

2021-2022 *Program of Studies* Course Selection

Grades 9-12

Preparing All Students for
Success in a Changing World





NORTH ALLEGHENY SCHOOL DISTRICT

2021 – 2022 Program of Studies
Course Selections for Grades 9 –12

North Allegheny Board of School Directors:

Andrew Chomos, President

Marcie Crow, Vice President

Libby Blackburn

Kevin Mahler

Richard McClure

Allyson Minton

Scott E. Russell

Elizabeth Warner

Shannon Yeakel

Patrick O'Toole, Ed.D.

Acting Superintendent of Schools
North Allegheny School District

Prepared under the direction of:

Melissa Friez, Ed.D.

Assistant Superintendent of Secondary Education/Deputy Superintendent

Jillian Bichsel, Ed.D.

Director of Curriculum, Assessment, and Professional Development

Joseph Sciullo, Ph.D.

Director of Student Services

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

Publication /Production:

Office of Secondary Education

.....
EEO and Title IX Statement

North Allegheny School District (North Allegheny) does not discriminate in its educational programs, activities or employment practices based on race, color, national origin, sex, sexual orientation, disability, age, religion, ancestry, genetic information, or any other legally protected category. Announcement of this policy is in accordance with State Law including the Pennsylvania Human Relations Act and with Federal law, including Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967 and the Americans with Disabilities Act of 1990.

For more information, please contact:
EEO and Title IX Compliance Officer
200 Hillvue Lane
Pittsburgh PA 15237
412.366.2100



**An Introduction to the 2021–2022 Program of Studies
from the Assistant Superintendent of
Secondary Education/Deputy Superintendent**

As a school district we are excited to share the *2021 – 2022 Program of Studies with you*. Each year we update and revise our academic offerings. 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 and career goals.

During the District Curriculum Review Process for each Department, new courses may be recommended for the *Program of Studies*.

Beginning with the 2021-2022 school year, the following elective courses have been added:

- Engineering Design and Development PLTW in the Technology and Engineering Education Department
- Civil Engineering and Architecture PLTW in the Technology and Engineering Education Department
- ES Resource Semester 1 in the Programs for Individual Student Needs – Emotional Support (ES)
- ES Resource Semester 2 in the Programs for Individual Student Needs – Emotional Support (ES)
- ES Resource Semester Full Year/Fulltime in the Programs for Individual Student Needs – Emotional Support (ES)

The following course names have changed in the following Departments:

BUSINESS, COMPUTER, AND INFORMATION TECHNOLOGY (BCIT)

Change from Cybersecurity and the Law (CHS) to **Cybersecurity and the Law**
Change from Computer Security (CHS) to **Computer Security**

MUSIC

Change from Mixed Choir to **Choral Ensemble**
Change from Concert Choir (F) to **Concert Choir (SA)**
Change from Concert Choir (M) to **Concert Choir (TB)**

TECHNOLOGY & ENGINEERING EDUCATION

Change from Construction Systems to **Home Maintenance and Repair**
Change Game Development (CHS) to **Game Development**
Change Advanced Game Development (CHS) to **Advanced Game Development**
Pre-requisite: Have taken Game Development
Change Electricity and Electronics (CHS) to **Electricity and Electronics**
Change Exploring Robotic Engineering (CHS) to **Exploring Robotic Engineering**
Change Advanced Robotic Engineering from Semester/FT to **FY/FT**

(Continued...)

**An Introduction to the 2021–2022 Program of Studies from the
Assistant Superintendent of Secondary Education/Deputy Superintendent**

VISUAL ARTS

Change from AP Studio Art (CHS) to **AP Art and Design (CHS)**

**PROGRAMS FOR INDIVIDUAL STUDENT NEEDS
LEARNING SUPPORT (LS)**

Change from Math 9 A to **Math 9**
Change from Math 10 A to **Math 10**
Change from SS/Sci/Health 9 to **SS/Sci/Health 9/10**
Change from Math 11 A to **Math 11**
Change from Math 12 A to **Math 12**
Change from English 11 A to **English 11**
Change from English 12 A to **English 12**
Change from Consumer Math 11 A to **Consumer Math 11/12**

In this document you will also find the Graduation Requirements for each class of students. Students should review expectations related to the Keystone Exams based upon 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 2021 – 2022 school year.

