involving mathematical connections to Geometry. Algebra 1 provides instruction and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. All students will take the Algebra 1 Keystone Exam at the end of the course.

# Course Descriptions

## Mathematics

### **HONORS ALGEBRA 2**

*Grade 9 (listed in Grade 10 section)*

**No. 3202**

### **ACADEMIC ALGEBRA 2**

*Grade 9 (listed in Grade 10 section)*

**No. 3103**

### **HONORS GEOMETRY**

*Full Year/Full Time*

*Grades 9, 10*

*NCAA*

**No. 3201**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Advanced Algebra 1 (3084) (prior to grade 9).**
- **Minimum of 95% in Academic Algebra 1 (3083) (prior to grade 9).**

This is the second year of the Honors Mathematics sequence. Honors Geometry is a rigorous course for students who have completed Advanced Algebra 1 in grades 6, 7, or 8. In this course, students will develop reasoning and problem-solving skills in the areas of congruence, similarity, properties of lines, properties of triangles, properties of quadrilaterals, and properties of circles. The course will also include work with transformations, perimeter, area, circumference, surface area, and volume to solve real-world problems. In addition to the Geometry content, this course includes numerous examples and exercises involving Algebra and trigonometry. Honors Geometry provides inquiry-based learning and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. Technology support will be used for both learning Geometry and for preparing for standardized tests. The Advanced/Honors Mathematics courses are intended to be more challenging than Academic courses and are designed to provide multiple opportunities for students to take an increased responsibility for their own learning and achievement. These courses are designed for students who have demonstrated an advanced level of achievement in mathematics. The curriculum is distinguished by a difference in rigor and the quality of work, not merely the quantity.

### **ACADEMIC GEOMETRY**

*Full Year/Full Time*

*Grades 9, 10*

*NCAA*

**No. 3102**

*Credit 1.0*

#### **Requirements:**

- **Minimum of 70% in Academic Algebra 1 (3083)(prior to grade 9).**
- **Minimum of 60% in Academic Algebra 1 (3101)(prior to grade 10).**

**NOTE: Students who do not meet the minimum of 70% in Academic Algebra 1 (3083) (prior to grade 9) will be approved to repeat Academic Algebra 1 (3101) in 9th grade.**

This is the second year of the Academic Mathematics sequence. In this course, students will develop reasoning and problem-solving skills in the areas of congruence, similarity, properties of lines, properties of triangles, properties of quadrilaterals, and properties of circles. The course will also include work with perimeter, area, circumference, surface area, and volume to solve real-world problems. In addition to the Geometry content, this course includes numerous examples and exercises involving Algebra and trigonometry. Academic Geometry provides inquiry-based learning and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. Technology support will be used for both learning Geometry and for preparing for standardized tests.

# Course Descriptions

## Mathematics

### **HONORS PRE-CALCULUS**

**WITH TRIGONOMETRY**

*Grade 9 (listed in Grade 11 section)*

**No. 3421**

### **COMPUTER SCIENCE A**

*Grades 9, 10 (listed at end of Mathematics section)*

**No. 3523**

### **COMPUTER SCIENCE B**

*Grades 9, 10 (listed at end of Mathematics section)*

**No. 3524**

### **AP COMPUTER SCIENCE PRINCIPLES**

*Grades 9, 10 (listed at end of Mathematics section)*

**No. 3010**

## GRADE 10 COURSE SELECTIONS

### **ESSENTIALS OF GEOMETRY (IMPACT)**

*Full Year/Full Time*

*Grade 10*

**Requirements:**

**No. 3334**

*Credit 1.0*

- This course is reserved for students who qualify for and are accepted into the IMPACT Program.
- Minimum of 60% in Essentials of Algebra 1 (Part 2) (IMPACT) (3333) or Essentials of Algebra 1 (Part 2) (3301).

This is the third year of the Essentials Mathematics sequence. Students enrolled in this course will be utilizing the Foundations of Geometry curriculum which addresses the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction lessons. This program exposes students to an understanding of geometric and trigonometric concepts.

A smaller class setting is used to provide more individualized instruction and remediation. Additional attention is given to assist students in the acquisition of more abstract topics. The purpose of this course is to meet the needs of students requiring more assistance. The Geometry strand of this course includes topics on parallel and perpendicular lines, triangles, quadrilaterals, similarity, polygons, transformations, area, surface area, and volume. The Trigonometry strand will cover square roots, special right triangle relationships, trigonometric ratios, and circles.

### **ESSENTIALS OF GEOMETRY**

*Full Year/Full Time*

*Grade 10*

**Requirements:**

**No. 3302**

*Credit 1.0*

- Minimum of 60% in Essentials of Algebra 1 (Part 2) (3301).

This is the third year of the Essentials Mathematics sequence. Students enrolled in this course will be utilizing the Foundations of Geometry curriculum which addresses the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction lessons. This program exposes students to an understanding of geometric and trigonometric concepts.

A smaller class setting is used to provide more individualized instruction and remediation. Additional attention is given to assist students in the acquisition of more abstract topics. The purpose of this course is to meet the needs of students requiring more assistance. The Geometry strand of this course includes topics on parallel and perpendicular lines, triangles, quadrilaterals, similarity, polygons, transformations, area, surface area, and volume. The Trigonometry strand will cover square roots, special right triangle relationships, trigonometric ratios, and circles.

# Course Descriptions

## Mathematics

### HONORS GEOMETRY

*Grade 10 (listed in Grade 9 section)*

**No. 3201**

### ACADEMIC GEOMETRY

*Grade 10 (listed in Grade 9 section)*

**No. 3102**

### HONORS ALGEBRA 2

*Full Year/Full Time*

*Grades 9, 10*

**NCAA**

**Requirements:**

**No. 3202**

*Honors Wt.*

*Credit 1.0*

- **Minimum of 80% in Honors Geometry (3201).**
- **Minimum of 95% in Academic Geometry (3102).**

This is the third year of the Honors Mathematics sequence. Honors Algebra 2 is a rigorous course for students who had Honors Geometry (3201) in grades 7, 8, or 9. The content of this course is organized around families of functions, including linear, quadratic, exponential, logarithmic, radical, and rational functions. Students will also learn to model real-world situations using functions. In addition to its Algebra content, Honors Algebra 2 includes topics on probability, data analysis, Geometry, and Trigonometry. Honors Algebra 2 provides instruction and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. Technology support will be used for both learning Algebra 2 and for preparing for standardized tests.

The Advanced/Honors Mathematics courses are intended to be more challenging than Academic courses and are designed to provide multiple opportunities for students to take an increased responsibility for their own learning and achievement. These courses are designed for students who have demonstrated an advanced level of achievement in mathematics. The curriculum is distinguished by a difference in rigor and the quality of work, not merely the quantity.

### ACADEMIC ALGEBRA 2

*Full Year/Full Time*

*Grades 9, 10, 11, 12*

**NCAA**

**Requirements:**

**No. 3103**

*Credit 1.0*

- **Minimum of 60% Academic Geometry (3102).**
- **NOTE: Students who do not meet the minimum of 80% in Honors Geometry (3201) will be approved for Academic Algebra 2 (3103).**

This is the third year of the Academic Mathematics sequence. The content of this course is organized around families of functions, including linear, quadratic, exponential, logarithmic, radical, and rational functions. Students will also learn to model real-world situations using functions. In addition to its Algebra content, Academic Algebra 2 includes topics on probability, data analysis, Geometry, and Trigonometry. Academic Algebra 2 provides instruction and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. Technology support will be used for both learning Algebra 2 and for preparing for standardized tests.

### HONORS PRE-CALCULUS

**WITH TRIGONOMETRY (CHS)**

*Grade 10 (listed under Grade 11 section)*

**No. 3421**

### HONORS CALCULUS (CHS)

*Grade 10 (listed under Grade 12)*

**No. 3422**

### AP CALCULUS AB

*Grade 10 (listed under Grade 12)*

**No. 3012**

### AP CALCULUS BC (CHS)

*Grade 10 (listed under Grade 12)*

**No. 3022**

# Course Descriptions

## Mathematics

**ACADEMIC Algebra 3** **No. 3104**  
WITH TRIGONOMETRY  
*Grade 10 (listed under Grade 11)*

**COMPUTER SCIENCE A** **No. 3523**  
*Grades 9, 10 (listed at end of Mathematics section)*

**COMPUTER SCIENCE B** **No. 3524**  
*Grades 9, 10 (listed at end of Mathematics section)*

**AP COMPUTER SCIENCE PRINCIPLES** **No. 3010**  
*Grades 9, 10 (listed at end of Mathematics section)*

## GRADE 11 COURSE SELECTIONS

**ESSENTIALS OF ALGEBRA 2 (PART 1)** **No. 3303**  
*Full Year/Full Time*  
*Grades 11, 12*  
**Requirements:** *Credit 1.0*

- Minimum of 60% in Essentials of Geometry (IMPACT) (3334) or Essentials Geometry (3302).

This is the fourth course of the Essentials Mathematics sequence. Students enrolled in this course will utilize the Foundations of Algebra 2 curriculum which addresses all the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction. This program exposes students to a solid foundation in the first half of Algebra 2.

A smaller class setting is used to provide more individualized instruction and remediation. The purpose of this course is to meet the needs of students requiring more assistance. The content of Algebra 2 is organized around families of functions, with emphasis on expressions, equations/inequalities, graphs, matrices, and sequences and series. As students learn about each family of functions, they will learn to represent them in multiple ways. The student will also learn to model real-life situations using functions to solve problems arising from those situations.

**ACADEMIC ALGEBRA 2** **No. 3103**  
*Grade 11 (listed under Grade 10)*

**ACADEMIC ALGEBRA 3** **No. 3623**  
*Full Year/Full Time*  
*Grade 11*  
*NCAA*  
**Requirements:** *Credit 1.0*

- Students who do not meet the minimum of 80% in Academic Algebra 2 (3103).

This is the fourth course of the Academic Mathematics sequence. Major emphasis includes the topics of modeling problem situations, family of functions, including linear, absolute value, quadratic, polynomial, exponential, logarithmic, radical, and rational functions. Students will also learn to model real-world situations using functions and transform the graphs of functions. In addition to its algebra content, Academic Algebra 3 includes topics on probability and counting and sequences and series. Academic Algebra 3 provides inquiry-based instruction and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response.

# Course Descriptions

## Mathematics

### **ACADEMIC Algebra 3 WITH TRIGONOMETRY**

**No. 3104**

*Full Year/Full Time*

*Grades 10, 11, 12*

**NCAA**

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Academic Algebra 2 (3103).**
- **Students who do not meet the minimum of 80% in Honors Algebra 2 (3202).**
- **Between 90% and 94% in Academic Algebra 3 (3623).**

This is the fourth year of the Academic Mathematics sequence. Major emphasis includes the topics of modeling problem situations, family of functions, including linear, absolute value, quadratic, polynomial, exponential, logarithmic, radical, rational, and circular and trigonometric functions. Students will also learn to model real-world situations using functions and transform the graphs of functions. Academic Algebra 3 with Trigonometry provides inquiry-based learning and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. Completion of the course will provide a smooth transition to Foundations of Calculus (Academic) (3105) but will NOT satisfy the prerequisite for Honors Calculus or AP Calculus.

### **HONORS PRE-CALCULUS WITH TRIGONOMETRY (CHS)**

**No. 3421**

*Full Year/Full Time*

*Grades 9, 10, 11, 12*

**NCAA**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Honors Algebra 2 (3202).**
- **Minimum of 95% in Academic Algebra 2 (3103).**
- **Minimum of 95% Academic Algebra 3.**

This is the fourth year of the Honors Mathematics sequence. Honors Pre-Calculus with Trigonometry is a rigorous course for the accelerated student. It requires a strong foundation in Algebra and Geometry. Major emphasis is placed on algebraic concepts and analysis of curves, functions, and graphing techniques. This course also contains a study of Trigonometry from the circular and right triangle perspective. The analysis of conic sections and other geometric curves from a coordinate point of view are also studied. Honors Pre-Calculus with Trigonometry provides inquiry-based learning and practice on standardized test questions in a variety of formats including multiple-choice, short response, and extended response. This is an Honors course which leads to Honors Calculus (3422) or AP Calculus (3012, 3022.)

Students who have trouble in this course, have Foundations of Calculus (Academic) (3105) as an option for a fifth year of mathematics. This course is required as a prerequisite for Calculus.

The Advanced/Honors Mathematics courses are intended to be more challenging than Academic courses and are designed to provide multiple opportunities for students to take an increased responsibility for their own learning and achievement. These courses are designed for students who have demonstrated an advanced level of achievement in mathematics. The curriculum is distinguished by a difference in rigor and the quality of work, not merely the quantity.

### **HONORS CALCULUS (CHS)** *Grade 11 (listed under Grade 12)*

**No. 3422**

### **AP CALCULUS AB** *Grade 11 (listed under Grade 12)*

**No. 3012**

### **AP CALCULUS BC (CHS)** *Grade 11 (listed under Grade 12)*

**No. 3022**

# Course Descriptions

## Mathematics

### **PROBABILITY AND STATISTICS (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**Requirements:**

- Minimum of 60% in Honors Algebra 2 (3202), or Academic Algebra 2 (3103).

**No. 3812**

*Credit 1.0*

This course introduces the idea that statistics is the science of collecting, organizing, and interpreting numerical facts, known as data. Students will be presented methods of basic statistics in a way that emphasizes working with data and mastering statistical reasoning. The course will focus on the production and analysis of data as well as the traditional topics of probability and inference, which are used as tools to help students draw conclusions from data in an appropriate manner. Real world examples drive the exposition portion of the course. Additionally, students will learn the technique of least-squares regression, how to interpret the regression slope, and the conceptual ties between the correlation and the importance of looking for influential observations.

### **AP STATISTICS (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**Requirements:**

- Minimum of 80% in Honors Pre-Calculus with Trigonometry (3421).
- Minimum of 70% in Foundations of Calculus (3105), Honors Calculus (3422), AP Calculus AB (3012), or AP Calculus BC (3022).

**No. 3014**

*AP Wt.*

*Credit 1.0*

This course is devoted to developing the student's ability to interpret and investigate statistical data. The activities of decision-making and justifying hypotheses are of the highest importance. Topics studied include collecting and drawing conclusions from data, summarizing, displaying and describing distributions, probability rules and random variables, sampling distributions, inferences from data, least squares regression and correlation. The course uses an activity/project-oriented approach to develop the concepts. It will be necessary for each student to have a TI-83/TI-83+ calculator. This calculator will be used to produce, analyze, and interpret data. It is strongly recommended that the student take the AP exam upon completion of this course. The student should have a high level of maturity and interest in mathematics.

### **HONORS LINEAR ALGEBRA (CHS)**

*Grades 11, 12 (listed under Grade 12)*

**No. 3032**

### **COMPUTER SCIENCE A**

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3523**

### **COMPUTER SCIENCE B**

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3524**

### **AP COMPUTER SCIENCE (CHS)**

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3011**



# Course Descriptions

## Mathematics

### GRADE 12 COURSE SELECTIONS

#### **ESSENTIALS OF ALGEBRA 2 (PART 1)**

*Grade 12 (listed under Grade 11)*

**No. 3303**

#### **ESSENTIALS OF ALGEBRA 2 (PART 2)**

*Full Year/Full Time*

*Grade 12*

#### **Requirements:**

**No. 3304**

*Credit 1.0*

- **Minimum of 60% in Essentials of Algebra 2 (Part 1) (3303).**

This is the fifth year of the Essentials Mathematics Sequence. Students enrolled in this course will utilize the Foundations of Algebra 2 curriculum which addresses all the content outlined in the PA Core Standards. This program employs a research-based instructional approach that includes both inquiry-based learning and direct instruction. This program exposes students to a solid foundation in the second half of Algebra 2.

A smaller class setting is used to provide more individualized instruction and remediation. The purpose of this course is to meet the needs of the students requiring more assistance. The content of Algebra 2 is organized around families of functions, with emphasis on polynomial, quadratic, radical, and rational functions. As students learn about each family of functions, they will learn to represent them in multiple ways. The student will also learn to model real-life situations using functions to solve problems arising from those situations.

#### **ACADEMIC ALGEBRA 2**

*Grade 12 (listed under Grade 10)*

**No. 3103**

#### **TRIGONOMETRY WITH FUNCTIONS**

*Full Year/Full Time*

*Grade 12*

*NCAA*

#### **Requirements:**

**No. 3624**

*Credit 1.0*

- **Minimum of 60% in Academic Algebra 2 (3103) in 11<sup>th</sup> grade.**
- **Students who do not meet the minimum of 70% in Academic Algebra 3 with Trigonometry (3104).**
- **Minimum of 60% in Academic Algebra 3 (3623) in 11<sup>th</sup> grade.**

This is the fifth year of the Academic Mathematics sequence. Trigonometry with Functions uses an inquiry approach to the study of functions including analysis of graphs of functions, transformations of functions, combinations of functions and inverse functions. The study of trigonometry is approached from both the theoretical perspective as well as the application of right triangle concepts to real life problems. This course provides an extensive study of analytical trigonometry including the use of fundamental identities and the verification process of these identities, the solving of trigonometric equations along with the use of the sum and difference identities, multiple angle identities and other trigonometric relationships. This course also includes an extensive study of conic sections. The study of trigonometry provides a smooth transition to college mathematics.

#### **ACADEMIC ALGEBRA 3**

**WITH TRIGONOMETRY**

*Grade 12 (listed under Grade 11)*

**No. 3104**

#### **HONORS PRE-CALCULUS**

**WITH TRIGONOMETRY (CHS)**

*Grade 12 (listed under Grade 11)*

**No. 3421**

# Course Descriptions

## Mathematics

### **FOUNDATIONS OF CALCULUS**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

#### **Requirements:**

- **Minimum of 70% in Academic Algebra 3 with Trigonometry (3104).**
- **Students who do not meet the minimum of 80% in Honors Pre-Calculus with Trigonometry (3421).**

**No. 3105**

*Credit 1.0*

This is the fifth year of the Academic Mathematics sequence. Foundations of Calculus (Academic) is an advanced level of mathematics equivalent to a college freshman course. This course will provide a foundation in calculus which deals with change and how the change in one quantity affects other quantities. We will discuss many of the functions used in calculus and review techniques from pre-calculus used to obtain the graphs of functions, and to transform known functions into new functions. This course will show students how to define and calculate limits, derivatives and integrals which are the three concepts that distinguish calculus from algebra and trigonometry. The development of these topics will explore the connection of these mathematical concepts and the relationship to other subject areas.

### **HONORS CALCULUS (CHS)**

*Full Year/Full Time*

*Grade 12*

*NCAA*

#### **Requirements:**

- **A Minimum of 80% in Honors Pre-Calculus with Trigonometry (3421).**
- **Minimum of 95% in Academic Algebra 3 with Trigonometry (3104).**

**No. 3422**

*Honors Wt.*

*Credit 1.0*

This is the fifth year of the Honors Mathematics sequence. If students have completed four years of Honors Mathematics with a high level of achievement, they should consider this course. This course is the standard first course in calculus for Science, Engineering and Mathematics students. If some difficulty has been encountered in the Honors sequence, Foundations of Calculus (Academic) (3105) should be considered as an option. If a student has experienced marginal success, he/she should consult their mathematics teacher for assistance with scheduling. Challenging for the able student, Honors Calculus covers many similar concepts as AP Calculus AB (3012) but at a slower pace. Students with a high level of achievement may elect to, but are not expected to, take the AP exam for college credit. These students would need to complete additional work outside of class to prepare for that exam. The course will cover elementary functions, limits, derivatives of algebraic and transcendental function, and basic integration with some application to area.

The Advanced/Honors Mathematics courses are intended to be more challenging than Academic courses and are designed to provide multiple opportunities for students to take an increased responsibility for their own learning and achievement. These courses are designed for students who have demonstrated an advanced level of achievement in mathematics. The curriculum is distinguished by a difference in rigor and the quality of work, not merely the quantity.

**NOTE: For students taking this course in grade 10 or grade 11, another Calculus course (3012 or 3022) may be taken prior to graduation. A student cannot earn more than 2.5 credits in Calculus.**

# Course Descriptions

## Mathematics

### AP CALCULUS AB

*Full Year/Full Time*

*Grade 10,11,12*

*NCAA*

#### Requirements:

- **Minimum of 90% in Honors Pre-Calculus with Trigonometry (3421).**

This is the fifth year of the Honors Mathematics sequence and the first year of the AP Mathematics sequence. AP Calculus AB is a course in sequence with Honors Pre-Calculus with Trigonometry (3421) that will enable the student to take the AP exam (AB) for college credit and/or placement. Because of the rigor and fast pace, only those students with a high level of achievement in previous mathematics courses and the approval of the Honors Pre-Calculus Mathematics teacher will be accepted.

The course will cover elementary functions, limits, derivatives of algebraic and transcendental functions, and basic integration with some application to area and volume. This course differs from the AP Calculus BC (3022) course, in that it is somewhat less rigorous, and because it meets only five periods per week, involves less homework and covers less material.

**NOTE: For students taking this course in grades 10, 11, or 12, another Calculus course may have already been taken prior to this (3422) or (3022) may be taken after this. A student cannot earn more than 2.5 credits in Calculus.**

### AP CALCULUS BC (CHS)

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

#### Requirements:

- **Minimum of 95% in Honors Pre-Calculus with Trigonometry (3421).**
- **Minimum of 90% in Honors Calculus (3422).**

This is the fifth year of the Honors Mathematics sequence and the first year of the AP Mathematics sequence. AP Calculus BC is a course in sequence with the approval of their Honors Pre-Calculus with Trigonometry (3421) that will enable the student to take the AP exam (Level BC) for college credit and/or placement. Because of the rigor and fast pace, only those students with the highest level of achievement in previous mathematics courses and the approval of their Honors Pre-Calculus Mathematics teacher will be accepted. The course will cover elementary vector and parametric functions, rigorous definitions of limits, derivatives of algebraic, transcendental, vector and parametric functions, integration involving area, volume, trigonometric substitution, and integration by parts and by partial fractions, and sequences and series. This course differs from the AP Calculus AB (3012) course, in that it meets seven periods per week, carries 1.5 credits, moves at a faster pace, is more rigorous, and involves more homework.