Melissa R. Friez, Ed.D.
**Assistant Superintendent of Secondary Education/
Deputy Superintendent**

Purpose of the Program of Studies

The *Program of Studies* is a comprehensive document outlining the course offerings, course sequence, and related requirements for high school students. Minimally, high school students at North Allegheny must meet the graduation requirements outlined in Board Policy #217. Students are required to schedule at least seven (7.0) credits per year in grades 9–12.

Students have certain subject area requirements each year that must be completed. The remaining credits are scheduled as elective courses according to the interests of the student and availability of that elective course. All courses are organized by Department and also by grade level. If courses are required within a Department at a particular level, it is delineated in the *Program of Studies*. Please note that certain elective courses are only available in specific grade levels. For example, a sophomore may not take an elective course available in grade 11 or 12 at NASH. While the District will provide the next sequential course in limited subject areas (i.e., Mathematics, Science, and World Languages), students will only receive one course in that area. Any additional courses in that subject area are considered as electives.



NORTH ALLEGHENY SCHOOL DISTRICT

2021 – 2022 Program of Studies, Grades 9– 12

Table of Contents

	Page #
General Information	
Comprehensive Plan	1
Scheduling Timeline	2
Graduation Requirements and Summary	3
• High School Course Sequence for Classes of 2022, 2023, 2024, and 2025.....	4
Plan Ahead Sheet.....	5
College Testing Terms	
• Advanced Placement Exams (AP)	6
• ACT	6
• PSAT/NMSQT	6
• SAT	6
• Optional SAT Essay.....	7
Scheduling Terms	
• Acceleration	7
• Advanced Placement Program	7
• Auditing a Course.....	8
• Credit.....	8
• Credit Recovery and Grade Replacement	8
• College in High School (CHS).....	8
• Elective Courses	9
• Graduation Requirements	10
• Early Graduation Requirements	10
• Honors Courses	10
• Independent Study	10
• Full Time Courses	10
• Part Time Courses	10
• Required Courses	10
• Semester Courses	10
• Sequential Courses.....	10
• Schedule Changes.....	11
• Waiver Procedure.....	11
• Withdrawal from Course(s)	11
• NCAA Course of Study for Athletes	12
Academics	
Blended Learning	16
Class Rank	16
College Admissions	16
Phasing Courses	16
Criteria for Weighting of Honors Courses.....	17
Weighting of Grades.....	18
Transcript.....	18
Career Clusters	19

2021–2022 Program of Studies, Grades 9–12

Table of Contents (continued)

Course Descriptions

AFJROTC/Aerospace Science	25
Business, Computer, and Information Technology	27
Computer Education	35
English Language Arts	37
Family and Consumer Sciences	51
Health / Physical Education	56
Mathematics	60
Mathematics Phase Sequence Chart	73
Music	74
Science	82
Science Phase Sequence Chart	91
Social Studies	92
Technology and Engineering Education	100
Visual Arts	108
World Languages	115
World Language Philosophy Statement	116
A.W. Beattie Career Center	122

Special Opportunities

IMPACT Program	127
Aviation / Aerospace (A.F.J.R.O.T.C.)	127
Cooperative Work Experience	127
Library	128

Programs for Individual Student Needs

Gifted Opportunities for Advanced Learners (GOAL)	129
Emotional Support (ES)	129
Deaf and Hard of Hearing Support Program (D/HHS)	129
Learning Support Program (LS)	130
• English	130
• Mathematics	130
• Resource	130
• Social Studies/Science/Health	131
• Daily Living Skills	131
Life Skills Support Program (LSS) English, Mathematics, Reading	131
Autistic Support Program (AS) English, Mathematics, Reading	132
Student Assistance Program	132

Activities

Athletics

Telephone Directory

Department Chairpersons



NORTH ALLEGHENY SCHOOL DISTRICT

Comprehensive Plan 2014—2021

Mission Statement

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

Vision Statement

The vision of the North Allegheny School District is to be a premier school district that inspires excellence in academics, athletics, arts, and activities for every student every day.

Shared Values

We will exceed the expectations of those we serve.

We believe:

- All individuals can learn.
- Learning is a life-long process that occurs inside and outside of the classroom.
- Learning occurs best in a safe, nurturing, and respectful environment.
- Effective teaching is both an art and a Science that results in increased levels of critical thinking, achievement, and growth.
- Embracing, valuing, and promoting diversity enriches our community and learning experiences.
- Integrity, trust, compassion, and open communication are hallmarks of an excellent educational community.
- Educational excellence requires effective leadership, high expectations, teamwork, and the responsible utilization of resources.
- Collaboration among students, parents, staff, and community enriches our ownership of the educational process.