**NOTE: For students taking this course in grade 11 or grade 12, another Calculus course (3422 or 3012) may have already been taken. A student cannot earn more than 2.5 credits in Calculus.**

### PROBABILITY AND STATISTICS (CHS)

*Grades 11, 12 (listed under Grade 11)*

**No. 3812**

### AP STATISTICS (CHS)

*Grades 11, 12 (listed under Grade 11)*

**No. 3014**

# Course Descriptions

## Mathematics

### HONORS LINEAR ALGEBRA (CHS)

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

#### Requirements:

- Minimum of 80% in AP Calculus BC (3022).
- Minimum of 90% in AP Calculus AB (3012).

This college level course is designed to prepare students for subsequent course work in multi-variable calculus and modern algebra. Linear Algebra is used in abstract algebra, functional analysis, and has extensive applications to both natural sciences and social sciences. This course covers systems of equations, vector spaces, linear transformations and matrix representations, determinants, eigenvalues, and a variety of applications.

Although this course is sequenced after AP Calculus BC (3022) or AP Calculus AB (3012), there is no guarantee of colleges awarding credit for successful completion. It is recommended that students construct a portfolio of their work during the course for the purpose of helping colleges/universities determine appropriate mathematics placement.

### COMPUTER SCIENCE A

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3523**

### COMPUTER SCIENCE B

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3524**

### AP COMPUTER SCIENCE (CHS)

*Grades 11, 12 (listed at end of Mathematics section)*

**No. 3011**

## COMPUTER SCIENCE COURSE SELECTIONS

### COMPUTER SCIENCE A

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*NCAA*

#### Requirements:

- Minimum of 60% in Algebra 1 (prior to Grade 9) OR co-requisite of Algebra 1 (3101).

Computer Science A is a one semester course designed to be the student's first experience in structured programming. The student will learn to use top-down design and stepwise refinement in designing programs using an appropriate programming language. The course will concentrate on problem-solving applied to familiar topics from Mathematics, Science, and Business. It is essential that students have a grade of 'C' or better in previous mathematics courses. The programming language used in this course is Python.

**No. 3523**

*Credit 0.5*

### COMPUTER SCIENCE B

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*NCAA*

#### Requirements:

- Minimum of 70% in Computer Science A (3523).

**No. 3524**

*Credit 0.5*

The major emphasis in this course is on extending the student's proficiency in the Python programming language methodology and understanding of algorithms and data structures. The implementation of this extension will be accomplished using an appropriate programming language. The high-level structured nature of the programming language will be utilized to develop solutions to problems by applying top-down design and modular programming methods. The topics and algorithms learned provide an excellent background for taking AP Computer Science (3011). The programming language used in this course is Python.

# Course Descriptions

## Mathematics

### **AP COMPUTER SCIENCE PRINCIPLES**

*Full Year/Full Time*

*Grades 9, 10*

*NCAA*

#### **Requirements:**

- **Minimum of 60% Algebra 1 (prior to Grade 9) OR co-requisite of Algebra 1 (3101).**

AP Computer Science Principles is an introductory college-level course that is an in-depth exploration of the following concepts: creating and innovating with technology, investigating how data and information facilitate the creation of knowledge, writing computer programs, and learning how the Internet infuses modern computing. This course also builds computational thinking practices of code analysis, computational solution design, abstraction of program development, and reasonable computing.

**No. 3010**

*AP Wt.*

*Credit 1.0*

### **AP COMPUTER SCIENCE (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

#### **Requirements:**

- **Minimum of 80% in Computer Science A (3523). Completion of Computer Science B (3524) is strongly recommended.**
- **Minimum of 80% in AP Calculus AB (3012) or AP Calculus BC (3022).**
- **Minimum of 90% in AP Computer Science Principles (3010).**

**No. 3011**

*AP Wt.*

*Credit 1.0*

Advanced Placement Computer Science is an introductory course in computer Science focusing on Object Orientation. A large part of the course is built around the development of computer programs that are understandable, adaptable and when appropriate, reusable. In addition, an extensive library, packages for developing GUI (graphical user interface) applications, multiple classes, and methods make Java very suitable for the Internet. Programs are used in the development of algorithms, the development and use of fundamental data structures and real-world applications. A Case Study, large real-world program, is included as part of the AP curriculum. In addition, an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course. The programming language used in this course is Java.

# Course Descriptions

## Music

### Grades 9,10,11,12 Course Selections

Music Production 1	#6408
Music Production 2-----	#6508
Music Technology and Songwriting 1-----	#6707
Music Technology and Songwriting 2-----	#6807
Music Technology and Songwriting 3-----	#6609
Music Technology and Songwriting 4-----	#6808
Vocal Music (FY/PT)-----	#6614
Adapted Music (FY/PT)-----	#6615

### Grades 9 and 10 - Course Selections

String Orchestra-----	#6906
Honors Chamber Orchestra-----	#6907
9th Grade Chorus SA/TB (FY/FT)-----	#6506
9th Grade Chorus SA/TB (FY/PT)-----	#6606
10th Grade Chorus SA/TB (FY/FT)-----	#6706
10th Grade Chorus SA/TB (FY/PT)-----	#6806
Honors Treble Singers -----	#6910
Honors Wind Ensemble-----	#6407
Symphonic Band-----	#6905
Concert Band-----	#6805

### Grades 10,11,12 - Course Selections

Honors Chamber Choir-----	#6610
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### Grades 11,12 - Course Selections

String Orchestra-----	#6908
Honors Chamber Orchestra-----	#6909
Honors Music Theory-----	#6300
Advanced Placement Music (CHS) -----	#6301
Honors Wind Ensemble -----	#6406
Symphonic Band -----	#6915
Concert Band -----	#6914
Concert Choir (SA) -----	#6611
Concert Choir (TB) -----	#6612
Honors Treble Singers -----	#6613
Computer Multi-Media Arts -----	#6201
Advanced Computer Multi-Media Arts-----	#6211

(CHS) Indicates College in High School Course

# Course Descriptions

## Music

### GRADES 9,10,11,12 Course Selections

#### Music Production 1

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6408**

*Credit .5*

#### Requirements:

- **None**

This course includes studies classified as music ear training, music writing, sight-reading, analysis, and composing. The student will learn how to hear music and write it down, how to read music, how to write music, how to analyze music, and how to compose music. This course is an absolute must for anyone considering a career in music. It will also provide the non-music major with valuable skills that will enable him/her to understand and enjoy music better. Students do not have to be able to play an instrument to take this course nor is any prior music background required.

#### Music Production 2

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6508**

*Credit .5*

#### Requirements:

- **Successful completion of Music Theory and Composition 1 (6408)**

This course is an extension of Music Theory and Composition 1. This level includes more advanced studies of melody and harmony. The student will continue to develop skills needed to learn how to hear music and write it down, how to read music, how to write music, how to analyze music, and how to compose music.

#### Music Technology and Songwriting 1

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6707**

*Credit .5*

#### Requirements:

- **None**

This course is designed to give students the ability to create original music, and learn to use different kinds of instruments and sound-generating and recording equipment. Students will express ideas to others by writing, performing, and recording music. Included is arranging for various instrument kinds, learning how artists develop their musical idea, and how to develop a musical idea into a final project. Topics covered include: melody, harmony, rhythm, texture, form, and various song styles.

#### Music Technology and Songwriting 2

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6807**

*Credit .5*

#### Requirements:

- **Successful completion of Music Technology and Songwriting 1 (6707)**

This course is a continuation of Music Technology and Songwriting 1. The student will create projects through the use of recording techniques, sound synthesizers and computers. The course also includes activities to improve the student's listening and analysis skills.

# Course Descriptions

## Music

### Music Technology and Songwriting 3

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6609**

*Credit .5*

#### Requirements:

- **Successful completion of Music Technology and Songwriting 2 (6807)**

This course is a continuation of Music Technology and Songwriting 2. This level includes more advanced studies of melody and harmony. The student will continue to develop skills needed in order to compose and perform music. Topics covered include: advanced melody, advanced harmony, advanced rhythm, advanced texture, advanced form, and various song styles.

### Music Technology and Songwriting 4

*Semester/Full Time*  
*Grades 9, 10, 11, 12*

**No. 6808**

*Credit .5*

#### Requirements:

- **Successful completion of Music Technology and Songwriting 3 (6609)**

This course is a continuation of Music Technology and Songwriting 3. Activities in this course include: Creating original music, learning to use different kinds of instruments and sound-generating equipment, and how to express ideas to others by writing, performing, and recording music. Included is arranging for various instrument kinds, learning how artists develop their musical idea, and how to develop a musical idea into a final performance. Topics covered include: melody, harmony, rhythm, texture, form, and various song styles.

### Vocal Music

*Full Year/Part Time*  
*Grades 9, 10, 11, 12*

**No. 6614**

*Credit .5*

#### Requirements:

- **None**

This course is designed to engage students in music-making with their singing voice to understand musical elements such as style, rhythm, tone, tuning, harmony, and vocal repertoire. Repertoire is assigned based on vocal range and ability across a variety of styles. Performances outside of class are optional.

### Adapted Music

*Full Year/Part Time*  
*Grades 9, 10, 11, 12*

**No. 6615**

*Credit .5*

#### Requirements:

- **None**

This course is designed to provide an individually tailored music education to students who require an adapted environment for physical, emotional, or intellectual needs. Students will be able to learn life-long skills for creating and/or engaging with music. This could include singing, playing instruments, dancing, history, theory, etc.



# Course Descriptions

## Music

### GRADES 9 and 10 Course Selections

**STRING ORCHESTRA**  
*Full Year/Full Time*  
*Grades 9, 10*

**No. 6906**

*Credit 1.0*

**Requirements:**

- **This course requires previous experience on a string instrument.**

String Orchestra is for students with previous experience playing violin, viola, cello, or bass. Students will further develop their performance and ensemble skills. Students should be aware that participation is required in school concerts as well as outside-of-school performances. String Orchestra students also participate in the “Golden Strolling Strings” program.

**HONORS CHAMBER ORCHESTRA**  
*Full Year/Full Time*  
*Grades 9, 10*

**No. 6907**

*Credit 1.0*

**Requirements:**

- **This course is available only by audition and approval of the Director.**

Honors Chamber Orchestra is a string ensemble designed for advanced musicians in grades 9 & 10. The repertoire is challenging and covers a diverse range of style and technique. Students should be aware that participation is required in school concerts as well as outside-of-school performances. Honors Chamber Orchestra students also participate in the “Golden Strolling Strings” program.

**CHORAL 1**  
*Full Year/Full Time*  
*Grade 9*

**No. 6506**

*Credit 1.0*

**Requirements:**

- **This course is available only by audition and approval of the Director.**

All types and styles of music are sung and performed in this course. The object of the course is to help develop the voice into a mature instrument.

**CHORAL 1**  
*Full Year/Part Time*  
*Grade 9*

**No. 6606**

*Credit .5*

**Requirements:**

- **This course is available only by audition and approval of the Director.**

Same as the Choral 1, (full year/full time), but on a part-time basis for .5 credit. All types and styles of music are sung and performed in this part-time course. The object of the course is to help develop the voice into a mature instrument.

**CHORAL 2**  
*Full Year/Full Time*  
*Grade 10*

**No. 6706**

*Credit 1.0*

**Requirements:**

- **This course is available only by audition and approval of the Director.**

Choral 2 is a full-time sequential course designed to lead to Mixed Choir and Concert Choir in the High School. The course explores all types of music and concentrates on the development of the voice and four-part ensemble singing.

# Course Descriptions

## Music

### CHORAL 2

*Full Year/Part Time  
Grade 10*

**No. 6806**

*Credit .5*

#### Requirements:

- This course is available only by audition and approval of the Director.

This is a separate course on a part-time basis for .5 credits. A sequential course designed to lead to Mixed Choir and Concert Choir, the course explores all types of music and concentrates on the development of the voice and four-part ensemble singing.

### HONORS TREBLE SINGERS

*Full Year/Full Time  
Grades 9, 10*

**No. 6910**

*Credit 1.0*

#### Requirements:

- This course is available only by audition and approval of the Director.

This course is a vocal ensemble designed for advanced treble voices in grades 9 & 10. The repertoire is challenging and covers a diverse range of style and vocal abilities. Students should be aware that participation is required in school concerts as well as outside-of-school performances. Emphasis will be placed on sight-reading, adaptations of different styles of music, and diction. *Special* attention will be placed on the blending of voices and vocal quality.

### HONORS WIND ENSEMBLE

*Full Year/Full Time  
Grade 09, 10*

**No. 6407**

*Honors Wt.  
Credit 1.0*

#### Requirements:

- This course is available only by audition and approval of the Director.

The Intermediate High School Wind Ensemble is designed for the most serious and advanced brass, woodwind, and percussion students in grades 9 and 10. This ensemble will rehearse, study, and perform the most advanced music written for the modern band as well as orchestral transcriptions. Students are expected to have a highly developed sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, advanced theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

### Symphonic Band

*Full Year/Full Time  
Grade 10*

**No. 6905**

*Credit 1.0*

#### Requirements:

- This course is available only by audition and approval of the Director.

The Intermediate High School Wind Ensemble is designed for the most serious and advanced brass, woodwind, and percussion students in grade 10. This ensemble will rehearse, study, and perform the most advanced music written for the modern band as well as orchestral transcriptions. Students are expected to have a highly developed sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, advanced theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

# Course Descriptions

## Music

### Concert Band

*Full Year/Full Time*

*Grade 9*

**No. 6805**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

The Intermediate High School Wind Ensemble is designed for the most serious and advanced brass, woodwind, and percussion students in grade 9. This ensemble will rehearse, study, and perform the most advanced music written for the modern band as well as orchestral transcriptions. Students are expected to have a highly developed sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, advanced theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

### GRADES 10,11 and 12 Course Selections

#### HONORS CHAMBER CHOIR

*Full Year/Full Time*

*Grades 10, 11, 12*

**No. 6610**

*Honors Wt.*

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

This course is a vocal ensemble designed for only the most serious singer. The music we will learn will cover many different styles of music with more challenging literature than previously handled. Students should be aware that participation is required in school concerts as well as outside-of-school performances. Emphasis will be placed on sight-reading, adaptations of different styles of music, and diction. *Special* attention will be placed on the blending of voices and vocal quality.

### GRADES 11 and 12 Course Selections

#### STRING ORCHESTRA

*Full Year/Full Time*

*Grades 11, 12*

**No. 6908**

*Credit 1.0*

#### Requirements:

- **This course requires previous experience on a string instrument.**

String Orchestra is for students with previous experience playing violin, viola, cello, or bass. Students will further develop their performance and ensemble skills. Students should be aware that participation is required in school concerts as well as outside-of-school performances. String Orchestra students also participate in the "Golden Strolling Strings" program.

# Course Descriptions

## Music

### HONORS CHAMBER ORCHESTRA

*Full Year/Full Time*

*Grades 11, 12*

**No. 6909**

*Honors Wt.*

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

Honors Chamber Orchestra is a string ensemble designed for advanced musicians in grades 11 & 12. The repertoire is challenging and covers a diverse range of style and technique. Students should be aware that participation is required in school concerts as well as outside-of-school performances. Honors Chamber Orchestra students also participate in the "Golden Strolling Strings" program.

### HONORS MUSIC THEORY

*Full Year/Full Time*

*Grades 11, 12*

**No. 6300**

*Honors Wt.*

*Credit 1.0*

#### Requirements:

- **This course is reserved for students who complete AP Music (6301) with an 80% or better.**

The Honors Music Theory class is designed for students who have an interest in becoming a well-rounded musician. It is open to all seniors who have previous experience in music theory courses and have taken AP Music.

The class meets every day for the entire school year. It incorporates advanced web-based lessons, harmonic analysis, music history, aural development, sight singing, composition, keyboard harmony, and melodic dictation. Students utilize a variety of music writing software such as *Finale*, *Garage Band*, and *Reason* to create original compositions. Honors Music Theory delivers individualized advanced instruction in music theory, composition, and aural skills.

Honors Music Theory is a natural progression from AP Music Theory. The class meets every day for the entire school year. It focuses on advanced harmonic analysis, part-writing procedures, and non-traditional harmony. There is also a strong emphasis on advanced aural skills and creative composition leading up to 20<sup>th</sup> Century music including non-traditional instruments and technologies.

### ADVANCED PLACEMENT MUSIC (CHS)

*Full Year/Full Time*

*Grades 11, 12*

**No. 6301**

*AP Wt.*

*Credit 1.0*

#### Requirements:

- **Successful completion of any of the following: Music Production 1(6408) with a 80% or better, Music Technology and Songwriting 1 (6707) with a 80% or better, successful completion of the Music Theory Placement Test.**

Advanced Placement Music is designed for students who have a desire to develop their knowledge and application of music theory and composition to the highest level. It is open to all juniors and seniors who have previous experience in music theory courses, music technology courses, or previous theory knowledge.

The class incorporates harmonic analysis, music history, aural development, sight singing, composition, keyboard harmony, and melodic dictation. Students utilize a variety of music writing software to create original compositions. AP Music provides an opportunity for students to take more time to develop aural skills and compositional techniques. During the second half of the semester, the course content focus is on preparation for the AP Music Theory exam. Students who wish to continue their study of music theory throughout their junior and senior years are encouraged to take AP Music Theory during the junior year and Honors Music Theory during the senior year.

# Course Descriptions

## Music

### HONORS WIND ENSEMBLE

*Full Year/Full Time*

*Grade 11, 12*

**No. 6406**

*Honors Wt.*

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

The Senior High School Wind Ensemble is designed for the most serious and advanced brass, woodwind, and percussion students in grades 11 and 12. This ensemble will rehearse, study, and perform the most advanced music written for the modern band as well as orchestral transcriptions. Students are expected to have a highly developed sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, advanced theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

### SYMPHONIC Band

*Full Year/Full Time*

*Grade 11, 12*

**No. 6915**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

The Senior High School Symphonic Band is designed for the advancing brass, woodwind, and percussion students in grades 11 and 12. This ensemble will rehearse, study, and perform medium to advanced music written for the modern band as well as orchestral transcriptions. Students are expected to have an above average sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

# Course Descriptions

## Music

### CONCERT ~~B~~and

*Full Year/Full Time*

*Grade 11, 12*

**No. 6914**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

The Senior High School Concert Band is designed for brass, woodwind, and percussion students in grades 11 and 12. This ensemble will rehearse, study, and perform a variety of music written for the modern band as well as orchestral transcriptions. Students are expected to have a sense of tone, intonation, rhythm, harmony, and articulation. In addition to the band repertoire, theoretical and technical concepts appropriate to individual instruments will also be addressed. Students should be aware that participation is *required* in school concerts as well as outside-of-school performances. There may also be *required* after school rehearsals. Musicians wishing to participate in AV, PMEA, or NAFME Honors Festivals, Marching Band, and/or chamber ensembles including Jazz Ensemble and Percussion Ensemble must be enrolled in Wind Ensemble, Symphonic Band, or Concert Band.

### CONCERT CHOIR (SA)

*Full Year/Full Time*

*Grades 11, 12*

**No. 6611**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

Emphasis is placed on learning and performance of choral music of various periods. Participation in outside- of-school activities is *required*.

### CONCERT CHOIR (TB)

*Full Year/Full Time*

*Grades 11, 12*

**No. 6612**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

Emphasis is placed on learning and performance of choral music of various periods. Participation in outside- of-school activities is *required*.

### HONORS TREBLE SINGERS

*Full Year/Full Time*

*Grades 11, 12*

**No. 6613**

*Credit 1.0*

#### Requirements:

- **This course is available only by audition and approval of the Director.**

This course is a vocal ensemble designed for advanced treble voices in grades 11 & 12. The repertoire is challenging and covers a diverse range of style and vocal abilities. Students should be aware that participation is required in school concerts as well as outside-of-school performances. Emphasis will be placed on sight-reading, adaptations of different styles of music, and diction. *Special* attention will be placed on the blending of voices and vocal quality. Participation in outside- of-school activities is *required*. Members will participate in all the same events (i.e., trips, tours, and competitions) as Concert Choir members.

## Course Descriptions

### Music

#### **COMPUTER MULTI-MEDIA ARTS**

**No. 6201**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- **None**

In this course, the students design and create original digital art and multimedia presentations that include animation, video, photography, graphics, and sound. Students shoot, edit, composite, and create special effects in video using professional digital video software. Students create rotoscope and stop-motion animations. Students learn sound recording, editing, and design and compose music using professional music software. In the independent final project, students are encouraged to work to their interests and strengths, emphasizing a particular subject or artistic discipline. Projects have included digital art or music portfolios, website development, online exhibits, learning games, multimedia stage performances, and interactive presentations on a variety of topics.

#### **ADVANCED COMPUTER MULTIMEDIA ARTS**

**No. 6211**

*Semester/Full Time*

*Grades 11, 12*

*Credit .5*

#### **Requirements:**

- **Successful completion of Computer Multimedia Arts (6201).**

Advanced Computer Multimedia Arts allows students to continue to design and create original media rich presentations, videos, animations, websites, and interactive games. This course builds upon photomontage, sound design, digital video, and animation concepts from the Multimedia Arts course. Students will explore advanced layout techniques, video mapping, augmented animation styles, and post-production video effects. Students will have the opportunity to create architectural projections, vector-based art, interactive portfolios, and mixed media installations.

The course emphasizes conception and planning, solving design challenges, personal artistic expression, and communication through new media technology. The course provides a foundation for careers in the growing fields of web development, print/layout, and multimedia design.

# Course Descriptions

## Science

Every student must take a Biology course in either Grade 9 or Grade 10. This graduation requirement is based on the North Allegheny School District High School [Graduation Requirements Board Policy #217](#) for compliance with State Board of Education Regulations and Keystone Exams legislation.

### Grade 9 - One (1) Credit Required

Biology (IMPACT)*-----	#4210
Biology-----	#4410
Academic Biology-----	#4510
Honors Biology-----	#4609

### Grade 10 - One (1) Credit Required

Introduction to Physics & Chemistry (IMPACT)*-----	#4209
Introduction to Physics & Chemistry-----	#4409
Academic Introduction to Physics & Chemistry -----	#4509
Honors Chemistry -----	#4610

\* These courses are connected to the IMPACT program and require a specific recommendation through the program, department, or counseling representative.

### Grade 11,12 - One Credit May Be Required in Either Grade 11 or Grade 12

Applied Science 1-----	#4411
Applied Science 2-----	#4414
Environmental Science-----	#4451
Honors Environmental Science-----	#4115
Astronomy-----	#4461
Honors Astronomy-----	#4462
Academic Chemistry-----	#4911
Honors Chemistry-----	#4610
Honors Organic Chemistry-----	#4811
AP Chemistry (CHS)-----	#4012
Honors Meteorology-----	#4111
Academic Physics-----	#4412
Honors Physics-----	#4512
AP Physics 1-----	#4062
AP Physics 2-----	#4072
AP Physics 1 & 2 (CHS)-----	#4082
AP Physics C-----	#4092
Academic Anatomy & Physiology-----	#4711
Honors Anatomy & Physiology-----	#4721
AP Biology (CHS)-----	#4011

Any elective course in this Department may be used to satisfy the one credit S.T.E.M. requirement (details on pages 3 and 4).

[\(CHS\) Indicates College in High School Course](#)



# Course Descriptions

## Science

### **BIOLOGY (IMPACT)**

*Full Year/Full Time*

*Grade 9*

**No. 4210**

*Credit 1.0*

#### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

This course presents the processes, structures, and functions of living organisms. Students will engage in basic experiments, investigations, and discussions to learn about cells, heredity, evolution, and ecology. This class meets five periods each week.

### **BIOLOGY**

*Full Year/Full Time*

*Grade 9*

*NCAA*

**No. 4410**

*Credit 1.0*

#### **Requirements:**

- **None.**

This course introduces the fundamental principles necessary to promote biological literacy among students. Classroom discussions, investigations, demonstrations, and laboratory activities are included to enhance student learning. Topics include cells, heredity, evolution, and ecology, with practical applications for each. This class meets five periods each week.

### **ACADEMIC BIOLOGY**

*Full Year/Full Time*

*Grade 9*

*NCAA*

**No. 4510**

*Credit 1.5*

#### **Requirements:**

- **Minimum of 85% in 8<sup>th</sup> grade Science.**
- **Minimum of 75% in Advanced Algebra 1 (or a higher-level Mathematics course) or minimum of 85% in Academic Algebra 1.**

This course is a traditional approach to life science with emphasis on cellular, molecular, and environmental concepts. Students will frequently work cooperatively to perform hands-on inquiry based experiments, engage with demonstrations, and participate in activities in areas such as biochemistry, genetics, evolution, and ecology. This class meets seven/eight periods each week.

### **HONORS BIOLOGY**

*Full Year/Full Time*

*Grade 9*

*NCAA*

**No. 4609**

*Honors Wt.*

*Credit 1.5*

#### **Requirements:**

- **Minimum of 93% in 8<sup>th</sup> grade Science.**
- **Minimum of 85% in Advanced Algebra 1 (or a higher-level Mathematics course) or minimum of 95% in Academic Algebra 1.**

This course is an in-depth approach to life science with emphasis on cellular, molecular, and environmental concepts. Students will frequently work cooperatively to perform hands-on inquiry based experiments and activities in areas such as biochemistry, genetics, evolution, and ecology. This class meets seven/eight periods each week. Students should expect a more rigorous workload commensurate with the level of the class, including independent study, advanced reading, and mathematical computation.

# Course Descriptions

## Science

### **INTRODUCTION TO PHYSICS & CHEMISTRY (IMPACT)**

**No. 4209**

*Full Year/Full Time*

*Grade 10*

*NCAA*

*Credit 1.0*

**Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

Introduction to Physics and Chemistry is a study of the nature and behavior of all non-living things in the natural world. This course uses laboratory exercises, demonstrations, and other classroom experiences to help students learn about the physical world. Laboratory experiments and demonstrations will supplement classroom discussion. Instructional modifications are made to help students understand scientific concepts. Team building and motivation play a major part in all aspects of the IMPACT program.

### **INTRODUCTION TO PHYSICS & CHEMISTRY**

**No. 4409**

*Full Year/Full Time*

*Grade 10*

*NCAA*

*Credit 1.0*

**Requirements:**

- **None.**

Students in Introduction to Physics and Chemistry will use laboratory exercises, demonstrations, and other classroom experiences to learn about the non-living physical world. Students will have one semester of introductory physics and one semester of introductory chemistry. This is primarily a learning-by-doing course and students should be capable of learning by inquiry and working cooperatively in small group and large group laboratory situations. This class meets five periods per week.

### **ACADEMIC INTRODUCTION TO PHYSICS & CHEMISTRY**

**No. 4509**

*Full Year/Full Time*

*Grade 10*

*NCAA*

*Credit 1.0*

**Requirements:**

- **Minimum of 80% in Honors Geometry (or a higher-level Mathematics course) OR minimum of 85% in Academic Geometry.**
- **Minimum of 80% in Academic Biology OR minimum of 95% in Biology.**

Academic Introduction to Physics and Chemistry is designed for the student who is capable of learning the laws of nature primarily through hands-on investigations and analyzing the results through complex mathematical and graphical comparisons. Students are expected to explain the analyses of their investigations through properly written conclusion statements following techniques used by true scientists. Students will have one semester of introductory physics and one semester of introductory chemistry. Students should be capable of learning by inquiry and working cooperatively in small group and large group laboratory situations. This class meets five periods per week.

# Course Descriptions

## Science

**HONORS CHEMISTRY**  
*Full Year/Full Time*  
*Grades 10, 11, 12*  
*NCAA*

**No. 4610**  
*Honors Wt.*  
*Credit 1.5*

Requirements for students entering grade 10:

- **Minimum of 80% in Honors Biology (4609) or minimum of 95% in Academic Biology (4510).**
- **Minimum of 85% in Honors Geometry (3201) or a higher-level Mathematics course, or minimum of 95% in Academic Geometry (3102).**

Requirements for students entering grades 11 and 12:

- **Minimum of 85% in Honors Biology (4609) or minimum of 95% in Academic Biology (4510) and minimum of 85% in Academic Introduction to Physics, and Chemistry (4509).**
- **Minimum of 80% in Honors Geometry (3201) or a higher-level Mathematics course, or minimum of 95% in Academic Geometry (3102).**

Honors Chemistry utilizes a problem-solving approach to chemistry requiring extensive use of algebra, geometry, and other mathematical processes. This course focuses on the mathematical solutions of chemical problems and the analytical use of experimental laboratory data in areas such as measurement, matter and energy, atomic structure, periodicity, and chemical reactions. Honors Chemistry is geared toward students who demonstrate strong skills in the areas of mathematics and science and meets 7/8 periods per week.

**APPLIED SCIENCE 1**  
*Full Year/Full Time*  
*Grades 11, 12*

**No. 4411**  
*Credit 1.0*

Requirements:

- **Approval by School Counselor and Science Department Chair.**

This course is a part of a two-year course sequence in which the student will study the four major branches of science. Basic concepts of general science as it applies to everyday living are offered. This course will focus on the use of the scientific method to investigate elements of biology, the human body, elements of physics, motion and Newton's laws, and space science. This course is designed with the intent to have the student learn about a topic in science and then apply it to an everyday situation. The topics for Applied Science 1 will always be different from the topics in Applied Science 2 so that the student can earn two credits of science if desired (or needed for graduation) at the Senior High.

**APPLIED SCIENCE 2**  
*Full Year/Full Time*  
*Grades 11, 12*

**No. 4414**  
*Credit 1.0*

Requirements:

- **Approval by School Counselor and Science Department Chair.**

This course is part of a two-year course sequence in which the student will study the four major branches of science. Basic concepts of general science as it applies to everyday living are offered. This course will focus on the use of the scientific method to investigate elements of chemistry, physical and chemical changes, changes in the state of matter, elements of physics, waves, sound, light, optics, and electricity. This course is designed with the intent to have the student learn about a topic in science and then apply it to an everyday situation. The topics for Applied Science 1 will always be different from the topics in Applied Science 2 so that the student can earn two credits of science if desired (or needed for graduation) at the Senior High.

# Course Descriptions

## Science

### **ENVIRONMENTAL SCIENCE**

*Full Year/Full Time*

*Grades 11, 12*

**NCAA**

**No. 4451**

*Credit 1.0*

**Requirements:**

- **Completion of an Introduction to Physics & Chemistry (or Chemistry) course and a Biology course.**

The goal of this course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. Students will be required to gather and analyze information from many different disciplines. This course is a scientific study of the natural world and how it is influenced by people. Major topics include ecology, human population, Earth's resources, pollution, energy, biodiversity, and global change. Scientific inquiry is integrated throughout the course.

### **HONORS ENVIRONMENTAL SCIENCE**

*Full Year/Full Time*

*Grades 11, 12*

**NCAA**

**No. 4115**

*Honors Wt.*

*Credit 1.0*

**Requirements:**

- **Minimum of 80% in Introduction to Physics & Chemistry (or Chemistry) course and minimum of 80% in a Biology course.**

This course is a study of interrelationships that equip students with the necessary information to understand the complexity of environmental concerns, problems, and alternative courses of action. Interactions between human populations and their environment, as well as basic ecological principles, environmental policy, ethics, resource use, and conservation, are addressed. Students will study environmental problems, both natural and human-made, to evaluate the relative risks associated with these problems and examine alternative solutions for resolving and/or preventing those problems. Sustainability on the personal, local, and global levels is weaved throughout the course. Principles of scientific inquiry are integrated throughout the course and lab activities and case studies will play a major role. Students should have developed skills in reading, writing, biology, chemistry, and mathematics to support their work. It is recommended (but not required) that students be enrolled in or have completed a chemistry course.

### **ASTRONOMY**

*Full Year/Full Time*

*Grades 11, 12*

**NCAA**

**No. 4461**

*Credit 1.0*

**Requirements:**

- **Completion of some level of Algebra 1 (3301, 3101).**

This course emphasizes historical contributions in the development of scientific thought about the earth and space. In this course, we will explore our universe. Students will first learn about Earth and the celestial sphere, seasons, models of the universe, and the governing laws. Students will also learn about space explorations and colonization, the solar system, and the stars, including their features and evolution. Laboratory experiments, worksheets, field work, projects, Starry Night Computer Simulation, videos, and class discussion will enhance the student's understanding and appreciation of our precious planet and our amazing universe!

# Course Descriptions

## Science

### **HONORS ASTRONOMY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4462**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Algebra 1 (3301, 3101).**

Astronomy is the science that deals with the study of the heavens and the realms extending from the Earth's atmosphere to the distant reaches of the universe. In this course, the topics that will be studied are stars and constellations, the solar system, celestial sphere, seasons, models of the universe, and the governing laws and principles that explain the Earth's systems and how the cosmos operates. The analysis and calculations of some topics are more in-depth than in the regular Astronomy course (4461). It is recommended, but not required, that students be enrolled in or have completed a chemistry or physics course. This course CANNOT be taken concurrently with Astronomy (4461).

### **ACADEMIC CHEMISTRY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4911**

*Credit 1.5*

#### **Requirements:**

- **Minimum of 80% in Academic Algebra 1 (3101), minimum of 90% in Essentials of Algebra I Part 2 (3301) or minimum of 75% in a higher level Mathematics course.**
- **Minimum of 80% in Academic Introduction to Physics and Chemistry or minimum of 90% in Introduction to Physics and Chemistry.**

Academic Chemistry is a college preparatory course that explores the fundamental principles of chemistry through classroom lecture and laboratory experimentation. This course covers the qualitative and quantitative aspects of scientific measurement, the nature of matter, atomic theory, nomenclature, chemical reactions, stoichiometry, chemical bonding, and more. Solving various mathematical problems related to chemical concepts is an integral part of the course. Academic Chemistry meets 7/8 periods per week.

### **HONORS ORGANIC CHEMISTRY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4811**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Honors Chemistry (4610) or minimum of 90% in Academic Chemistry (4911).**
- **Completion of Academic Algebra 2 (3103) or Honors Algebra 2 (3202).**

This is a demanding, lecture-oriented course that deals with the chemistry of carbon compounds, their structure, nomenclature, reaction mechanisms, and syntheses. It is roughly equivalent to one and a half semesters of college-level organic chemistry. Students who intend to pursue a career in chemistry, medicine, pharmacy, biology, nursing, or veterinary medicine will find this course extremely beneficial.

# Course Descriptions

## Science

**AP CHEMISTRY**  
*Full Year /Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4012**  
*AP Wt.*  
*Credit 1.5*

**Requirements:**

- **Minimum of 80% in Honors Chemistry (4610) or minimum of 90% in Academic Chemistry (4911).**
- **Completion of Academic Algebra 2 (3103) or Honors Algebra 2 (3202).**

The AP Chemistry course is designed to be the equivalent of two semesters of undergraduate introductory chemistry, usually taken by science/engineering majors during their first year of college. Textbooks and laboratory sessions are designed to cover the range and depths of college-level chemistry and will provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of chemistry.

**HONORS METEOROLOGY**  
*Full Year/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4111**  
*Honors Wt.*  
*Credit 1.0*

**Requirements:**

- **Current enrollment in, or completion of, any level of physics (4412, 4512, 4092, 4062, or 4082).**

Students who take this course investigate the structure of severe storm systems, including super cell thunderstorms, hurricanes, and blizzards. They also explore and discuss ways to handle the dangers associated with them. Additionally, they become proficient in knowledge regarding weather basics, including the layers of the atmosphere, energy exchanges, formation of clouds, types of precipitation, weather instruments, atmospheric optics, and forecasting techniques. Current topics such as climate change, global warming, the thinning of the ozone layer, and alternative energy sources will also be studied. This course is conceptually based and uses only minimal mathematical skills.

**ACADEMIC PHYSICS**  
*Full Year/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4112**  
*Credit 1.0*

**Requirements:**

- **Completion of Academic Chemistry (4911), Honors Chemistry (4610), or concurrent enrollment in an engineering or aerospace course.**
- **Completion of some level of Algebra 1 (3301, 3101).**

This course is intended for college-bound students who are interested in a non-science career. Students will study the following topics: classical mechanics, waves, sound, optics, electrostatics, and magnetism. Although this class stresses concepts over computations, a basic knowledge of algebra, geometry, and trigonometry is required.

# Course Descriptions

## Science

**HONORS PHYSICS**  
*Full Year/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4512**  
*Honors Wt.*  
*Credit 1.5*

**Requirements:**

- **Completion of Honors Chemistry (4610) or minimum of 90% in Academic Chemistry (4911).**
- **Completion of Honors Algebra 2 (3202) or minimum of 90% in Academic Algebra 2 (3103).**

This course stresses the mathematical and conceptual development of the following topics: mechanics, electricity, waves, sound, and optics. Mathematical problem-solving, including algebraic manipulation, systems of equations, trigonometric functions, logarithms, and graphical analysis are used extensively. Laboratory exercises are included to enhance the development of concepts and data analysis techniques. Honors physics is designed for the college-bound student and for the student preparing for the Advanced Placement 1 & 2 and C level courses. This course meets 7/8 periods each week.

**AP PHYSICS 1 & 2 (CHS)**  
*Full Year/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4082**  
*AP Wt.*  
*Credit 1.5*

**Requirements:**

- **Minimum of 80% in Honors Algebra 2 (3202) or minimum of 95% in Academic Algebra 2 (3103).**
- **Minimum of 80% in Honors Chemistry (4610) or minimum of 90% in Academic Chemistry (4911).**

The topics covered in AP Physics C include classical mechanics (linear and angular kinematics and dynamics and conservation laws), thermodynamics, fluid dynamics, electricity and magnetism, waves and light, and topics in modern physics. The large number of objectives for the course and the highly analytical nature of the problem-solving make it very demanding. This course is equivalent to a two-semester terminal physics course at the college-level. Mathematics, including trigonometry, geometry, and algebra will be used extensively in this course to solve problems and develop relationships between physical quantities. Please note that there are two separate AP exams associated with this course: one for AP Physics 1 and a second for AP Physics 2.

**AP PHYSICS 1**  
*Full Year/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 4062**  
*AP Wt.*  
*Credit 1.0*

**Requirements:**

- **Minimum of 80% in Honors Algebra 2 (3202) or minimum of 95% in Academic Algebra 2 (3103).**
- **Minimum of 80% in Honors Chemistry (4610) or minimum of 90% in Academic Chemistry (4911).**

The topics covered in AP Physics 1 include classical mechanics (linear and angular kinematics and dynamics and conservation laws), waves, and fluid dynamics. This course is equivalent to a one-semester physics course at the college-level. The course is valuable to the student in two ways: the experience of having taken a college-level science class in high school will be a tremendous help when the student is in college. Secondly, the student will have the opportunity to take the AP Physics 1 exam at the end of the year. Mathematics, including trigonometry,

geometry, and algebra, will be used extensively in this course to solve problems and develop relationships between physical quantities.

## Course Descriptions

### Science

#### **AP PHYSICS 2**

*Full Year/ Full Time*

*Grade 12*

*NCAA*

**No. 4072**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in Honors Physics (4512) or AP Physics 1 (4062).**

This course is designed to meet the demands of the AP Physics 2 syllabus as published by the College Board. The first unit of Physics 2 builds on the last unit of Physics 1, exploring electrostatic phenomena in more detail, and then using this information to analyze electric circuits in greater depth. It is very important that students have a firm grasp of the basic concepts of physics, as only some of the material is reviewed. Topics for this course include electric field and circuit analysis, magnetism, fluid dynamics and thermodynamics, geometric & physical optics, modern topics, and atomic & nuclear physics. The student may earn college credit by taking the AP Physics 2 exam at the end of the year.

#### **AP PHYSICS C**

*Full Year/Full Time*

*Grade 12*

*NCAA*

**No. 4092**

*AP Wt.*

*Credit 1.5*

#### **Requirements:**

- **Minimum of 80% in AP Chemistry (4012) or Honors Chemistry (4610).**
- **Minimum of 80% in any other Physics course (4412, 4082, 4062).**
- **Completion of or current enrollment in AP Calculus (3012 or 3022) or Honors Calculus (3422).**

The AP Physics C course is designed to be the equivalent of two college introductory calculus-based physics courses. This course encompasses the calculus based Introductory Classical Mechanics, and the calculus based Introductory Classical Electricity and Magnetism course. These two courses are usually taken by science/engineering majors during their first or second year of college. Textbooks and laboratory sessions are designed to cover the range and depths of college-level calculus-based classical mechanics and classical electricity and magnetism, and it will provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of physics.

#### **ACADEMIC ANATOMY & PHYSIOLOGY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4711**

*Credit 1.0*

#### **Requirements:**

- **Completion of some level of Biology (4410, 4510, or 4609).**

Academic Anatomy & Physiology is designed for students who are interested in learning about the structures and functions of body systems, their interactions, and disorders affecting those systems. A considerable amount of time will be devoted to lab work (modeling, simulations, and dissection), lectures, cooperative group learning, hands-on activities, and demonstrations. This course is recommended for any student interested in furthering their understanding of the human body.



## Course Descriptions

### Science

#### **HONORS ANATOMY & PHYSIOLOGY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4721**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Completion of Honors Biology (4609) OR minimum of 80% in Academic Biology (4510), OR minimum of 90% in Academic Anatomy & Physiology (4711).**
- **Minimum of 80% in Academic Chemistry (4911) OR minimum of 75% in Honors Chemistry (4610).**

This course is designed for college-bound students who are interested in the structure and function of the major systems in the human body. Considerable time is devoted to lecture, clinical, practical, and laboratory applications. Honors Anatomy and Physiology is recommended for college-bound students, especially those interested in a medical or science related field.

#### **AP BIOLOGY**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 4011**

*AP Wt.*

*Credit 1.5*

#### **Requirements:**

- **Completion of Honors Biology (4609) OR 80% in Academic Biology (4510).**
- **Minimum of 75% in Honors Chemistry (4610) OR minimum of 93% in Academic Chemistry (4911).**

The AP Biology course is designed to be the equivalent of a college introductory biology course usually taken by biology majors during their first year of college. Textbooks and laboratory sessions are designed to cover the range and depths of college-level biology and will provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology.

## Science Pathway Chart

**Three Science credits are needed for graduation. Students should consult with their teacher for the best option. Every student must take a Biology course in Grade 9. This graduation requirement is based on the [North Allegheny School District High School Graduation Requirements Board Policy #217](#) for compliance with State Board of Education Regulations and [Keystone Exams](#) legislation.**

The following are some typical science pathways. Regardless of their current pathway, students are able to move up/down levels based on their past performance and course requirements each year. 11th and 12th grade students are eligible to take more than one science course per year as elective credits.