Goals

Goal #1: Academic Achievement – We will promote the achievement of all students at the highest level of their individual abilities in all areas.

Goal #2: Safe and Supportive Schools – We will provide a safe, welcoming, and well-maintained learning environment.

Goal #3: Stewardship – We will maximize efficiencies in all areas of the District for the continuous improvement and optimization of resources.

Goal #4: Curriculum and Professional Practice – We will offer high quality instruction built upon a dynamic curriculum that fosters creativity, critical thinking, and life-long learning.

Goal #5: Innovation – We will innovate our educational practices and become leaders in technology integration.

Goal #6: Community Engagement – We will foster a collaborative culture that invites and celebrates community support and participation.

2021–2022 Scheduling Timeline

February 8-12	Teachers notify students of next year course approvals.
February 22	8 th -11 th School Counselors share scheduling presentation with students.
Feb 22 - Mar 5	School Counselors are available for scheduling discussions.
February 25	NAI Virtual Elective and Transition Fair for 8 th and 9 th grade parents and students (parochial and new to NASD are invited):
February 25	Principals/Counselor Virtual Coffee – 7:00 a.m. for 8 th and 9 th grade parents
March 5	Deadline for grades 8–11 students request to be completed and submitted.
March 5	Waivers due to respective School Counseling Offices for grades 8–11.
March 8-12	Counselors finalize scheduling process.
March 12-15	Scheduling Letter with final course approvals and selections emailed home to parents.
March 15	Final changes submitted to School Counseling offices (no changes accepted after this date).
April 1	End of Third Nine weeks
August 23	First Day of School

General Information

Graduation Requirements

At North Allegheny, a minimum of 24.0 credits is required for graduation from high school.

These credits must include:

English	4.0 credits
(includes culminating projects)	
Social Studies	4.0 credits
Mathematics	3.0 credits
Science (includes Biology)	3.0 credits
S.T.E.M.	1.0 credit
Healthy & Physical Education	(.5) credit/year
	2.0 credits
Wellness for Life	.5 credit
Electives	6.5 credits
Total Credits	24.0 credits

Scheduling Requirements for Students

1. 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.
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.

In addition to the scheduling requirements above, students must demonstrate mastery of the PA Core Standards on the Keystone Exams to graduate. Keystone Exams are typically taken during the spring of the year in which a student is enrolled in the appropriate course, regardless of the grade he or she is in. The current Keystone Exams are Algebra 1, Biology, and Literature. If a student does not receive a score of "Advanced" or "Proficient" 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, the District will provide opportunities for remediation and the demonstration of mastery in an alternative manner.

General Information

Classes of 2022, 2023, 2024, and 2025 Course Sequence

North Allegheny Intermediate High School Course Sequences Grade 9 (2025)	North Allegheny Senior High School Course Sequences Grade 11 (2023)
Required English 1.0 credit (specific required courses are on page 28) Social Studies 1.0 credit (specific required courses are on page 67) Mathematics 1.0 credit (see Mathematics course offerings listed on page 45) Science 1.0 credit (specific required courses are on page 60) Health & Physical Education .5 credit Wellness for Life .5 credit Required Courses 5.0 credits Elective Courses upto 3.0 credits <i>(Must schedule at least 2.0 Elective Course credits)</i>	Required English 1.0 credit (specific required courses are on page 30) Social Studies 1.0 credit (specific required courses are on page 67) Mathematics * 1.0 credit Science * 1.0 credit Health & Physical Education .5 credit Required Courses 4.5 credits Elective Courses upto 3.5 credits <i>(Must schedule at least 2.5 Elective Course credits)</i> <i>* At least three total credits each of Math and Science are required for graduation.</i>
Grade 10 (2024)	Grade 12 (2022)
Required English 1.0 credit (specific required courses are on page 29) Social Studies 1.0 credit (specific required courses are on page 67) Mathematics 1.0 credit (see Mathematics course offerings listed on page 45) Science 1.0 credit (specific required courses are on page 60) Health & Physical Education .5 credit Required Courses 4.5 credits Elective Courses upto 3.5 credits <i>(Must schedule at least 2.5 Elective Course credits)</i>	Required English 1.0 credit (specific required courses are on page 30) * Social Studies ** 1.0 credit Health & Physical Education .5 credit Required Courses 2.5 credits Elective Courses upto 5.5 credits <i>(Must schedule at least 4.5 Elective Course credits)</i> <i>*A total of four credits in specific required English courses are required for graduation</i> <i>** Students who attend A.W. Beattie Career Center are not required to take Grade 12 Social Studies</i>

By Graduation for the Classes of 2022, 2023, 2024, and 2025

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 19 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				

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.