<u>GRADE / COURSE</u>	<u>OPTIONS / ELECTIVES</u>
9 - Biology (IMPACT) (4210) 10 - Intro to Physics & Chemistry (IMPACT) (4209) 11 or 12 - Applied Science 1 (4411) or Applied Science 2 (4414)	
9 - Biology (4410) 10 - Intro to Physics & Chemistry (4409) 11 or 12 - Environmental Science (4451) 11 or 12 - Astronomy (4461)	
9 - Academic Biology (4510) 10 - Intro to Physics & Chemistry (4409) 11 - Academic Chemistry (4911) 12 - Academic Physics (4412) OR 9 - Academic Biology (4510) 10 - Academic Intro to Physics & Chemistry (4509) 11 - Academic Chemistry (4911) or Honors Chemistry (4610) 12 - Academic Physics (4412) or Honors Physics (4512) OR 9 - Honors Biology (4609) 10 - Honors Chemistry (4610) 11 - Honors Physics (4512) and/or Science Elective 12 - Science Elective	<b><u>NASH Only Electives</u></b> Environmental Science (4451) Honors Environmental Science (4115) Astronomy (4461) Honors Astronomy (4462) Honors Organic Chemistry (4811) Academic Anatomy & Physiology (4711) AP Biology (4011) AP Chemistry (4012) Honors Anatomy & Physiology (4721) Honors Meteorology (4111) AP Physics 1 (4062) AP Physics 2 (4072) AP Physics 1&2 (4082) AP Physics C (4092)
9 - Academic Biology (4510) 10 - Academic Intro to Physics & Chemistry (4509) 11 - Honors Chemistry (4610 or Academic Chemistry (4911)) 12 - Honors Physics (4512) or Academic Physics (4412) OR 9 - Honors Biology (4609) 10 - Honors Chemistry (4610) 11 - Honors Physics (4512) and/or Science Elective 12 - Science Elective	Honors Anatomy & Physiology (4721) Honors Environmental Science (4115) Honors Astronomy (4462) Honors Meteorology (4111) Honors Organic Chemistry (4811) Honors Physics (4512) AP Biology (4011) AP Chemistry (4012) AP Physics 1 (4062) AP Physics 2 (4072) AP Physics 1&2 (4082) AP Physics C (4092)

## Course Descriptions

### Social Studies

#### Grade 9 - One (1) Credit Required (One Semester Course from Each Set of Courses):

American History 1 (IMPACT)* -----	#2209
American History 1 -----	#2409
Honors American History 1 -----	#2408
AND	
European History (IMPACT)* -----	#2309
European History -----	#2509
Honors European History -----	#2414

#### Grade 10 - One (1) Credit Required

World Cultures (IMPACT)* -----	#2210
World Cultures -----	#2410
Honors World Cultures -----	#2415
AP Human Geography -----	#2416

\* These courses are connected to the IMPACT program and require a specific recommendation through the program, department or counseling representative..

#### Grade 11 - One (1) Credit Required from One of the Following:

Fundamentals of Modern American History** or -----	#2211
Fundamentals of American Government and Law** -----	#2212
Modern American History and Politics -----	#2411
Honors Modern American History and Politics (CHS) -----	#2111
AP United States History (CHS) -----	#2011

#### Grade 9,10,11,12 Electives

Psychology -----	#2612
Economics -----	#2511

#### Grade 11,12 Electives - One (1) Credit Required for Grade 12

AP United States History (CHS) -----	#2011
AP Economics -----	#2013
AP Psychology (CHS) -----	#2014
AP United States Government and Comparative Politics -----	#2016
Honors American Foreign Policy: 1945-Present (CHS) -----	#2611
Honors History of Europe and Russia: 1945-Present (CHS) -----	#2712
Honors History of East Asia: 1945-Present (CHS) -----	#2711
Honors Introduction to Philosophy (CHS) -----	#2713
Law and Justice -----	#2412
Multicultural Experience (CHS) -----	#2610
Sociology (CHS) -----	#2911
Fundamentals of Modern American History** or -----	#2211
Fundamentals of American Government and Law ** -----	#2212

#### Grade 12 only Electives

AP European History (CHS) -----	#2012
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**\*\* These courses are a two-year sequence with each course offered alternating school years. Fundamentals of Modern American History (#2211) is offered in school years finishing in an even year. Fundamentals of American Government and Law (#2212) is offered in school years finishing in an odd number.**

**(CHS) Indicates College in High School Course**

# Course Descriptions

## Social Studies

### **AMERICAN HISTORY 1 (IMPACT)**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2209**

*Credit 0.5*

#### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

Continuing chronologically from where the 8th grade American History course ended, this American History course develops the major themes of the late 1800s through the mid-1900s. Topics include: Geography (local and national), Immigration, the Rise of Labor, America as a World Power, Prosperity and Depression, and World War II. Emphasis is placed on the development of skills including: note taking, organization, study skills, reading comprehension, and the development of written language skills.

### **EUROPEAN HISTORY (IMPACT)**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2309**

*Credit 0.5*

#### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

The History of the Western World develops the major themes of the Western World from the 1500s to 1939. Major topics include: The Renaissance, Reformation, Absolutism, French Revolution, Napoleonic Era, Growth of Parliament, Industrialism, Nationalism, World War I, and the Rise of Totalitarianism. Emphasis is placed on the development of skills including: note taking, organization, study skills, reading comprehension, and the development of writing skills.

### **AMERICAN HISTORY 1**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2409**

*Credit 0.5*

#### **Requirements:**

- **None.**

The focus of this course covers the time period from 1890-1945. After a brief review of Reconstruction and Westward Expansion the course traces our history from Industrialization, Immigration, Progressivism, Imperialism, WWI, the Roaring Twenties, and The Great Depression & New Deal, concluding with a study of the events surrounding WWII. The course connects students with issues in contemporary society by studying their parallels within history. Examples of local and Pennsylvania history are embedded in this course to further enhance this connection.

### **EUROPEAN HISTORY**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2509**

*Credit 0.5*

#### **Requirements:**

- **None.**

The focus of this course is the History of Western Culture. This course examines the development of European social, economic, and political systems and the geography of the region. Topics covered include: The Middle Ages, Renaissance, Reformation, Absolutism, French Revolution, Napoleonic Era, Growth of Parliament, Industrialism, Nationalism, World War I, and the Rise of Totalitarianism.

# Course Descriptions

## Social Studies

### **HONORS AMERICAN HISTORY 1**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2408**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **Minimum of 93% in 8<sup>th</sup> grade Social Studies course.**

Students enrolled in this course analyze American history from the Second Industrial Revolution through the end of WWII. Major topics include Economics, Industrialization, Immigration, Progressivism, the Roaring Twenties, The New Deal & Great Depression, Imperialism, and WWII. Students will engage in rigorous primary and secondary source readings, historical writing, debate, and the application of historical events and lessons to modern times. As an Honors level course, this course will move at a faster pace and include a more in-depth analysis of the content.

### **HONORS EUROPEAN HISTORY**

*Semester/Full Time*

*Grade 9*

*NCAA*

**No. 2414**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **Minimum of 93% average in 8<sup>th</sup> grade Social Studies course.**

The 9th Grade Honors European History course focuses on the origins and development of Western Civilization and European Culture from the Middle Ages through 1939, and the evolution of the political, social, religious, and economic institutions in the modern western world. Emphasis is placed on analyzing information, writing essays, and developing research skills. As an Honors level course, this course will move at a faster pace and include a more in-depth analysis of the content.

### **WORLD CULTURES (IMPACT)**

*Full Year/Full Time*

*Grade 10*

*NCAA*

**No. 2210**

*Credit 1.0*

#### **Requirements:**

- **This course is reserved for students who qualify for and are accepted into the IMPACT Program.**

The course provides a review of geographical skills and economic principles. Students are given an overview of cultures from around the world. A multi-disciplinary approach that stresses geography, history, economics, and government is used to explore Africa, the Middle East, Asia, and Latin America. Students will develop critical thinking skills through the analysis of primary documents and articles relating to contemporary and global issues and their impact.

### **WORLD CULTURES**

*Full Year/Full Time*

*Grade 10*

*NCAA*

**No. 2410**

*Credit 1.0*

#### **Requirements:**

- **None.**

This course utilizes the five themes of geography to provide a framework for a comparative study of cultures around the world. Geography, mapping skills, and economic principles are emphasized throughout the course. The areas of Africa, the Middle East, Southeast Asia, East Asia, and Latin America are explored through a multi-disciplinary approach. Students will advance their critical thinking skills through the analysis of primary documents and articles relating to contemporary and global issues and their impact.

# Course Descriptions

## Social Studies

### **HONORS WORLD CULTURES**

*Full Year/Full Time*

*Grade 10*

*NCAA*

**No. 2415**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- Minimum of 80% in any required honors level 9th grade social studies course and/or 90% in any required academic level 9th grade social studies course.
- Minimum of 80% in Honors English 1 (1109) or 90% in Academic English 1 (1509).

Students in this course will examine current world events and investigate a variety of contemporary global issues. The course curriculum will focus on the regions of East and South Asia, the Middle East, and Europe with an emphasis on their history, current economic and political issues, and relationship with the United States. Course work will involve high level reading and writing assignments, extensive research on a variety of topics, and the development of analytical skills.

### **AP HUMAN GEOGRAPHY**

*Full Year/Full Time*

*Grade 10*

*NCAA*

**No. 2416**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- Minimum of 90% in both Honors 9th grade social studies and Honors English 1 (1109).
- Concurrent Enrollment in Honors English 2 (1110)

This year-long course is the equivalent of a semester introductory college course in Human Geography and is intended for top-performing 10th graders with advanced reading, writing, and analytic skills. The purpose of this course is to become more geoliterate, more engaged in contemporary global issues, and more informed about the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface, including multicultural viewpoints. Students learn to employ spatial concepts and landscape analysis to examine economic, cultural, political, and urban geography as it applies to the modern global world. Students will develop skills in approaching problems geographically, using maps and geospatial technologies, thinking critically about texts and graphic images, interpreting cultural landscapes, and applying geographic concepts such as scale, region, diffusion, interdependence, and spatial interaction, among others. As a college level course, this course requires a substantial time commitment from the student and a demonstrated ability of the student to complete advanced reading and writing assignments independently.

### **FUNDAMENTALS OF MODERN AMERICAN HISTORY**

*Full Year/Full Time*

*Grade 11, 12*

*NCAA*

**No. 2211**

*Credit 1.0*

#### **Requirements:**

- Approval by School Counselor and Social Studies Department Chair.

This course is designed to support the needs of 11th and 12th grade students with reading and writing difficulties and is the companion course to Fundamentals of American Government and Law. Students study Contemporary American Culture by examining the history of our nation from the end of World War II through the present. Basic social and economic principles are examined in connection with the main events of this period of U.S. history. The primary focus of the course is to assist the student in building and strengthening their reading, writing, listening, speaking, and study skills.

# Course Descriptions

## Social Studies

### **FUNDAMENTALS OF AMERICAN GOVERNMENT AND LAW**

**No. 2212**

*Full Year/Full Time*

*Grade 11, 12*

*NCAA*

*Credit 1.0*

#### **Requirements:**

- **Approval by School Counselor and Social Studies Department Chair.**

This course is designed to support the needs of 11th and 12th grade students with reading and writing difficulties and is the companion course to Fundamentals of Modern American History. Students study contemporary American culture by examining the American democratic process. Basic political, social, and economic principles are examined in the study of contemporary local, state, and national events and issues. The primary focus of the course is to assist the student in building and strengthening their reading, writing, listening, speaking, and study skills.

### **MODERN AMERICAN HISTORY AND POLITICS**

**No. 2411**

*Full Year/Full Time*

*Grade 11*

*NCAA*

*Credit 1.0*

#### **Requirements:**

- **None.**

This full year course is the final phase of the American History and Government program. The course covers the time period from 1945 to the present and explores the domestic and foreign policies of each administration and their impact on the citizenry of the United States and on the world. This is a required interdisciplinary study emphasizing critical analytical skills, discussion skills, in-depth reading skills, and writing skills. This course also examines in detail the political system of the United States including its history, traditions, values, and institutional framework. Students will utilize readings and case studies to analyze public opinion, political parties, voting patterns, and interest group behavior in our political process.

### **HONORS MODERN AMERICAN HISTORY AND POLITICS (CHS)**

**No. 2111**

*Full Year/Full Time*

*Grade 11*

*NCAA*

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 80% in AP Human Geography or Honors World Cultures or a minimum of 90% in World Cultures.**

This Honors course is the final phase of the Modern American History and Government program. The course is an in-depth study of the time period from 1945 to the present and explores the domestic and foreign policies of each administration and their impact on the citizenry of the United States and the impact on the world. This course emphasizes critical analytical skills, discussion skills, and requires advanced reading and writing abilities. This course also examines in detail the political system of the United States – its history, traditions, values, and institutional framework. Students will utilize readings and case studies to analyze public opinion, political parties, voting patterns, and interest group behavior in our political process.

# Course Descriptions

## Social Studies

### **AP UNITED STATES HISTORY (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2011**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 3.5 grade point average.**
- **Minimum of 80% in AP Human Geography or a minimum of 90% in Honors World Cultures.**

The Advanced Placement United States History course provides an in-depth study of the major social, economic, political, and technological forces at work in American history. The course is designed to mirror the content and difficulty that can be expected in a typical college survey course of United States History. Much reading, discussion, analytical thinking, and evaluation are required and students will work independently to moderate lessons within the classroom.

### **AP EUROPEAN HISTORY (CHS)**

*Full Year/Full Time*

*Grade 12*

*NCAA*

**No. 2012**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 3.5 grade point average.**
- **Enrollment in this Advanced Placement elective course is limited to 12th grade students only.**

This elective course offers a comprehensive view of European History from the Renaissance (1350) to present day. This challenging, college-level course demands a high level of analytical thinking, class discussion of primary sources, and frequent writing assignments. Major areas of study include politics, economics, and diplomacy, as well as special emphasis on the arts, philosophy, and culture. It is highly recommended that a student successfully complete AP United States History prior to taking this course.

### **AP ECONOMICS**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2013**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 3.5 grade point average.**
- **Minimum of 80% in an Honors or AP level social studies course the previous year.**
- **Enrollment in this Advanced Placement elective course is limited to 11th and 12th grade students only.**

The Advanced Placement Economics course will encompass a college-level study of both Microeconomics and Macroeconomics. The Microeconomics portion will provide a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the larger economic system. It places primary emphasis on the nature and functions of product markets and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. The Macroeconomics portion of the course provides a thorough understanding of the principles of economics that apply to an economic system. It places particular emphasis on the study of national income and price determination, and develops familiarity with economic performance measures, economic growth, and international economics.



## Course Descriptions

### Social Studies

#### **AP PSYCHOLOGY (CHS)**

*Full Year/Full Time*

*Grades 11, 12 Phase*

*NCAA*

**No. 2014**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 3.5 grade point average.**
- **Minimum of 80% in an Honors or AP level social studies course the previous year.**
- **Enrollment in this Advanced Placement elective course is limited to 11th and 12th grade students only.**

The Advanced Placement course in Psychology is a college-level introduction to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Included is a consideration of the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. Students also learn about the ethical standards and methodology psychologists use in their science and practice. This course will be similar in design, content, and difficulty to a college survey course in Psychology.

#### **AP UNITED STATES GOVERNMENT AND COMPARATIVE POLITICS**

*Full Year/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2016**

*AP Wt.*

*Credit 1.0*

#### **Requirements:**

- **Minimum of 3.5 grade point average.**
- **Minimum of 80% in an Honors or AP level social studies course the previous year.**
- **Enrollment in this Advanced Placement elective course is limited to 11th and 12th grade students only.**

The AP American Government and Comparative Politics course will encompass a college-level study of both U.S. government and politics and comparative government and politics. The AP US Government and Politics portion of the course introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments. The AP Comparative Government and Politics portion of the course introduces students to the rich diversity of political life outside the United States. The course uses a comparative approach to examine the political structures, policies, and political, economic, and social challenges among six selected countries: Great Britain, Mexico, Russia, Iran, China, and Nigeria. Additionally, students examine how different governments solve similar problems by comparing the effectiveness of approaches to many global issues.

#### **ECONOMICS**

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*NCAA*

**No. 2511**

*Credit 0.5*

#### **Requirements:**

- **None.**

This course begins with an introduction to key microeconomic principles: the functioning of the free market economic system, the interaction between supply and demand, and market failures such as externalities. The course concludes with an examination of macroeconomic concepts. Students will learn how measurements of GDP, unemployment and inflation are used to gauge the health of the economy. In addition, theories of fiscal and monetary policy will be addressed.

## Course Descriptions

### Social Studies

#### **HONORS AMERICAN FOREIGN POLICY: 1945 – PRESENT (CHS)**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2611**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **None.**

Honors American Foreign Policy: 1945-Present is an honors level course designed to provide the college bound student with training in the critical analysis, problem-solving, and decision-making skills necessary for lifelong learning. In addition, the course presents extensive background and analysis of factual data related to recent American foreign policy to enable modern citizens to develop informed views about current international issues.

#### **HONORS HISTORY OF EUROPE AND RUSSIA: 1945 – PRESENT (CHS)**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2712**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **None.**

The major emphasis of this course is placed on key historical problems facing Europe and Russia in the period following World War II including: the reconstruction following World War II, the Cold War, political and economic rivalry between Russia and the Eastern Bloc versus Western Europe and the United States 1945-1953. It covers the peaceful coexistence and brinkmanship 1953-1969, détente and improving relations between Eastern and Western Europe 1969-1980, the final decline of communism ending with its collapse in Europe 1981-1992. There is an examination of Western European unity, the political and economic relationships among the European nations, and a comparative study of the democratic parliamentary systems in Western Europe. The Soviet System in Eastern Europe and the evolutionary development of the economic and political systems in Russia and Eastern Europe 1989-present are reviewed. There is an emphasis on the new age of a global economy and interdependence.

#### **HONORS HISTORY OF EAST ASIA: 1945 – PRESENT (CHS)**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2711**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **None.**

This one-semester survey course covers the historical problems and developments of modern East Asia with an emphasis on the histories of Japan, North and South Korea, China, and Taiwan. The course will examine current political, democratic, and communist experiences of the region and analyze the role of the U.S. in East Asia and the cultural impact of U.S. and East Asian relations.

## Course Descriptions

### Social Studies

#### **HONORS INTRODUCTION TO PHILOSOPHY (CHS)**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2713**

*Honors Wt.*

*Credit 0.5*

#### **Requirements:**

- **None**

Honors Introduction to Philosophy is an introduction to philosophical reflection and examination of some central questions of human existence. Throughout this course, students will consider: 1) epistemological questions concerning the possibility and nature of knowledge and truth.; 2) metaphysical questions concerning the nature of ultimate reality, the mind-body problem, consciousness, freedom and determinism, personal identity, and the existence of God; and the existence of God; and 3) ethical questions concerning morality and the good life. Honors Philosophy is largely discussion-based and will place an emphasis on the careful reading of primary and secondary sources, critical and systematic thinking, and the verbal and written expression of ideas.

#### **LAW AND JUSTICE**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2412**

*Credit 0.5*

#### **Requirements:**

- **None**

Law and Justice provides practical information and problem-solving opportunities that develop in students the knowledge and skills necessary for survival in our legal society. A variety of films, role-plays, mock trials, and small group exercises are utilized. The course includes a visit to a criminal court and a juvenile detention center.

#### **MULTICULTURAL EXPERIENCE (CHS)**

*Semester/Full Time*

*Grades 11, 12*

*NCAA*

**No. 2610**

*Credit 0.5*

#### **Requirements:**

- **None**

This course is designed to promote a holistic understanding of the richness that multicultural differences offer including an exploration of different cultural perspectives and customs. A historical to present day view of biases, prejudices, and stereotypes will be analyzed. Students will experience local multicultural activities and access local community resources. The focus on the pluralistic nature of the U.S., in conjunction with its free political system will enable students to understand that the United States has special significance to the rest of the world. The richness of the course content will develop a sense of global connectedness, unity, and sameness of all people.

## Course Descriptions

### Social Studies

**SOCIOLOGY (CHS)**  
*Semester/Full Time*  
*Grades 11, 12*  
*NCAA*

**No. 2911**

*Credit 0.5*

**Requirements:**

- **None**

Sociology is the study of culture, society, and groups within a society. Students will learn about the causes and effects of contemporary social problems confronting society. Through discussions of basic sociological concepts, students will see how human beings become social creatures and how they establish patterns of behavior that make society work.

**PSYCHOLOGY**  
*Semester/Full Time*  
*Grades 9, 10, 11, 12*  
*NCAA*

**No. 2612**

*Credit 0.5*

**Requirements:**

- **None**

Psychology examines the complex nature of the human mind and behavior. Major areas of concentration include: psychological models, states of consciousness, learning, personality, and the causes/treatment of abnormal behavior. A variety of assignments and activities are used to enhance the students' comprehension of important concepts and theories.

## Course Descriptions

### Technology and Engineering Education

#### Grade 9,10 - Electives

Game Development*	#9505
Advanced Game Development*	#9605
Exploring CADD* (Computer-Aided Drawing & Design)	#9806
Manufacturing 1	#9503
Manufacturing 2	#9604
Electricity and Electronics*	#9508
Exploring Emerging Technologies*	#9704
Exploring Creation & Innovation*	#9601
Exploring Robotic Engineering*	#9506
Robotic Engineering*	#9507
Honors/PLTW Introduction to Engineering Design* (CHS)	#9703
Honors/PLTW Principles of Engineering* (CHS)	#9702

#### Grades 11, 12 - Electives

Exploring Robotic Engineering*	#9506
Robotic Engineering*	#9507
Advanced Robotic Engineering*	#9502
Game Development*	#9505
Advanced Game Development*	#9605
Wood and Metal Fabrication (Semester)	#9504
Wood and Metal Fabrication (Full Year)	#9404
Exploring CADD* (Computer-Aided Drawing & Design)	#9806
Home Maintenance and Repair	#9608
Advanced CADD* (Computer-Aided Drawing & Design)	#9411
Emerging Technologies*	#9408
Creation & Innovation*	#9602
Stage Technology and Production	#9908
Advanced Stage Technology and Production	#9909
Honors/PLTW Introduction to Engineering Design * (CHS)	#9703
Honors/PLTW Digital Electronics* (CHS)	#9701
Honors/PLTW Principles of Engineering* (CHS)	#9702
Honors/PLTW Computer Integrated Manufacturing* (CHS)	#9705
Honors/PLTW Civil Engineering and Architecture* (CHS)	#9708
Honors/PLTW Engineering Design and Development*	#9707

\* These courses may be used towards satisfying the one credit S.T.E.M.\* (Science, Technology, Engineering and Math) requirement (details on pages [3](#) and [4](#)).

(CHS) Indicates College in High School Course

## Course Descriptions

### Technology and Engineering Education

#### **GAME DEVELOPMENT**

**No. 9505**

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

Game Development is a game design course and much more. Technical skills such as programming, graphic design, animation, testing and debugging will be taught in this course. Skills acquired will be transferable to other STEM career paths. Game Development will begin with event driven programming and advance to more complex projects that involve writing text-based code. The engineering problem-solving cycle plays a large role with integrating physics and mathematical principles into game functionality. After you have learned how to develop and program a game, you will investigate how to market an original game idea.

#### **ADVANCED GAME DEVELOPMENT**

**No. 9605**

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*Credit 0.5*

#### **Requirements:**

- Successful completion of Game Development (9505).

Advanced Game Development will expand upon the principles of two-dimensional game design learned in Game Development and introduce students to the principles of three-dimensional modeling and animation for game development. Topics will include modeling, animating, lighting, camera angles, and texturing. Through the use of a game engine, students will implement controls, physics, collision detection, sound, animation, and memory management. Students will use C# programming language, the Unity 3-D editor, and many of the concepts that are used in successful game design. Students will also become familiar with elements of game play and project management concepts, as related to video games. Students will utilize STEM skills as they apply the design process to the creation of their own games.

#### **EXPLORING CADD (COMPUTER-AIDED DRAWING & DESIGN)**

**No. 9806**

*Semester/Full Time*

*Grades 9, 10, 11, 12*

*Credit 0.5*

#### **Requirements:**

- None

This course is an introduction to drafting and design for students interested in learning how engineering is done using CADD to communicate technical information. Autodesk software will be utilized on the PC platform. Programs used will include AutoCAD, Inventor, Fusion 360, and REVIT. Students will be given opportunities to utilize laser engravers, 3-D printers, and other mediums. Students will learn techniques of drawing, dimensioning, modeling, and prototyping. Areas of engineering addressed will include mechanical, architectural, and structural. Both 2-D and 3-D modeling will be taught including, but not limited to rendering (color and shading of drawings). Students will learn about the materials used in manufacturing, the machines and methods of manufacturing, and related careers.

## Course Descriptions

### Technology and Engineering Education

**MANUFACTURING 1**  
*Semester/Full Time*  
*Grades 9, 10*

**No. 9503**

*Credit 0.5*

**Requirements:**

- None

Newer technologies related to manufacturing will be incorporated into the development and construction of woodworking products. The use of CADD (Computer Aided Drawing and Design) software, a CNC (Computer Numerical Controlled) Router and a Laser Engraver will be used to add individual design to assigned activities. The focus of this hands-on course will be to gain a fundamental understanding of wood, woodworking machines, and hand tools. The safe operation of machinery, hand-held power and hand tools will also be discussed. Students will be introduced to the materials, drawings, and tools used in the manufacturing of individual products. Students will become familiar with jigs and fixtures as a way to create quality products.

**MANUFACTURING 2**  
*Semester/Full Time*  
*Grades 9, 10*

**No. 9604**

*Credit 0.5*

**Requirements:**

- Successful completion of Manufacturing 1 (9503).

Advanced use of CADD (Computer Aided Drawing and Design) software, a CNC (Computer Numerical Controlled) Router, Laser Engraver, and 3-D printer will be used in the design and development of individual products. This course continues the study of wood, woodworking machines, and hand tools, but at an advanced level. Students become more independent in the development, design, and engineering of class products.

**ELECTRICITY & ELECTRONICS**  
*Semester/Full Time*  
*Grades 9, 10*

**No. 9805**

*Credit 0.5*

**Requirements:**

- None

This course is an introduction to electricity and electronics designed for students interested in learning how electricity can be safe and exciting. Students learn about electronic components and how they are used to design and assemble various circuits. Students will also complete various projects that will enhance their understanding of electronic design. Soldering wires and components, crimping connections, using digital multimeters, and operating power supplies for testing circuits are just a few of the hands-on activities in this course. How electricity is used in the home will be explored through residential wiring, electrical planning, and concepts of the smart home. Students will also be exposed to programmed circuits and mechatronics through individual projects using the Arduino and Raspberry Pi. STEM concepts will be addressed throughout the course.

## Course Descriptions

### Technology and Engineering Education

#### **EXPLORING EMERGING TECHNOLOGIES**

***Semester/Full Time***

***Grades 9, 10***

**No. 9704**

***Credit 0.5***

#### **Requirements:**

- None

In this course, students will develop solutions to given situations using problem-solving models. Activities will utilize STEM related concepts combined with the operation of automated machines in order to create prototypes and solutions. Students will research, design, prototype, manufacture, and test products that they have created themselves. Students will discover how to apply engineering design, scientific principles, and engineering analysis to solve real world problems. Problems will be based on the PA State Standards for Technology and Engineering Education. Individual and group work will be emphasized through the problem-solving process. The class will prepare students for the challenges of today and the future's dynamic world by promoting technological literacy, leadership, and problem-solving skills. Criteria for Selection – None.

#### **EXPLORING ROBOTIC ENGINEERING**

***Semester/Full Time***

***Grades 9, 10, 11, 12***

**No. 9506**

***Credit 0.5***

#### **Requirements:**

- None

Students will acquire a basic understanding of types of robots, how they operate, and their application in the real world. This hands-on, project-based course introduces students to the generations of robots through a unique curriculum collaboration with Carnegie Mellon Robotics Academy. Classroom and lab activities will include assembling and operating robotic systems, building using VEX Robotics, and programming robots and automated systems with VEXcode. Furthermore, students will design and build various robots and use computational thinking practices to solve problems and complete challenges. Students will design and produce custom robotic components utilizing a laser engraver and a 3-D printer. STEM concepts will be addressed throughout the course.

#### **ROBOTIC ENGINEERING**

***Semester/Full Time***

***Grades 9, 10, 11, 12***

**No. 9507**

***Credit 0.5***

#### **Requirements:**

- Successful completion of Exploring Robotic Engineering (9506).

Robotic Engineering will provide students the opportunity to continue the study of robots and automated systems gained through work in the previous course. Classroom and lab activities will include building and programming mobile robots using the VEX V5 system, using programmable logic controllers to control pneumatic/mechanical systems, and exploring robots used in manufacturing, product development, testing, and amusement. Students will also experience programming with vision sensors and remote controls. Students will use this knowledge along with the design process to create custom robots that will prepare them for challenges and competitions.



## Course Descriptions

### Technology and Engineering Education

#### **EXPLORING CREATION & INNOVATION**

*Semester/Full Time*

*Grades 9, 10*

**No. 9601**

*Credit 0.5*

#### **Requirements:**

- None

Exploring Creation and Innovation is an emerging course where students apply critical thinking and creativity through the use of the design process and digital fabrication. Using the latest technology tools and software including 3D printers, laser engravers, CNC routers, vinyl printer/cutter machines, and programmable devices, students will analyze current innovations and trends to create improvements upon them. Students will also have the opportunity to design and create their own projects based on previous activities and teacher input. These projects could include, but not limited to, vinyl wall art, custom 3D printed models, personalized engraved items, t-shirts, and jewelry. STEM concepts will be addressed throughout as students are exposed to and become active members of the “Maker” movement.

#### **CREATION & INNOVATION**

*Semester/Full Time*

*Grades 11, 12*

**No. 9602**

*Credit 0.5*

#### **Requirements:**

- None

Creation and Innovation is a course where students apply critical thinking and creativity through the use of the design process and digital fabrication. Using the latest technology tools and software including 3D printers, laser engravers, CNC routers, vinyl printer/cutter machines, and programmable devices, students will analyze current innovations and trends to create improvements upon them. Students will also have the opportunity to design and create their own projects based on previous activities and teacher input. These projects could include, but not limited to, vinyl wall art, custom 3D printed models, personalized engraved items, t-shirts, and jewelry. STEM concepts will be addressed throughout as students are exposed to and become active members of the “Maker” movement.

#### **ADVANCED ROBOTIC ENGINEERING**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9502**

*Credits 1.0*

#### **Requirements:**

- Successful completion of Exploring Robotic Engineering (9506) and/or Robotics Engineering (9507).

Students will capstone a STEM journey with robotics in this course. Students will continue exposure to robotics and coding through use of the VEX V5 system and VEXcode software. Designing custom robots for competition and developing solutions to real-world problems will be the focus of this course. Students will develop team-driven, job specific (e.g., programmers, fabricators, and marketers) robotic projects based on problems presented by industry, experts, and organizations. Projects may also include the use of mechatronic components and concepts, material processing, CNC operation, and 3D printing. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotics industry.

## Course Descriptions

### Technology and Engineering Education

#### **WOOD & METAL FABRICATION**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9404**

*Credit 1.0*

#### **Requirements:**

- None

This full-year course provides an opportunity to improve and advance knowledge and skills in using a variety of materials and processes. Although wood is the primary material for the course, metals are explored and can be utilized in the student's engineered projects. Students will design, produce, and test products that will improve their skills, understanding, and knowledge of material processes and systems related to solving problems applying Mathematical and Science principles. More advanced techniques in the use of machines, tools, manufacturing processes, and finishing procedures related to various materials will be included. Careers to which this study could lead include all types of manufacturing, engineering, construction, materials design, cabinetmaking, and carpentry.

#### **WOOD & METAL FABRICATION**

*Semester/Full Time*

*Grades 11, 12*

**No. 9504**

*Credit 0.5*

#### **Requirements:**

- None

This course is the semester version of course #9404.

#### **HOME MAINTENANCE & REPAIR**

*Semester/Full Time*

*Grades 11, 12*

**No. 9608**

*Credit 0.5*

#### **Requirements:**

- None

This course provides students with the opportunity to explore the many different areas and fundamental systems related to home maintenance, repair, and ownership. Through hands-on problem-solving, students will learn and practice many different home repair procedures and techniques including, but not limited to, masonry, systems (e.g., electrical, plumbing, heating), roofing, and interior/exterior finishing. Architectural plans, building codes, permits, specifications, and material estimating will also be addressed throughout this course. Students will learn these practical maintenance and home improvement skills that apply to both future homeowners and those interested in pursuing careers in architecture, construction, and building trades.

## Course Descriptions

### Technology and Engineering Education

#### **EMERGING TECHNOLOGIES**

*Semester/Full Time*

*Grades 11, 12*

**No. 9408**

*Credit 0.5*

#### **Requirements:**

- None

This course will allow students to design and build solutions to technological problems. Students will develop problem-solving skills while designing and physically creating solutions to problems based on the PA State Standards. Many of the problems will replicate ones that engineers are faced with. This course is designed to be the hands-on application of many academic disciplines such as mathematics, science, physics, history, and language arts.

#### **Advanced CADD (COMPUTER-AIDED DRAWING & DESIGN)**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9411**

*Credit 1.0*

#### **Requirements:**

- Successful completion of Exploring CADD (9806).

This course is designed for students who already are familiar with CADD software. This course involves the development of advanced drafting techniques. Areas of study include, but not limited to, surface development, modeling, and design through the creation of mechanical, structural, and architectural drawings. Advanced 3-D modeling techniques will be used, and animations will be generated from the CADD files. Portfolio development through drafting, 3-D printing, and laser engraving will be explored within the course. Autodesk products that will be used include AutoCAD, Inventor, REVIT, and Fusion 360.

#### **STAGE TECHNOLOGY & PRODUCTION**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9908**

*Credit 1.0*

#### **Requirements:**

- None

This course will cover the principles and techniques of stagecraft, including stage terminology, theater architecture, scenic construction, set painting, tool and machine use, set materials, and production organization. Implementation of lighting design including reading a light plot, hanging a show, utilizing lighting instruments, programming computer light boards, programming computer sound boards, and utilizing color theory. Ultimately, all efforts will be centered toward the creation of a functional space, mood, and style for each school production.

## Course Descriptions

### Technology and Engineering Education

#### **ADVANCED STAGE TECHNOLOGY & PRODUCTION**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9909**

*Credit 1.0*

#### **Requirements:**

- **Successful completion of Stage Technology & Production (9908).**

This course will cover advanced principles, techniques, and technologies of stagecraft. Students will be responsible for creating plans for Lighting Design, Sound Design, Set Construction, and Stage Management for three school productions. A deep understanding of sound design, sound board operation, lighting design, and light board operation will be applied to each of the productions. Students will be working directly with show directors in a collaborative environment to bring the director's vision to life.

Project Lead The Way (PLTW) provides transformative learning experiences for students across the United States. PLTW creates an engaging classroom environment unlike any other with a hands-on/minds-on approach to design and problem solving. PLTW empowers students to develop and apply in-demand, transportable skills by exploring real-world challenges with Science, Technology, Engineering and Math (STEM) concepts.

These courses are eligible for college credit through Rochester Institute of Technology (RIT).

More information about the RIT college credit can be found at:

<https://www.rit.edu/emcs/pltw/undergraduate-credit/students-and-parents>

Additionally, there are many other colleges and universities that accept college credit for PLTW courses.

More information can be found at the PLTW student opportunities page:

<https://www.pltw.org/experience-pltw/student-opportunities>.

Students have the opportunity to potentially earn up to 18 college credits within their high school career at North Allegheny. Transferable earned credits are dependent upon an End of Course (EOC) Assessment score and applications and fees to the appropriate school.

#### **HONORS/PLTW INTRODUCTION TO ENGINEERING DESIGN (CHS)**

*Full Year/Full Time*

*Grades 9, 10, 11, 12*

**No. 9703**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **None**

In Honors Introduction to Engineering Design (IED) students are introduced to the engineering profession and methods to use to approach solutions of engineering problems. The course will utilize activity, project problem-based teaching with a major emphasis on the design process. Students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, teamwork and other professional skills. Students will develop skills in technical representation and documentation of design solutions according to accepted technical standards and will use current 3D modeling software, digital fabrication, and 3D printing to represent and communicate solutions.

This course is eligible for college credit through Rochester Institute of Technology (RIT) and other colleges and universities that can be found at the Project Lead the Way (PLTW) student opportunities page

<https://www.pltw.org/experience-pltw/student-opportunities>

## Course Descriptions

### Technology and Engineering Education

#### **HONORS/PLTW DIGITAL ELECTRONICS (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

**No. 9701**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Successful completion of, or concurrently enrolled in Honors/PLTW Introduction to Engineering Design (CHS) (9703).**

Honors Digital Electronics (DE) is the study of electronic circuits that are used to process and control digital signals. Digital electronics allows for greater signal speed and storage capabilities and has revolutionized the world of electronics. The major focus of this course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Utilizing the activity, project, and problem-based teaching and learning pedagogy, students will analyze, design, and build digital electronic circuits. While implementing these designs, students will continually hone their professional skills, creative abilities, and understanding of the circuit design process.

This course is eligible for college credit through Rochester Institute of Technology (RIT) and other colleges and universities that can be found at the Project Lead the Way (PLTW) student opportunities page

<https://www.pltw.org/experience-pltw/student-opportunities>

#### **HONORS/PLTW PRINCIPLES OF ENGINEERING (CHS)**

*Full Year/Full Time*

*Grades 10, 11, 12*

**No. 9702**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **Successful completion of, or concurrently enrolled in Honors/PLTW Introduction to Engineering Design (CHS) (9703).**

Honors Principles of Engineering (POE) exposes students to some of the major concepts that they will encounter in a postsecondary engineering course. Through problems that engage and challenge, students explore a broad range of engineering topics including mechanisms, electrical systems, thermodynamics, the strength of materials and structures, automation, robotics, and motion. Students have the opportunity to develop skills and understand course concepts through activity, project, and problem-based learning. Activities and projects include, but not limited to, an automated sorter, a projectile launcher, various electrical circuits, and material testing methods. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.

This course is eligible for college credit through Rochester Institute of Technology (RIT) and other colleges and universities that can be found at the Project Lead the Way (PLTW) student opportunities page

<https://www.pltw.org/experience-pltw/student-opportunities>

# Course Descriptions

## Technology and Engineering Education

### **HONORS/PLTW COMPUTER INTEGRATED MANUFACTURING (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

#### **Requirements:**

- **Successful completion of, or concurrently enrolled in Honors/PLTW Introduction to Engineering Design (CHS) (9703).**

Honors Computer Integrated Manufacturing (CIM) deepens the skills and knowledge of an engineering student within the context of efficiently creating the products all around us. Students build upon their Computer Aided Design & Drawing (CADD) experience through the use of Computer Aided Manufacturing (CAM) software. CAM is used to convert a digital design into a program that a Computer Numerical Controlled (CNC) machine can understand. The CNC machine then transforms raw material into a product that was designed by a student. Students learn and apply concepts related to integrated robotic systems such as Automated Guided Vehicles (AGV) and robotic arms into manufacturing systems.

This course is eligible for college credit through Rochester Institute of Technology (RIT) and other colleges and universities that can be found at the Project Lead the Way (PLTW) student opportunities page <https://www.pltw.org/experience-pltw/student-opportunities>

### **HONORS/PLTW CIVIL ENGINEERING & ARCHITECTURE (CHS)**

*Full Year/Full Time*

*Grades 11, 12*

#### **Requirements:**

- **Successful completion of, or concurrently enrolled in Honors Introduction to Engineering Design (CHS) (9703).**

Honors Civil Engineering and Architecture (CEA) is a specialized high school level course that deepens the skills and knowledge of an interested in pursuing a career in architecture, civil, and similar areas of engineering. In CEA students are introduced to important aspects of building and site design and development. Students will apply mathematics, science, and standard engineering practices to design both residential and commercial projects and document their work using 3-D architectural design software Autodesk REVIT. Students will also learn how to document their work and communicate their projects to their peers and members of the professional community.

This course is eligible for college credit through Rochester Institute of Technology (RIT) and other colleges and universities that can be found at the Project Lead the Way (PLTW) student opportunities page <https://www.pltw.org/experience-pltw/student-opportunities>

### **HONORS/PLTW ENGINEERING DESIGN & DEVELOPMENT**

*Full Year/Full Time*

*Grades 11, 12*

#### **Requirements:**

- **Successful completion of, or concurrently enrolled in Honors/PLTW Introduction to Engineering Design (CHS) (9703).**

Honors Engineering Design and Development (EDD) is the capstone course in the PLTW high school engineering program. It is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. Students will perform research to select, define, and justify a problem. After carefully defining the design requirements, teams of students will create, and test their solution prototype. Student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and continually hone their organizational skills, interpersonal skills, and their creative and problem-solving abilities. Key

**No. 9705**

*Honors Wt.*

*Credit 1.0*

**No. 9708**

*Honors Wt.*

*Credit 1.0*

**No. 9707**

*Honors Wt.*

*Credit 1.0*

concepts covered in this course include, but not limited to, project management, documentation, teamwork, intellectual property management, prototyping, and evaluating and presenting a project.

## Course Descriptions

### Visual Arts

#### Grade 9,10 - Electives

Drawing and Painting 1-----	#6403
Drawing and Painting 2-----	#6503
Drawing and Painting 3-----	#6603
Arts and Crafts-----	#6703
Introduction to Pottery and Sculpture-----	#6404
Digital Imaging and Media Arts*-----	#6202
AP Art History (CHS)-----	#6013

#### Grades 11, 12 - Electives

Senior High Drawing and Design Concepts-----	#6504
Senior High Painting and Color Concepts-----	#6604
Pottery 1-----	#6704
Pottery 2-----	#6705
Sculpture-----	#6804
Photography 1*-----	#6505
Photography 2* (CHS) -----	#6605
Graphic Design and Digital Illustration -----	#6203
Jewelry and Metalsmithing-----	#6912
Computer Multimedia Arts*-----	#6201
Honors Art (CHS)-----	#6010
AP Art and Design (CHS)-----	#6011
Advanced Computer Multimedia Arts*-----	#6211

\* These courses may be used towards satisfying the one credit S.T.E.M.\* (Science, Technology, Engineering and Math) requirement (details on pages [3](#) and [4](#)).

(CHS) Indicates College in High School Course

## Course Descriptions

### Visual Arts

#### **DRAWING AND PAINTING 1**

**No. 6403**

*Semester/Full Time*

*Grades 9, 10*

*.5 Credit*

##### **Requirements:**

- None

Drawing and Painting 1 a basic course that introduces a wide variety of media and techniques. Included in the course are topics in design and composition in areas such as painting, drawing, cartooning, and work in the sketchbook. Students will be encouraged to work creatively and to become competent in the use of different materials and basic processes.

#### **DRAWING AND PAINTING 2**

**No. 6503**

*Semester/Full Time*

*Grades 9, 10*

*.5 Credit*

##### **Requirements:**

- None

Drawing and Painting 2 a more advanced study of drawing and painting. There are no prerequisites; however, Drawing and Painting 1 is recommended. Students work in an expanded range of two-dimensional media. There will be concentration in areas of more advanced drawing, watercolor and acrylic painting, mixed media, graphic design, digital media, and printmaking, as well as work in the artist's own personal sketchbook.

#### **DRAWING AND PAINTING 3**

**No. 6603**

*Full Year/Full Time*

*10th Grade*

*1.0 Credit*

##### **Requirements:**

- Successful completion of one or more semester-level Visual Arts courses in 9th grade  
OR
- An approval from a high school art teacher

Drawing and Painting 3 is a full year/full time course designed for those who wish to concentrate in specialized areas of interest. A high degree of personal involvement and responsibility for developing ideas and finished work will be stressed. Classwork will include an emphasis on more advanced drawing and painting, watercolor, acrylic and oil painting, graphic design, digital media, printmaking, and work in the sketchbook.