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 Writing Test is an optional essay test that measures writing skills emphasized in high school English classes and in entry level college composition courses. The test consists of one writing prompt that describes two points of view on an issue, and students write a response about their position on the issue.

The ACT is given in September, October, December, February, April, and June of each year at North Allegheny Senior High School. High school seniors who take the ACT for admission purposes should take the test early in their senior year. Juniors are also encouraged to take the test. 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.

PSAT and the National Merit Scholarship Qualifying Text (NMSQT)

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

Students who choose to take the PSAT/NMSQT must register to do so and assume the related costs. Registration materials are available in the School Counseling 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 NASD 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.

The SAT includes four parts: Reading, Writing and Language, Mathematics, and the optional SAT Essay. 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.

(Continued...)

Optional SAT Essay

The optional SAT Essay is similar to a typical college writing assignment that requires a student to analyze text and explain how the author builds an argument to persuade an audience. Students will be asked to support their explanation with evidence from the passage. This test is optional, but some colleges require it.



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. AP courses are weighted in computing QPA. North Allegheny offers AP courses in:

Art and Design	English, Grades 11 & 12	US Govt. & Comp. Pol
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 Principals	Latin	Spanish Language and Culture
Computer Science	Music	Statistics
Economics (Macro-Micro)	Psychology	

Refer to individual course descriptions for additional information.

(Continued...)

Scheduling Terms (continued)

Auditing a Course

Occasionally, students may wish to learn about a subject area without officially enrolling in the course. It is possible for students to audit a course if space is available and the teacher gives permission. While an audited course carries no grade or credit, all course requirements and attendance standards must be met.

Requests to audit a course must be made by day 15 of the school year. Students who request an audit will receive a Pass/Fail grade and after approval, students may not request a changeover to take the course for credit.

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 and Grade Replacement

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, which 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.

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. Students must receive approval from their school counselor for this option prior to the student scheduling the course.

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 right 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.

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/

Business, Computers, and Information Technology

Course	Course #	University
Business Communications	7905	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
Webpage Design	7908	La Roche University (Grades 10-12 only)

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
Honors Shakespeare	1911	La Roche University
Journalism 11	1803	La Roche University
Speech	1805	La Roche University

Family and Consumer Sciences

Course	Course #	University
Child Development	8704	La Roche University

Scheduling Terms (continued)

Mathematics

Course	Course #	University
AP Calculus AB	3012	La Roche University
AP Calculus BC	3022	La Roche University
AP Computer Science	3011	La Roche University
AP Statistics	3014	La Roche University
Honors Calculus	3422	La Roche University
Honors Pre-Calculus with 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	4011	La Roche University
AP Chemistry	4012	La Roche University
AP Physics 1 & 2	4082	La Roche University

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
Honors 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 and Russia: 1945-present	2712	La Roche University
Multicultural Experience	2610	La Roche University
Sociology	2911	La Roche University

Technology and Engineering Education

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

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 German IV	5509	La Roche 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

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.

Graduation Requirements

The North Allegheny School District's graduation requirements are highlighted in Board Policy #217. The specific course and credit requirements are noted in the General Information section on page 4. In addition, Chapter 4 of the Pennsylvania School Code notes that students must demonstrate mastery of the PA Core Standards on the Keystone Exams. Keystone Exams are typically taken during the spring of the year in which a student is enrolled in the appropriate course, regardless of the grade he or she is enrolled. For instance, a student will take the Biology Keystone Exam when he or she is enrolled in a Biology course in 9th or 10th grade. If a student does not receive a score of "Advanced" or "Proficient" 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, the District will provide opportunities for remediation and the demonstration of mastery in an alternative manner.

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 9th or 10th grade counselor to review the Early Graduation process.
- Schedule and maintain exactly 8 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 Keystone)

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 for the purpose of computing 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 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.

Full Time