#### **ARTS AND CRAFTS**

**No. 6703**

*Semester/Full Time*

*Grades 9, 10*

*.5 Credit*

##### **Requirements:**

- None

This course is designed for students who like to work in many different artistic areas to discover interests and abilities for further study. Students learn the primary skills of many visual art processes as well as design and creative strategies. Most of the work produced in this class is intended for use as functional objects as well as works of art, and a variety of artistic media are used to develop artistic concepts. Some of the activities in the course include: etching on mirrors, hand-wrought metalwork and jewelry, hand-built pottery, tie-dye t-shirt design, sculpture, decoupage, pewter-casting, and fresco painting.



## Course Descriptions

### Visual Arts

#### **INTRODUCTION TO POTTERY AND SCULPTURE**

**No. 6404**

*Semester/Full Time*

*Grades 9, 10*

*.5 Credit*

#### **Requirements:**

- None

This course is designed to provide students with the opportunity to explore methods of artistic expression through studies in pottery and three-dimensional art making. Study will include a nine-week concentration in pottery work with experiences on the pottery wheel, hand-building pottery, and glazing. The other half of the semester is devoted to the creation of sculptures while exploring a variety of media including clay, plaster, metal, wood, glass, and plastic. Within each unit of study, various artists and artistic styles will be covered as well as different sculptural techniques and surface renderings. Some of these techniques will include: under and over glazing, marbleizing clay, mishima, and traditional patina finishes.

#### **DIGITAL IMAGING AND MEDIA ARTS**

**No. 6202**

*Semester/Full Time*

*Grades 9, 10*

*.5 Credit*

#### **Requirements:**

- None

Digital Imaging and Media Arts introduces students to creating original creative work using computers and digital media. Topics will include the design and production of digital imagery, graphics and photography, animation, video, multimedia, interactive design, and game design. Students will learn to use industry-standard creative software, such as Adobe Photoshop, Premiere Pro, and After Effects, to explore techniques, genres, and styles relating to graphic and web design, commercial advertising, and the fine arts.

#### **AP ART HISTORY (CHS)**

**No. 6013**

*Full Year/Full Time*

*10th Grade*

*AP Wt.*

*1.0 Credit*

#### **Requirements:**

- None

Advanced Placement (AP) Art History offers a unique, in-depth perspective into our world's rich and diverse cultural heritage through study of art and architectural works across cultures and time periods, and is designed to engage students at the same level as an introductory college art history survey. Art History emphasizes visual analysis to understand how and why works of art function in their historical context. Throughout the year, students will examine issues such as politics, religion, patronage, gender, function, and ethnicity as they relate to creative works. Global and thematic connections will be made through the cross-cultural comparison of art. Students will engage with the history of art through a combination of discussion, research, museum visits, projects, and hands-on studio experiences. The course curriculum is intended to prepare students for the AP Art History exam, which students are encouraged, but not required, to take.

# Course Descriptions

## Visual Arts

### **SENIOR HIGH DRAWING AND DESIGN CONCEPTS**

**No. 6504**

***Semester/Full Time***

***Grades 11, 12***

***.5 Credit***

#### **Requirements:**

- None

All levels of artistic ability and experience are welcome in this semester course. In Senior High Drawing, students will learn to utilize various drawing media and techniques, including graphite, marker, pen ink, color pencil, charcoal, pastel, and mixed media. Students will explore various subject matters including still life, landscape, portraiture, and abstraction while learning to visually express concepts and ideas in their artwork. Learning to use value, color, and other visual elements will enable students to compose well-designed drawings and artworks while exploring their own artistic style. Through individual and group discussions of artwork, students will learn to refine and revise their artwork to grow from their initial artistic abilities.

### **SENIOR HIGH PAINTING AND COLOR CONCEPTS**

**No. 6604**

***Semester/Full Time***

***Grades 11, 12***

***.5 Credit***

#### **Requirements:**

- None

All levels of artistic ability and experience are welcome in this semester course. In Senior High Painting, students will learn to utilize various painting media and techniques, including acrylic, water mixable oils, watercolor, and mixed media. Students will explore various subject matters including still life, landscape, portraiture, and abstraction while learning to visually express concepts and ideas in their artwork. Learning to use color, light, and other visual elements will enable students to compose well-designed paintings and artworks while exploring their own artistic style. Through Individual and group discussions of artwork, students will learn to refine and revise their artwork to grow from their initial artistic abilities.

### **POTTERY 1**

**No. 6704**

***Semester/Full Time***

***Grades 11, 12***

***.5 Credit***

#### **Requirements:**

- None

Pottery 1 is an entry-level course, designed to offer students instruction in the aesthetics, techniques, and history of pottery. The class is primarily performance-based, and students are expected to actively participate in class every day. Practice is essential to acquiring the skill necessary to form pottery. Students will learn various forming methods such as coil, slab, and the potter's wheel. Emphasis will be placed on craftsmanship, proper technique, glazing, and decorating. Pottery is a labor-intensive class; however, there is very little book work. Information is presented in lecture and hands-on demonstrations during class. No previous experience is necessary.

## Course Descriptions

### Visual Arts

#### **POTTERY 2**

**No. 6705**

*Semester/Full Time*

*Grades 11, 12*

*.5 Credit*

#### **Requirements:**

- Successful completion of Pottery 1 (6704) at NASH  
OR
- Approval from a high school art teacher

Pottery 2 is a class designed for students who are interested in a more in-depth clay experience. Emphasis will be placed on refining basic skills to produce work that is more complex and mature. A variety of glazing/decorating techniques will be explored. In addition, the study of ceramic history will include a focus on contemporary artists.

#### **SCULPTURE**

**No. 6804**

*Semester/Full Time*

*Grades 11, 12*

*.5 Credit*

#### **Requirements:**

- None

This class will provide students with the opportunity to creatively express their thoughts and ideas in a three-dimensional form. Students will explore the processes of mold-making, casting, head modeling, reductive carving, and assemblage while utilizing a variety of materials including clay, plaster, wood, and found objects. Emphasis will be placed on handling the materials, craftsmanship, and creative solutions to assigned projects. No previous experience is necessary.

#### **JEWELRY AND METALSMITHING**

**No. 6912**

*Semester/Full Time*

*Grades 11, 12*

*.5 Credit*

#### **Requirements:**

- None

Students will be taught both basic and advanced techniques of jewelry making, including processes of fabrication, photo etching, "lost wax" casting, stone setting, enameling, and glass casting. As students create projects such as rings, earrings, neckpieces, and ornaments, the emphasis will be on design and how to design successfully. Materials used will include: copper, nu-gold, nickel silver, contemporary plastic, and glass. Students have the option to purchase precious metals and gemstones to incorporate into their work.

#### **PHOTOGRAPHY 1**

**No. 6505**

*Semester/Full Time*

*Grades 11, 12*

*.5 Credit*

#### **Requirements:**

- None

Want to learn how to take amazing photographs with your smartphone or digital camera and stop relying on filters? Then, this is the course for you. All levels of artistic ability and experience are welcome. Subjects like portrait, landscape, abstract, and digital collage will be explored with an emphasis on creativity. Students will learn how to edit and enhance photos with Adobe Lightroom and Photoshop. Analog photography will also be explored. Photography is a skill you will use the rest of your life. Learn how to take incredible photographs and be the envy of your friends on social media.

# Course Descriptions

## Visual Arts

### **PHOTOGRAPHY 2 (CHS)**

**Semester/Full Time**

**Grades 11, 12**

**No. 6605**

**.5 Credit**

#### **Requirements:**

- **Minimum of 80% in Photography 1 (6505).**

Photography 2 will provide students with an opportunity to further develop and build upon the skills learned in Photography 1. Students will explore advanced film and digital shooting techniques including multiple exposure, long exposure, painting with light, time lapse, studio lighting, and high dynamic range (HDR) imaging. Advanced darkroom techniques including combination printing and alternative chemistry will also be explored. Students will also expand upon their knowledge of digital image editing with more advanced techniques. All film, chemicals, and darkroom equipment are provided.

### **GRAPHIC DESIGN AND DIGITAL ILLUSTRATION**

**Semester/Full Time**

**Grades 11, 12**

**No. 6203**

**0.5 Credit**

#### **Requirements:**

- **None**

Graphic Design and Digital Illustration introduces students to using visual communication skills and creating original graphical work in line with creative professions, like graphic design, comic and game-style illustration, and animation. Students will learn drawing and design skills using industry-standard computer hardware and digital applications, such as Adobe Photoshop and Adobe Illustrator. Design and Illustration fundamentals are introduced through experience with logo and wordmark creation, typography and image, vector graphics, print and web design, branding, digital drawing and painting, sequential art, and animation. Individual and group discussions of your artwork will help to take work to the next level. No previous experience is necessary.

### **HONORS ART (CHS)**

**Full Year/Full Time**

**Grades 11, 12**

**No. 6010**

**Honors Wt.**

**1.0 Credit**

#### **Requirements:**

- **Minimum of an 80% in Drawing and Painting 1 (6403), 2 (6503), or 3 (6603),**  
**OR**
- **Minimum of an 80% in at least three sections of semester art courses,**  
**OR**
- **An approval from a high school art teacher**

Honors Art is a studio course that will challenge students to develop a higher level of visual aesthetic expression, through both 2D and 3D art mediums, including drawing, painting, printmaking, digital media, and sculpture. Students will develop their own creative artistic expression through the use of visual journals, technical exercises, art production, critiques, and a variety of creative thinking strategies. Honors Art provides students with the foundational skills in preparation for the AP Art & Design course. Students can potentially earn college credit through the LaRoche Scholar's Program with the successful completion and passing of Honors Art. Students will learn how to navigate problems and setbacks, innovate new ideas, research and implement cross-disciplinary subjects, manage projects, and experiment as well as take risks helping to prepare students for any career.

## Course Descriptions

### Visual Arts

#### **AP ART AND DESIGN (CHS) (Drawing, 2D Design, 3D Design)**

*Full Year/Full Time*

*12th Grade*

**No. 6011**

*AP Wt.*

*1.0 Credit*

##### **Requirements:**

- Successful completion of Honors Art (6010) is recommended
- Minimum of an 80% in a previous full-year art course - Honors Art (6010) or Drawing and Painting 3 (6603),  
OR
- Minimum of an 80% in at least four sections of semester art courses,  
OR
- An approval from the AP Art and Design instructor with the submission of at least 5-7 recent artworks and a journal/sketchbook

Advanced Placement (AP) Art & Design is a studio course designed to meet the criteria of College Board's [AP Art & Design Course and Exam](#) by creating a portfolio of artwork specific to either the [AP Drawing](#), [2D Art & Design](#), or [3D Art & Design](#) portfolio requirements. The AP Art and Design course is the equivalent of a one-semester, introductory college course and offers college credit through the La Roche University Scholars Program or successful completion and passing of the Advanced Placement exam. Students begin with creating an inquiry that will guide their development of a portfolio of artwork, any 2D and/or 3D art mediums can be explored. Within their artwork students are challenged with demonstrating experimentation, revision, and synthesis of materials, processes, and ideas in connection to their inquiry. Students will learn how to navigate problems and setbacks, innovate new ideas, research and implement cross-disciplinary subjects, manage projects, and experiment as well as take risks helping to prepare students for any career.

#### **COMPUTER MULTI-MEDIA ARTS**

*Semester/Full Time*

*Grades 11, 12*

**No. 6201**

*0.5 Credit*

##### **Requirements:**

- None

In this course, the students design and create original digital art and multimedia presentations that include animation, video, photography, graphics, and sound. Students shoot, edit, composite, and create special effects in video using professional digital video software. Students create rotoscope and stop-motion animations. Students learn sound recording, editing, and design and compose music using professional music software. In the independent final project, students are encouraged to work to their interests and strengths, emphasizing a particular subject or artistic discipline. Projects have included digital art or music portfolios, website development, online exhibits, learning games, multimedia stage performances, and interactive presentations on a variety of topics.

#### **ADVANCED COMPUTER MULTI-MEDIA ARTS**

*Semester/Full Time*

*Grades 11, 12*

**No. 6211**

*0.5 Credit*

##### **Requirements:**

- Successful completion of Computer Multi-Media Arts (6201).

Advanced Computer Multi-Media Arts allows students to continue to design and create original media rich presentations, videos, animations, websites, and interactive games. This course builds upon photomontage, sound design, digital video, and animation concepts from the Multi-Media Arts course. Students will explore advanced layout techniques, video mapping, augmented animation styles, and post-production video effects. Students will have the opportunity to create architectural projections, vector-based art, interactive portfolios, and mixed media installations.

The course emphasizes conception and planning, solving design challenges, personal artistic expression, and communication through new media technology. The course provides a foundation for careers in the growing field of web, layout, and multimedia design.

# Course Descriptions

## World Languages

At North Allegheny, we believe that a World Language Program should foster and support the students' recognition of the world as a global society comprised of diverse languages and cultures. North Allegheny also responds to the very practical need of its students to be prepared for higher learning at the college/university level and beyond. Therefore, a successful World Language Program will enable students to develop self-awareness and insight into cultural differences while acquiring the necessary skills to communicate in a language other than their own.

The following are important components of an effective and successful program:

- Communication:** comprehending what is read and heard and being understood when one speaks and writes
- Culture:** appreciating the culture of the people who speak the language today and of those who spoke the language in the past
- Connections:** acquiring and reinforcing knowledge of other disciplines through study of the target language
- Comparisons:** relating the study of the target language to the student's own language and culture
- Communities:** cultivating responsible and productive citizens of the world
- Critical Thinking:** developing the ability to analyze, synthesize, and evaluate information

## World Language Scope and Sequence TIERS

<u>2023-2024 GRADE</u>	<u>ACADEMIC</u>	<u>HONORS</u>
9	Academic Level II	Honors Level II
10	Academic Level III	Honors Level III
11	Academic Level IV	Honors Level IV
12	Honors Level V	AP

**Please note:**

*The Honors Level V is offered as the culminating course for the Academic Level IV student. Students will schedule for the Honors Level V. The Honors Level IV and Level V courses are conducted in the target language.*

# Course Descriptions

## World Languages

### Grade 9,10 - Electives

French I-----	#5401
German I-----	#5501
Latin I-----	#5601
Spanish I-----	#5701

Academic French II-----	#5402
Academic German II-----	#5502
Academic Latin II-----	#5602
Academic Spanish II-----	#5702

Honors French II-----	#5403
Honors German II-----	#5503
Honors Latin II-----	#5603
Honors Spanish II-----	#5703

Academic French III-----	#5405
Academic German III-----	#5505
Academic Latin III-----	#5605
Academic Spanish III-----	#5705

Honors French III-----	#5406
Honors German III-----	#5506
Honors Latin III-----	#5606
Honors Spanish III-----	#5706

### Grades 11, 12 - Electives

Academic French IV-----	#5408
Academic German IV-----	#5508
Academic Latin IV-----	#5608
Academic Spanish IV-----	#5708

Honors French IV (CHS)-----	#5409
Honors German IV (CHS)-----	#5509
Honors Latin IV (CHS)-----	#5609
Honors Spanish IV (CHS)-----	#5709

Honors French V (CHS) -----	#5410
Honors German V (CHS) -----	#5510
Honors Latin V (CHS) -----	#5610
Honors Spanish V (CHS) -----	#5710

AP French (CHS)-----	#5411
AP German (CHS)-----	#5511
AP Latin (CHS)-----	#5611
AP Spanish(CHS)-----	#5711

(CHS) Indicates College in High School Course

# Course Descriptions

## World Languages

### CLASSICAL LANGUAGES

#### **LATIN I**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5601**

*Credit 1.0*

#### **Requirements:**

- **None**

In this course, students will comprehend the Latin language on a novice level through practice in reading, writing, and speaking. They will relate Latin to English vocabulary and compare the structure of both languages. In addition, students will develop an understanding of the history and culture of the Romans, especially during the first century A.D. in Pompeii.

#### **ACADEMIC LATIN II**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5602**

*Credit 1.0*

#### **Requirements:**

- **minimum of 75% in Level I**

Students will read more complex Latin passages and further develop their Latin and English vocabulary and grammar skills. More time will be spent in this course on review and practice of these basic skills. The readings focus on Roman culture in Britain and Egypt in the first century A.D.

#### **HONORS LATIN II**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5603**

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- **minimum of 85% in Level I**

Students will read more complex Latin passages and further develop their Latin and English vocabulary and grammar skills. In this class, the readings focus on Roman culture in Britain and Egypt in the first century A.D.

#### **ACADEMIC LATIN III**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5605**

*Credit 1.0*

#### **Requirements:**

- **minimum of 75% in Academic Level II**

In this course, students will refine their comprehension skills as they read and listen to increasingly longer and more complex passages of Latin. They will encounter more challenging grammar and writing exercises, and they will build their English vocabulary through the extensive study of Latin root words. More time will be spent in this course on review and practice of basic skills. The readings in this course focus on the town of Aquae Sulis and the Roman Army in Britain.



## Course Descriptions

### World Languages

#### **HONORS LATIN III**

*Full Year/Full Time*  
*Grades 9,10,11,12*  
*NCAA*

**No. 5606**

*Honors Wt.*  
*Credit 1.0*

#### **Requirements:**

- minimum of 85% in Honors Level II

Students will refine their comprehension skills as they read and listen to increasingly longer and more complex passages in Latin. They will encounter more challenging grammar and writing exercises, and they will build their English vocabulary through the extensive study of Latin root words. The readings in this course focus on the Roman Army in Britain, and on the political intrigues in the city of Rome during the reign of the Emperor Domitian.

#### **ACADEMIC LATIN IV**

*Full Year/Full Time*  
*Grades 9,10,11,12*  
*NCAA*

**No. 5608**

*Credit 1.0*

#### **Requirements:**

- minimum of 75% in Academic Level III

The primary objective of this course is to advance students from reading adapted Latin passages toward authentic Latin texts. This is accomplished through a succession of stages which augment the vocabulary and sentence structures already mastered in earlier levels. A second important emphasis of this course is to enable students to write more easily in Latin. The readings in this course focus on the political intrigues in the city of Rome during the reign of the Emperor Domitian.

#### **HONORS LATIN IV (CHS)**

*Full Year/Full Time*  
*Grades 9,10,11,12*  
*NCAA*

**No. 5609**

*Honors Wt.*  
*Credit 1.0*

#### **Requirements:**

- minimum of 85% in Honors Level III

Students will continue the established Latin sequence via the Cambridge Latin Course. The students will also read authentic Latin texts. An anthology of Latin prose and poetry will expand the students' knowledge and appreciation of Greek and Roman mythology. Students will also continue to develop their writing skills. Each unit will expand the students' ability to use a variety of Latin sentence structures. Each unit of study is geared to prepare students for success in the Advanced Placement course.

#### **HONORS LATIN V (CHS)**

*Full Year/Full Time*  
*Grades 9,10,11, 12*  
*NCAA*

**No. 5610**

*Honors Wt.*  
*Credit 1.0*

#### **Requirements:**

- minimum of 75% in Academic Level IV

Students will continue the established Latin sequence via the Cambridge Latin Course. The students will also read authentic Latin texts. An anthology of Latin prose and poetry will expand the students' knowledge and appreciation of Greek and Roman mythology. Students will also continue to develop their writing skills.

# Course Descriptions

## World Languages

### AP Latin V (CHS)

*Full Year/Full Time*

*Grades 9,10,11, 12*

*NCAA*

**No. 5611**

**AP Wt.**

**Credit 1.0**

#### Requirements:

- minimum of 80% in Honors Level IV

The primary focus of this course is to enable students to demonstrate an ability to read, analyze, and critique authentic Latin prose and poetry. Preparation for the Advanced Placement Latin test is an important goal and focus. This course is almost exclusively a readings course. The Advanced Placement syllabus includes sections of Vergil's epic poem The Aeneid and Julius Caesar's dē bellō Gallicō.

## MODERN LANGUAGES

### FRENCH I

### GERMAN I

### SPANISH I

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5401**

**No. 5501**

**No. 5701**

**Credit 1.0**

#### Requirements:

- None

These courses are designed for students who are beginning their language study. They introduce students to the basic language skills of listening, speaking, reading, and writing. Equal emphasis is placed on all areas of study. At the same time, students learn to appreciate the similarities and differences among the cultures studied.

### ACADEMIC FRENCH II

### ACADEMIC GERMAN II

### ACADEMIC SPANISH II

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

**No. 5402**

**No. 5502**

**No. 5702**

**Credit 1.0**

#### Requirements:

- minimum of 75% in Level I

These courses expand and intensify the skills introduced in Level 1. While listening and speaking remain as primary goals of the class, each course now places additional emphasis upon reading and writing. The students will strengthen their understanding and appreciation of the target culture.

## Course Descriptions

### World Languages

**HONORS FRENCH II**

**No. 5403**

**HONORS GERMAN II**

**No. 5503**

**HONORS SPANISH II**

**No. 5703**

*Full Year/Full Time*

*Honors Wt.*

*Grades 9,10,11,12*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- minimum of 90% in Level I

In addition to the attributes of Level II, the students will be exposed to an enhanced variety of listening, speaking, reading, and writing activities. Grammar topics and vocabulary that are beyond the scope of Level II will also be covered. The students will be expected to complete independent assignments.

**ACADEMIC FRENCH III**

**No. 5405**

**ACADEMIC GERMAN III**

**No. 5505**

**ACADEMIC SPANISH III**

**No. 5705**

*Full Year/Full Time*

*Credit 1.0*

*Grades 9,10,11,12*

*NCAA*

#### **Requirements:**

- minimum of 75% in Academic Level II

These courses provide continued practice in the four basic skills of language learning. Structures learned in Levels I and II are expanded and new ones introduced. Pronunciation habits and intonation patterns are refined. Reading and writing are given added emphasis. Knowledge of the people and their country is broadened.

**HONORS FRENCH III**

**No. 5406**

**HONORS GERMAN III**

**No. 5506**

**HONORS SPANISH III**

**No. 5706**

*Full Year/Full Time*

*Honors Wt.*

*Grades 9,10,11,12*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- minimum of 85% in Honors Level II

Students will be exposed to an enhanced variety of listening, speaking, reading, and writing activities. Grammar topics and vocabulary that are beyond the scope of Level II will also be covered. The students will be expected to complete independent assignments. Many of the classes are conducted in the target language and students are expected to increase their speaking proficiency.

## Course Descriptions

### World Languages

#### **ACADEMIC FRENCH IV**

**No. 5408**

#### **ACADEMIC GERMAN IV**

**No. 5508**

#### **ACADEMIC SPANISH IV**

**No. 5708**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

*Credit 1.0*

#### **Requirements:**

- minimum of 75% in Academic Level III

These courses provide the student with an opportunity to review and practice the language skills previously acquired. In addition, new and more complex linguistic structures are introduced, allowing students to communicate more freely in the target language. The conversational approach of language learning is stressed, and cultural connections are enhanced through meaningful classroom discussions.

#### **HONORS FRENCH IV (CHS)**

**No. 5409**

#### **HONORS GERMAN IV (CHS)**

**No. 5509**

#### **HONORS SPANISH IV (CHS)**

**No. 5709**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- minimum of 85% in Honors Level III

These courses continue the development of the language skills of listening, speaking, reading, and writing. Emphasis is on oral proficiency and composition. In addition, reading skills and vocabulary are broadened through a variety of supplemental works. Classes are conducted in the target language and students are required to respond in the target language. Upon successful completion of these courses, students are strongly encouraged to take the Advanced Placement course.

#### **HONORS FRENCH V (CHS)**

**No. 5410**

#### **HONORS GERMAN V (CHS)**

**No. 5510**

#### **HONORS SPANISH V (CHS)**

**No. 5710**

*Full Year/Full Time*

*Grades 9,10,11,12*

*NCAA*

*Honors Wt.*

*Credit 1.0*

#### **Requirements:**

- minimum of 75% in Academic Level IV

These courses continue the development of the language skills of listening, speaking, reading, and writing. Emphasis is on oral proficiency and composition. In addition, reading skills and vocabulary are broadened through a variety of supplemental works. Classes are conducted in the target language and students are required to respond in the target language.

## Course Descriptions

### World Languages

**AP FRENCH V (CHS)**

**No. 5411**

**AP GERMAN V (CHS)**

**No. 5511**

**AP SPANISH V (CHS)**

**No. 5711**

*Full Year/Full Time*

*AP Wt.*

*Grades 9,10,11, 12*

*Credit 1.0*

*NCAA*

#### **Requirements:**

- **minimum of 80% in Honors Level IV**

These courses are designed to further the development proficiency in listening comprehension, speaking, reading, and writing to prepare students to take the AP Language Exam in one of these three languages. The courses are conducted in the target language and students are expected to use the target language at all times. Reading materials are drawn from a variety of authentic literary works and contemporary articles. Composition skills are enhanced by frequent writing assignments on many different topics. Conversations, discussions, oral reports, and similar activities ensure practice in the spoken language.

# A. W. Beattie Career Center

## A.W. Beattie Career Center

### P.M.AFTERNOON SESSION

Grades 11, 12

No. 0605

Credit 3.0

### Admissions Information —

All consortium secondary students are welcome to enroll in an advanced career pathway program with A.W. Beattie Career Center during their sophomore, junior or senior year. Enrollment is an open process during the first semester in all available career programs. In the event that a career program has reached the maximum enrollment based on safety or by Joint Operating Committee action, new student enrollment will be determined by implementing the five (5) year average daily membership (ADM) effective March 1<sup>st</sup> of the prior school year. In addition to the ADM, the sending school may also implement the student evaluation rubric to determine admission to a high demand program. No new enrollment will be accepted after the 10<sup>th</sup> day of the first semester, unless the student has prior education experience within a career center.

**All A. W. Beattie Career Center Programs offer advanced college credit upon successful completion. Potential college credits range from three to twenty credits.**

A.W. Beattie Career Center Programs are approved Programs of Study (POS) providing for seamless transition to post-secondary education through rigorous content aligned with challenging academic and relevant career context in a non-duplicative progression of courses aligned to post-secondary education. SOAR is a Pennsylvania program which allows CTE students to earn free college credits. Students earn free credits with a qualifying score from the NOCTI Senior year assessment and confirmation that they have completed the entire CTE program of study. To obtain these free credits, students must submit the proper paperwork to the college, as outlined below. This paperwork requires CTE administrative signatures for submission.

### **SEE WHICH COLLEGES OFFER FREE CREDITS FOR YOUR CTE PROGRAM OF STUDY (POS)**

To determine the free credits offered for Pennsylvania Career and Technical Educational Programs of Study (POS) visit the website <http://www.collegetransfer.net/>. After selecting your Program of Study and your high school graduation year, you can view all the colleges offering free credits for your particular CTE program. Additionally, A.W. Beattie Career Center maintains many college articulation agreements, along with dual enrollment and pre-apprenticeship opportunities for students. Please visit our website [www.beattietech.com](http://www.beattietech.com) for additional information.

Students who attend A. W. Beattie may be eligible to earn mathematics and/or science credits toward graduation requirements. Please see your Counselor for additional information.

Several of A. W. Beattie's programs require uniforms and equipment. The student and parents assume this cost. Therefore, students should obtain accurate cost information before enrolling for a course. Transportation is provided by the School District.

Applications to attend A.W. Beattie Career Center should be made during the second semester of the 9<sup>th</sup>, 10<sup>th</sup> or 11<sup>th</sup> grade and will be carefully reviewed. Further information regarding enrollment in A. W. Beattie Career Center program's is available in your high school Counseling Office.

### Course Offerings —

- |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Advertising Design</li><li>• Automotive Collision Technology</li><li>• Automotive Technology</li><li>• Carpentry/Building Construction</li><li>• Computer Systems, Networks &amp; Cyber Security</li><li>• Cosmetology</li><li>• Culinary Arts</li><li>• Dental Careers</li><li>• Early Childhood Education</li></ul> | <ul style="list-style-type: none"><li>• Emergency Response Technology</li><li>• Health and Nursing Sciences</li><li>• Heating, Ventilating and Air Conditioning Technology</li><li>• Pastry Arts</li><li>• Pharmacy Operations (Grade 12 Only)</li><li>• Robotics Engineering Technology</li><li>• Sports Medicine - Rehab Therapy and Exercise</li><li>• Science Technology</li><li>• Surgical Science</li><li>• Veterinary Sciences Technology</li></ul> |
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## A.W. Beattie Career Center

### A.W. Beattie Career Center

#### Course Offerings:

**Advertising Design** – The **Advertising Design** program at A. W. Beattie Career Center focuses on a wide variety of professional art-related fields, including: Digital Graphic Design, Multimedia, Digital Photography, and Web Design. Students will train in a dual-platform (Mac and PC) environment using the latest in professional graphic design software and equipment, such as: Adobe Photoshop CS5.5, Adobe Illustrator CS5.5, Adobe Premiere Pro, Adobe Dreamweaver CS5.5, and many others. Achieve advanced standing at local colleges or universities by utilizing college credits you can earn while you are an Advertising Design student.

**Automotive Collision Technology** – The NATEF (National Automotive Technicians Education Foundation) certified **Automotive Collision Technology** program at A.W. Beattie Career Center meets strict Industry standards, providing students with hands-on experience using equipment in our state-of-the-art auto body shop. The **Automotive Collision Technology** program trains students in all aspects of the industry including: MIG Welding, computerized paint mixing, and automotive spraying techniques. Using the latest technology in our fully equipped auto shop keeps students up to date with current standards. Cooperative education experiences in local area dealerships provide necessary hands-on training. Students learn through the nationally recognized ICAR curriculum.

**Automotive Technology** – The NATEF (National Automotive Technicians Education Foundation) ensures the **Automotive Technology** program within A. W. Beattie Career Center meets strict standards, providing students with hands-on experience using up-to-date diagnostic equipment in our state-of-the-art auto shop. **Automotive Technology** is an AYES (Automotive Youth Education Systems) training facility. AYES provides students authentic experiences during their senior year, with on-site experiences in local area dealerships, allowing for those important career connections. NATEF and AYES certifications assure students the best training and preparation to complete their ASE (Automotive Service Excellence) certification in less time, upon graduation. Students will have the opportunity to earn their PA Safety and Emissions Inspection credentials prior to graduation.

**Building Construction** – Students in this PBA (Pennsylvania Builders Association) endorsed program will receive classroom and hands-on training in carpentry, masonry, plumbing, residential wiring, and building a home for sale. Students also have the opportunity to join SkillsUSA where they can be involved in activities and competitions, as well as community projects that challenge the student during the year, preparing them for immediate employment. Students also have the opportunity to experience live work by taking part in the on-going project of building a modular home. Additionally, students will gain experience in the operations of forklifts, scissor lifts and industrial rigging systems.

**Computer System, Network Engineering and Cyber Security** – Are you interested in knowing how the Internet works? Are you familiar with the components and software aspects of a computer? Interested in pursuing a career in computers? Then you may be a candidate for **Computer System, Network Engineering and Cyber Security** at A.W. Beattie Career Center. Building, maintaining, and troubleshooting computers and peripherals is part of the curriculum. Students will learn the basics of networking and will build Linux and Windows servers. They will also set up and maintain internet services. Students will participate in the Cisco Networking Academy and will practice using virtual simulations within the LabSim environment.

**Cosmetology** – The A.W. Beattie Training Salon provides qualified **Cosmetology** students with the opportunity to use their energy, skills, and imagination on clients from the community in a state-of-the-art cosmetology salon. Students will study the care of hair, nails, and skin. They will learn the proper use of cosmetology tools and equipment, as well as techniques in hair cutting, styling, coloring, permanent waving, relaxing, manicuring, pedicuring and skin care. Students will also focus on professionalism and customer relations and test for their Pennsylvania State Cosmetologist License when they have completed 1,250 hours of training

**Culinary Arts** – The **Culinary Arts** program has built a reputation as one of the finest throughout the state. The A.W. Beattie Restaurant, given a three-star rating by the Pittsburgh Press, is student-run and serves breakfast and lunch to more than 150 people a day! The Bake Shop sells cookies, brownies, pies, cakes, and various pastries. Students learn all aspects of the restaurant business from meal planning, food preparation, baking and carving, to dining room and banquet serving. There are many job opportunities within the always-growing culinary industry. In this program, students practice their craft in a commercially equipped kitchen and bakery.

# A.W. Beattie Career Center

## A.W. Beattie Career Center

**Dental Careers – Dental Careers** provides students with the necessary skills for employment in Dental Assisting, Lab Technician, Infection Control Assistant, and many more opportunities within the dental industry that extend into a jumpstart for post-secondary education. Seniors participate in hands-on work experiences in dental offices, learning and assisting in four-handed dentistry, chair-side assisting, administrative skills and other techniques. Students will prepare to test for their PA Dental Radiology Certification. Students learn the latest techniques including digital x-ray.

**Early Childhood Education –** Qualified Students in **Early Childhood Education** experience the opportunity to apply their child development and teaching skills daily, working with children in the on-site Kiddie Tech Child Care Center. In addition to a variety of classroom activities, students learn hands-on with infants, toddlers, and preschool age children. Students present a series of learning and developmental activities in the childcare facility, practicing and refining their creative teaching skills, as well as learning the basics in caring for and managing children. In partnership with Junior Achievement, students have the opportunity to teach in classrooms in local school districts.

**Emergency Response Technology – Emergency Response Technology** challenges students with exciting hands-on training in a fully equipped on-site lab, as well as field trips to local Police and Fire Academies throughout the school year. Students study several technical fields including police science, fire science, rescue operations, hazardous materials, and emergency medical services. Training for the Emergency Medical Responder and Emergency Medical Technician Certifications at A.W. Beattie Career Center will prepare students for immediate employment in the growing Emergency Response industry.

**Health and Nursing Sciences –** Today's medical field is rapidly growing. Now, more than ever, health care professionals are in high demand and are essential employees. These professions include Patient Care Technicians, Nursing Assistants, Medical Assistants, EKG Technicians, Phlebotomy Technicians, Registered Nurses, Nurse Practitioners, Physician Assistants, etc. The **Health and Nursing Sciences** core curriculum will prepare students for future success in the healthcare industry. Students will have the opportunity to obtain many health care certifications. These include, but are not limited, to First Aid, CPR, Stop the Bleed, and Patient Care Technician. During the program, students will learn and develop essential hands-on clinical skills that are imperative for said health care professions. Students will also have the opportunity to engage in clinicals in a nursing home, hospital, and/or doctor's office setting. This will allow students to experience health care professionals in action and help students identify which career they want to pursue in health care.

**Heating, Ventilating, and Air-Conditioning – Heating, Ventilating, and Air-Conditioning** trains students with the necessary skills to become qualified technicians and mechanics. Students learn heating installation and service, air-conditioning. Installation and service, plumbing, electrical wiring, refrigeration, and sheet metal fabrication. Students will put skills into use when they participate in the plumbing, ventilating, and wiring of the A.W. Beattie modular home, which is sold after completion. They also test for their EPA Certification at A.W. Beattie Career Center, helping them to ensure immediate employment opportunities. Additionally, students will gain experience in the operations of forklifts, scissor lifts, and industrial rigging systems.

**Introduction to Pharmacy –** The **Introduction to Pharmacy** program will provide 12<sup>th</sup> grade students the opportunity to jumpstart their post-secondary training and work towards a career with increased employment opportunities over the next ten years. Students will learn compounding formulas and ratios, laws and regulations, participate in module lab work, practice sterilization skills, and demonstrate proficiency as required by industry standards. Student instruction includes the PassAssured interactive pharmacy training and test preparation for the Pharmacy Technician Certification exam. Students will participate in mock simulations and gain hands-on experience within the community. The program is limited to 12<sup>th</sup> grade students.



## A.W. Beattie Career Center

### A.W. Beattie Career Center

**Pastry Arts** – The **Pastry Arts** course provides students with an opportunity to learn all functions of a commercial bakery while perfecting their creative pastry skills. Students keep the bakery cases, located in the Beattie Dining Room, stocked full of cakes, cookies, pies, brownies, breakfast pastries, and a variety of specialty breads and rolls. Students receive quality training in our fully equipped Pastry Arts lab learning everything from baked goods preparation to merchandising, and dining room service. There are classroom demonstrations from industry professionals throughout the school year, as well as field trips to local bakeries and restaurants. Students will prepare special orders for holidays, weddings, and special events throughout the year. Students have the opportunity to earn their SERV Safe Food Safety Certification.

**Robotics Engineering Technology (RET)** – Students interested in the most recent, innovative technology have an opportunity for training in **Robotics Engineering Technology**. Through a partnership with the Advanced Manufacturing Industry, California University of Pennsylvania, and support from Carnegie Mellon University, students move through in-depth activities into advanced design and control challenges using curriculum developed through the National Robotics Engineering Center. Students study robotics technology case studies and participate in hands-on lab experiences. Due to the broad application of Robotics, numerous employment opportunities exist in the Pittsburgh area and nationally. Students also develop skills related to Advanced Manufacturing with CNC, FANUC Robotic Arm, and 3-D modeling.

**Sports Medicine – Rehab Therapy and Exercise Sciences Technology (SMART-EST)** – The **SMART-EST** Program is designed for students that are looking towards the fields of: physical therapy, occupational therapy, physical rehabilitation, exercise physiology, and sports medicine. Students will develop valuable skills in diagnosis, differential diagnosis, assessment, and prevention, along with prognosis and the rehabilitation of bodily injuries and related health conditions. Students will learn the therapy and application principles of a patient care plan including: assessment, evaluation, interventions of exercise, manual therapy, modalities, and neuro re-education. Students will also develop goal setting and discharge plans for patients. Students will participate in nutrition understanding, as they learn how to develop proper diet plans for healthy individuals, and they will learn how to tailor diet plans for special populations. Students participating in the **SMART-EST** Program could be a Personal Trainer/Coach and Physical Therapy Aid out of high school. The program provides a core base that a student may build a post-secondary degree or advanced certification upon.

**Surgical Sciences** – The **Surgical Sciences** program is designed for students that are looking towards a career in surgery such as: Sterile Processing, Surgical Technology, Surgical Physician's Assistant, Surgical Anesthesia, Surgical Perfusionist, Surgical Sales Representative, Operating Room Nurse, or Surgeon. Students will develop valuable skills in sterile processing, surgical set up and instrumentation, surgical procedures, anatomy, and physiology, and more. Students will learn the full surgical patient path, starting from diagnosis to recovery. They will learn how to set up and sterilize surgical instrumentation, as well as set up, and management of a surgical sterile field. Students will learn surgical assisting, as well as the roles of the additional staff in an operating room. Students will learn to critically think, as well as manage themselves and others in tense or crisis medical situations. They will work on professionalism, interview skills, and be encouraged to explore career paths that interest them. The program provides a core base advantage that a student may build a post-secondary degree, as well as equip them to enter the workforce in Sterile Processing Departments with a significant edge over other applicants.

**Veterinary Sciences Technology** – Students enrolled in the Veterinary Assistant program will experience a wide variety of care and management techniques throughout the program. They will gain a solid foundation in the **Veterinary Sciences** program on which to build a post-secondary degree and entry level employment skills. Students will learn to maintain medical records, schedules, offer client education, explore authentic laboratory procedures, and assist with nursing and preparation for surgical duties; along with routine exams. They will learn how to execute basic animal examinations with dogs, cats and smaller animals brought in by instructors and staff. See your school counselor to sign up for a tour and apply for the program.

# **A.W. Beattie Career Center**

## **A.W. Beattie Career Center**

### **Certifications:**

Through strategic planning and partnerships with local employers, A.W. Beattie Career Center offers a variety of nationally recognized validated industry skills certifications. Senior students will participate in the annual National Occupational Competency Testing Institute exams (NOCTI).

Training related externships are required for all students wishing to earn a Performance Certificate with honors during their enrollment at A. W. Beattie Career Center. These related externship experiences can be paid or unpaid and fall into one of the following categories: Cooperative Education, Job Shadowing, Clinical Experiences or Internships, and Volunteer opportunities.

Student Success Center services are open to all students. The Center is designed to facilitate the needs of students to help them reach their full potential. Facilitators provide support services through tutoring, study guides, test assistance, and curriculum modification. Facilitators and Instructional Assistants offer support in the classrooms and labs.

### **Accreditation:**

A.W. Beattie Career Center meets all requirements as established by the PA Department of Education under the guidelines of Chapter 339. The A.W. Beattie Career Center is the first recognized United States Department of Education Green Ribbon School Award Recipient Career Center in Pennsylvania.

**Contact – [A.W. Beattie Career Center](#) for more information.**

**A.W. Beattie Career Center**

**9600 Babcock Blvd.**

**Allison Park, PA 15101**

**Phone: 412-847-1902**

**Fax: 412-366-9600**

**email: [kim.zylinski@beattietech.com](mailto:kim.zylinski@beattietech.com)**

**[sara.goodyear@beattietech.com](mailto:sara.goodyear@beattietech.com)**

A.W. Beattie Career Center does not discriminate on the basis of race, color, age, creed, religion, sex, sexual orientation, ancestry, national origin, handicap/disability, gender identity or expression, or genetic information in its programs or activities.

## Special Opportunities

- Aviation Aerospace (A.F.J.R.O.T.C.)
- Cooperative Work Experience
- IMPACT Program
- Library

### **AVIATION/AEROSPACE A.F.J.R.O.T.C.**

North Allegheny is one of 285 schools in the nation which offers the Air Force Junior R.O.T.C. program. The primary goal of the program is to develop better informed citizens about aerospace, and through leadership education, to develop responsible and confident students.

The four courses listed in the Course Selection section of the Program of Studies constitute the basic program. There are additional benefits to enrollment:

Although there is absolutely no military commitment or obligation of any kind connected with the courses, there are benefits for those who might consider a period of service in the military. These benefits apply to the Army, Navy, Air Force, and Coast Guard:

1. For those students who may enlist in the military after completing high school and AFJROTC, there is an immediate grade promotion (from E-1 to E-3). This promotion would affect starting salary.
2. There is assistance in obtaining a 4-year ROTC Scholarship for students in the top 15% of their class. These scholarships have been worth \$40,000 each in some cases.

**Additional information can be obtained by contacting the School Counseling Office at the Senior High School.**

### **COOPERATIVE WORK EXPERIENCE**

Students enrolled in Advanced Marketing or Career Development can earn credit for Work-Study through Co-op. Students spend part of the school day at a work site under the supervision of school personnel and the other part of the day fulfilling academic requirements at the Senior High School. Students should refer to the course descriptions and confer with their school counselor for additional information.

### **IMPACT PROGRAM**

#### **Grades 9, 10**

The IMPACT Program is a voluntary, regular educational program for 9th and 10th grade students who meet the NASD educational requirements. Students are recommended by teachers and/or counselors and are interviewed for the program. Enrollment in the program is limited; therefore, students are selected on a priority basis according to academic needs. The IMPACT Program teachers provide intense skill development in the core curriculum areas of mathematics, English, social studies, and science. Using a team approach, study strategies, organizational tools, and career development are also emphasized as part of the IMPACT Program's instruction.

#### **GRADE 9**

Essential English 1 – IMPACT-----	No. 1209
Essentials of Algebra 1 Part 2 – IMPACT-----	No. 3333
Intro to Physics & Chemistry – IMPACT-----	No. 4209
Euro History – IMPACT-----	No. 2309
Amer History – IMPACT -----	No. 2209

#### **GRADE 10**

Essential English 2-----	No.1210
Essentials of Geometry – IMPACT-----	No. 3334
Biology – IMPACT-----	No. 4210
World Cultures – IMPACT-----	No. 2210

## Special Opportunities

### LIBRARY

#### **Grades 9-12**

The North Allegheny School District Libraries function as an integral part of the total curriculum and seek to empower students to:

- Develop a lifelong love of literature.
- Seek and critically evaluate information.
- Understand and practice ethical use of information.
- Recognize and appreciate diverse cultures.
- Effectively communicate, collaborate, and create.

The teaching of these information and technology objectives is the joint responsibility of the librarians and the subject area teachers, who plan together to develop and deliver lessons. A sequential, problem-solving research approach is taught as students gather, interpret, and organize information for curricular projects.

Students have access to award-winning databases through District subscriptions to EBSCOhost, GALE, ABC-CLIO, Congressional Quarterly, Teen Health and Wellness, and World Book. These databases provide millions of articles from diverse, credible sources and offer additional support through leveled text, read-aloud functionality, font size change, videos, audio clips, primary sources, and recommended websites. Additionally, Noodle Tools, an online citation resource, is available to help students cite and organize their research. The collections of all the North Allegheny Libraries are accessible from the North Allegheny District homepage under Academics, Library, and through Blackboard. Resources are available to students at school and remotely.

In addition to scheduled class time, students have frequent opportunities to use the Library to pursue individual academic needs and personal interests. Libraries are open both before and after school, and students may also obtain passes to visit during study halls or lunch periods.

## Programs for Students with Individualized Needs

- Autistic Support Program (AS)
- Dear and Hard of Hearing Support Program (D/HHS)
- Emotional Support Program (ES)
- Gifted Opportunities for Advanced Learning (GOAL)
- Learning Support Program (LS)
- Life Skills Support Program (LSS)
- Student Assistance Program (SAP)

**For additional information, students and/or parents should contact the  
Special Education Office  
412-635-4109**

### **AUTISTIC SUPPORT PROGRAM (AS)**

The North Allegheny Autistic Support Program serves students who are identified as needing Autistic Support under the Type of Support listed in their Individualized Education Program. The AS Program is designed for students requiring a highly structured setting in order to make meaningful progress. Goals and Specially Designed Instruction are most often related to behavior supports, social skills training, and emotional regulation. The program emphasizes functional academics, communication, self-help, social skills, self-advocacy, vocational education, and daily living skills.

Students may receive full time, supplemental, or itinerant support services. All programs are individualized based on student need. Students will be provided with the necessary support to access the curriculum successfully.

#### **English**

<b>NAI</b>	<b>Grades 9 and 10</b>	English 9/10	No. 0108
<b>NASH</b>	<b>Grades 11 and 12</b>	English 11/12 C	No. 0361

This course is designed for students who require direct instruction in the area of functional written language as determined by the IEP.

#### **Mathematics**

<b>NAI</b>	<b>Grades 9 and 10</b>	Math 9/10	No. 0107
<b>NASH</b>	<b>Grades 11 and 12</b>	Math 11/12 C	No. 0327

This course is designed for students who require direct instruction in the area of functional mathematical computation and problem-solving as determined by the IEP.

#### **Reading**

<b>NAI</b>	<b>Grades 9 and 10</b>	Reading 9/10	No. 0106
<b>NASH</b>	<b>Grades 11 and 12</b>	Reading 11/12 C	No. 0384

This course is designed for students who require direct instruction in the area of functional reading comprehension as determined by the IEP.

## Programs for Students with Individualized Needs

### DEAF AND HARD OF HEARING SUPPORT PROGRAM (D/HHS)

<b>NAI</b>	<b>Grades 9 and 10</b>	Resource	No. 0204
<b>NASH</b>	<b>Grades 11 and 12</b>	Resource Semester 1	No. 0302
	<b>Grades 11 and 12</b>	Resource Semester 2	No. 0303
	<b>Grades 11 and 12</b>	Resource Full Year/Part Time	No. 0301

The Deaf and Hard of Hearing Support program provides students with a mild to profound hearing impairment with an education to develop optimum communication skills through sequential language acquisition and academic support.

A multidisciplinary evaluation is conducted when students are being considered for this program. Once the evaluation is completed and services are recommended, an Individualized Education Program (IEP) and Communication Plan are cooperatively designed by the general education teacher, Local Education Agency (LEA) Representative, and District personnel.

Students may receive full time, supplemental or itinerant support services, depending on need. They will be provided with all the supports necessary to assist them in accessing the curriculum successfully, including FM amplification, sign language interpreters, speech/language support and/or other accommodations. Other support services can be provided based on student need.

### EMOTIONAL SUPPORT PROGRAM (ES)

<b>NAI</b>	<b>Grades 9 and 10</b>	Interpersonal Communication	No. 0374
	<b>Grades 9 and 10</b>	ES Resource Semester 1	No. 0370
	<b>Grades 9 and 10</b>	ES Resource Semester 2	No. 0371
	<b>Grades 9 and 10</b>	ES Resource Full Year/Part Time	No. 0372
<b>NASH</b>	<b>Grades 11 and 12</b>	Interpersonal Communication	No. 0379
	<b>Grades 11 and 12</b>	ES Resource Semester 1	No. 0370
	<b>Grades 11 and 12</b>	ES Resource Semester 2	No. 0371
	<b>Grades 11 and 12</b>	ES Resource Full Year/Part Time	No. 0372

The North Allegheny Emotional Support Program serves students who are identified as needing Emotional Support under Type of Support listed in the IEP. The ES program is designed for students whose behaviors are interfering with their academic success and social integration. Students may receive services for direct academic instruction, resource, study skills or social skills. Students may receive full time, supplemental, or itinerant support services. All programs are individualized based on student need. Students will be provided with the necessary supports to access the curriculum successfully.

## Programs for Students with Individualized Needs

### GIFTED OPPORTUNITIES FOR ADVANCED LEARNERS (GOAL)

The K-12 GOAL program provides enrichment opportunities, both inside and outside of the classroom, for students whose abilities require greater challenge.

GOAL provides emphasis on developing higher order thinking skills, such as analysis, synthesis, application, and evaluation. All activities are designed to emphasize the four strands of gifted performance:

**Critical Thinking**

**Creativity**

**Problem-Solving**

**Communication Skills**

### LEARNING SUPPORT PROGRAM (LS)

The North Allegheny Learning Support Program serves students who are identified as needing Learning Support under the Type of Support listed in the IEP. The LS program is designed for students identified as having a specific learning disability, mild or moderate intellectual disability, neurological impairments, autism, and other health impairments. Students may receive services for direct academic instruction, resource, study skills or social skills.

Students may receive full time, supplemental, or itinerant support services. All programs are individualized based on student need. Students will be provided with the necessary supports to access the curriculum successfully.

<b>English</b>	<b>NAI</b>	<b>Grade 9</b>	English 9	No. 0108 (NCAA)
		<b>Grade 10</b>	English 10	No. 0207 (NCAA)
		<b>Grades 9 and 10</b>	English C	No. 0213
	<b>NASH</b>	<b>Grade 11</b>	English 11	No. 0359 (NCAA)
		<b>Grade 12</b>	English 12	No. 0367 (NCAA)
		<b>Grades 11 and 12</b>	English 11/12 C	No. 0361

This course is designed for students that continue to need direct instruction in the area of written language as determined by the IEP Team.

<b>Mathematics</b>	<b>NAI</b>	<b>Grade 9</b>	Math 9	No. 0211
		<b>Grade 10</b>	Math 10	No. 0212
		<b>Grades 9 and 10</b>	Math C	No. 0250
	<b>NASH</b>	<b>Grade 11</b>	Math 11	No. 0328
		<b>Grade 12</b>	Math 12	No. 0329
		<b>Grades 11 and 12</b>	Consumer Math 11/12	No. 0337
		<b>Grades 11 and 12</b>	Math 11/12 C	No. 0327

This course is designed for students who require direct instruction in the area of mathematical computation and problem-solving as determined by the IEP.143

## Programs for Students with Individualized Needs

### LEARNING SUPPORT PROGRAM (LS) - CONTINUED

<b>Resource</b>	<b>NAI</b>	<b>Grades 9 and 10</b>	Full Year / Part Time	No. 0201
			Semester 1	No. 0202
			Semester 2	No. 0203
	<b>NASH</b>	<b>Grades 11 and 12</b>	Full Year / Part Time	No. 0301
			Semester 1	No. 0302
			Semester 2	No. 0303

This is a period for students with IEPs which focuses on executive functioning skills. Students will learn leadership skills that will allow them to succeed in and out of the school setting. Working memory, planning/prioritization, organization, sustained attention, task initiation, and emotional control are areas relating to executive functioning that will be addressed. Students will have opportunities to practice skills learned in class through individual and group work.

**Credit .5**

#### Science/Social Studies/Health

<b>NAI</b>	<b>Grades 9 and 10</b>	SS/Sci/Health	No. 0118
<b>NASH</b>	<b>Grades 11 and 12</b>	SS/Sci/Government	No. 0350

This course is designed to provide practical information to enhance a student's independence. Topics may include current events, health, science, and government through adapted texts and periodicals. Strong emphasis is placed on safety, first aid, environmental issues, and election procedures. Health education has been coordinated with the general curriculum and is adapted to the needs of students.

#### Daily Living Skills/Vocational Education

<b>NAI</b>	<b>Grades 9 and 10</b>	Vocational Education	No. 0503
<b>NASH</b>	<b>Grades 11 and 12</b>	Daily Living Skills	No. 0391
		Vocational Resources	No. 0359

Daily Living Skills is designed to provide instruction in the area of independent living to prepare for practical experiences in the world outside of the high school environment. Topics relate to self-help, housekeeping, and food preparation skills. Vocational Education is designed to provide instruction in the area of vocational skills necessary for future employment. Flexible scheduling may be provided to accommodate for vocational experiences.



## Programs for Individual Student Needs

### LIFE SKILLS SUPPORT PROGRAM (LSS)

The North Allegheny Life Skills Support Program serves students who are identified as needing Life Skills Support under Type of Support listed in the IEP. The program is designed for students identified as having an intellectual disability which prevents them from making meaningful progress in the general education curriculum and requires intensive instruction to prepare the student to work and live in the community. Goals and Specially Designed Instruction are most often related to a Transition Plan which enhances functional skills and independent living. The program emphasizes functional academics, communication, self-help, social skills, self-advocacy, vocational education, and daily living skills.

Students may receive full time, supplemental, or itinerant support services. All programs are individualized based on student need. Students will be provided with the necessary supports to access the curriculum successfully.

#### English

<b>NAI</b>	<b>Grades 9 and 10</b>	English 9/10	No. 0108
<b>NASH</b>	<b>Grades 11 and 12</b>	English 11/12 C	No. 0361
	<b>Grades 11 and 12</b>	Vocational Resource	No. 0359

This course is designed for students who require direct instruction in the area of functional written language as determined by the IEP.

#### Mathematics

<b>NAI</b>	<b>Grades 9 and 10</b>	Math 9/10	No. 0107
<b>NASH</b>	<b>Grades 11 and 12</b>	Math 11/12 C	No. 0327

This course is designed for students who require direct instruction in the area of functional mathematical computation and problem-solving as determined by the IEP.

#### Reading

<b>NAI</b>	<b>Grades 9 and 10</b>	Reading 9/10	No. 0106
<b>NASH</b>	<b>Grades 11 and 12</b>	Reading 11/12 C	No. 0384

This course is designed for students who require direct instruction in the area of functional reading comprehension as determined by the IEP.

### STUDENT ASSISTANCE PROGRAM (SAP)

North Allegheny offers a team of teachers, counselors, nurses, and building administrators to assist students who are experiencing problems which may be interfering with their learning. Team members have been trained to gather and assess data and make appropriate recommendations for remedial learning problems. Students with chemical use and dependency or other problems can receive assistance through this program.

Students can refer themselves for help, or they can be referred by parents, teachers, or other school personnel.

## Activities

There are a variety of activities offered at the Intermediate High School and the Senior High School. Students should contact the principal for the name of the sponsor of the activities listed below.

### Grades 9 and 10

Actors Society  
American Sign Language  
Amnesty International  
Art Club  
ASAP (After School Achievement Program)  
Astronomy Club  
Basic Leadership & Development (AFJROTC)  
Best Buddies  
Book Discussion Club  
Bowling  
Cheerleading  
Chemistry Club  
Chess Club  
Chorus  
Class Council  
Computer Club  
Concert Band  
Creative Writing Club  
Dance Team  
DECA (An Association of Marketing Students)  
Drill Team  
Environment Club  
Fashion Club  
Film and Entertainment Club  
Fitness Center  
Flag Team  
Forensics/Debate  
French Club  
Future Business Leaders of America (FBLA)  
Gardening Club  
Gay Straight Alliance (GSA)  
German Club  
Global Leadership Student Club  
Guitar Club  
Health Occupational Students of America (HOSA)  
Interact Club  
Intermediate High School Fall Play  
Intermediate High School Spring Play  
Italian Club  
Jazz Ensemble  
Junior Classical League (JCL)  
Key Club  
Literary Magazine, First Draft  
Majorettes  
Marching Band  
Multicultural Student Union (MSU)  
National Art Honor Society  
Orchestra

Percussion Ensemble  
Project Lit  
Robotics Club  
SADD  
Science Bowl Club  
Ski Club  
Social Injustice Club  
Spanish Club  
Spring Musical Stage Crew  
Strolling Strings  
Student Council  
Student Support Leadership Team  
SWAT  
Table Tennis  
Talent Show  
Technology Student Association (TSA)  
Weightlifting  
Wind Ensemble  
Yearbook

### Grades 11 and 12

Actor's Society Club  
Amnesty International  
Astronomy Club  
Best Buddies  
Chamber Choir  
Cheerleaders (NASH)  
Choral Ensemble  
Color Guard  
Computer Club  
Concert Band  
Concert Choir  
Concert Percussion Ensemble  
Creek Connections  
Cultural Communications Alliance  
Dance Team  
DECA (An Association of Marketing Students)  
Environment Club  
Fall Play  
Fall Play Stage Crew  
French Club  
Future Business Leaders of American (FBLA)  
Future Filmmakers Club  
Gay Straight Alliance (GSA)  
German Club  
Golden Strolling Strings  
Health Occupational Students of America (HOSA)  
Henna Club  
Honors Wind Ensemble  
Indoor Drumline

Indoor Guard  
Interact Club  
Italian Club  
Investment Club  
Jazz Ensemble I  
Jazz Ensemble II  
Jazz Ensemble III  
Junior Class Advisors  
Junior Classical League (JCL)  
Key Club  
Korean Club  
Majorettes  
Marching Band  
Mathematics Team  
Mock Trial Team  
Model UN  
Multicultural Student Union (MSU)  
NA Fashion Club / FCCLA  
NASH Library Book Club  
NASH Photography Club  
NASH Ski and Board Club  
NASH Youth Group  
National Art Honor Society  
National English Honors Society  
National Honor Society  
NATV  
NORTH STAR (Newspaper)  
Orchestra  
Origami Club  
Percussion Ensemble  
Principal's Advisory Committee  
Quiz Team  
Robotics Club  
R.O.T.C.  
R.O.T.C. Drill Team  
SADD  
Safari (Yearbook)  
Senior Class Advisors  
Shakespeare Club  
Spanish Club  
Speech and Debate  
Spring Musical Stage Crew  
STEAMinism  
Student Council  
Symphonic Band  
Teaching Peace Initiative  
Technology Student Association (TSA)  
Ukulele Club  
Variations  
Wind Ensemble  
Winter Guard  
Z-Club

# Athletics

Students should contact the [Athletic Director's Office](#) for the name of the coach for the activities listed below:

<p><b>Fall Sports</b></p> <p>Basketball (Girls) – Middle School  Cross Country (Boys/Girls) – Middle School, Junior Varsity, Varsity  Field Hockey (Girls) – Middle School, Junior Varsity, Varsity  Flag Football * (Girls)  Football (Boys) – Middle School, Freshman, Junior Varsity, Varsity  Golf (Boys) – Junior Varsity, Varsity  Golf (Girls) – Junior Varsity, Varsity  Soccer (Boys) – Middle School, Junior Varsity, Varsity  Soccer (Girls) – Middle School, Junior Varsity, Varsity  Tennis (Girls) – Junior Varsity, Varsity  Volleyball (Girls) – Junior Varsity, Varsity  Water Polo (Girls/Boys) – Junior Varsity, Varsity</p> <p><b>Winter Sports</b></p> <p>Basketball (Girls) – Middle School, Junior Varsity, Varsity  Basketball (Boys) – Middle School, Freshman, Junior Varsity, Varsity  Bowling * (Girls/Boys) – Junior Varsity, Varsity  Diving (Girls/Boys) – Varsity  Swimming (Girls/Boys) – Varsity  Ice Hockey * (Boys) – Junior Varsity, Varsity  In-Line Hockey * (Girls/Boys) – Junior Varsity, Varsity  Indoor Track (Girls/Boys) – Varsity  Wrestling (Boys) – Junior High, Junior Varsity, Varsity  Wrestling (Girls) – Varsity  Gymnastics (Girls) – Varsity</p>	<p><b>Spring Sports</b></p> <p>Baseball – Middle School, Freshman, Junior Varsity, Varsity  Softball – Junior High, Junior Varsity, Varsity  Tennis (Boys) – Junior Varsity, Varsity  Track and Field (Boys/Girls) – Middle School, Junior Varsity, Varsity  Volleyball (Boys) – Middle School, Junior High, Junior Varsity, Varsity  Volleyball (Girls) – Junior High Gold (Grades 7-9), Junior High Black (Grades 7-8)  Lacrosse (Boys) – Sophomore, Junior Varsity, Varsity  Lacrosse * (Girls) – Junior Varsity, Varsity  Rowing * (Girls/Boys) – Varsity  Cheerleading – Middle School, Freshman, Junior Varsity, Varsity (Fall and Winter)</p> <p><b>* Indicates a Club Sport</b></p>
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# Telephone Directory

## North Allegheny Senior High School:

**Telephone: 724-934-7200**

**Direct Extension  
724-934-**

Dr. Natasha Dirda, Principal-----	7218
Mr. TJ Salopek, Assistant Principal-----	7214
Mr. Robert Bozzuto, Athletic Director-----	7238
Ms. Jennifer Rosato, Counselor (A – Dn)-----	7226
Ms. Rhonda Bielawski, Counselor (Do – J)-----	7225
Ms. Mary Insana, Counselor (K – M)-----	7275
Mr. Kevin Thompson, Counselor (N – Sh)-----	7229
Ms. Michelle Buettner, Counselor (Si – Z)-----	7223
Mr. Jeffrey Longo, Student Assistance -----	7260

## North Allegheny Intermediate High School:

**Telephone: 412-369-5530**

**Direct Extension  
412-369-**

Mrs. Caitlin Ewing, Principal -----	5463
Dr. Jenna Fraser, Assistant Principal -----	5450
Dr. John Morey, Assistant Principal -----	5460
Mr. Bryan Kiggins, Counselor (A – Dn) -----	5467
Ms. Madison Lewis, Counselor (Do – J) -----	5843
Ms. Meghan Mayhew, Counselor (K – M) -----	5485
Mr. Matthew Butler, Counselor (N – Sh) -----	5480
Ms. Rianna Liebenguth, Counselor (Si – Z) -----	5465
Mr. Douglas Brinkley, IMPACT/Student Assistance -----	5466

## Carson Middle School:

**Telephone: 412-369-5520**

**Direct Extension  
412-369-**

Ms. Katherine Krivak, Principal -----	5425
Dr. William McGahee, Assistant Principal -----	5427
Mr. Chance Petro, Counselor (A – L) -----	5421
Ms. Courtney Vadnais, Counselor (M – Z) -----	5421

## Ingomar Middle School:

**Telephone: 412-348-1470**

**Direct Extension  
412-369-**

Mr. David Deramo, Principal -----	1473
Dr. Jason Harding, Assistant Principal -----	1472
Ms. Darla Allerton, Counselor (A – L) -----	1404
Ms. Lynne Earley, Counselor (M – Z) -----	1476

## Marshall Middle School:

**Telephone: 724-934-6060**

**Direct Extension  
724-934-**

Dr. Dan Swogger, Principal -----	6036
Mr. Matt Buchak, Assistant Principal -----	6037
Ms. Shannon Salpeck, Counselor (M – Z) -----	6038
Mr. Jeff Smalley, Counselor (A – L) -----	6038

## District Administration:

**Telephone: 412-366-2100**

**Direct Extension  
412-**

Dr. Melissa Friez, Superintendent -----	369-5419
Dr. Joseph Sciallo, Assistant Superintendent of Secondary Education-----	369-5896
Dr. Michele Dowell, Assistant Superintendent of Elementary Education-----	630-5826
Dr. Amy DeLuca, Director of Student Services -----	635-4110

## Departments Chairpersons

<a href="#"><u>AFJROTC — Lieutenant Colonel Donald Accamando, NAI</u></a>	412-369-5455
<a href="#"><u>Business, Computer, and Information Technology — Jordan Langue, NASH</u></a>	724-934-7265
<a href="#"><u>English Language Arts — Jeremy Rak, NAI</u></a>	412-369-5405
<a href="#"><u>Family and Consumer Sciences — Elizabeth Gallagher, NASH</u></a>	724-934-7233
<a href="#"><u>Health &amp; Physical Education — David Schmidt, NAI</u></a>	724-369-5807
<a href="#"><u>Library — Tamara Turner, IMS</u></a>	412-348-1498
<a href="#"><u>Mathematics — Robert Bell, Jr., NASH</u></a>	412-934-7200 Ext. 35370
<a href="#"><u>Music — Robert Tozier, NASH</u></a>	724-934-7230
<a href="#"><u>School Counseling — Bryan Kiggins, NAI</u></a>	412-369-5467
<a href="#"><u>Science — Christopher Omasits, NASH</u></a>	724-934-7207
<a href="#"><u>Social Studies — Joelle Keats, NASH</u></a>	724-934-7211
<a href="#"><u>Special Education — Jamie Grace, NAI</u></a>	412-369-5530
<a href="#"><u>Technology and Engineering Education — Heath Lauster, NASH</u></a>	724-934-7200
<a href="#"><u>Visual Arts — Michael Bockoven, NAI</u></a>	412-369-5530 Ext. 60208
<a href="#"><u>World Language — Marcie Good, NASH</u></a>	724-934-7273



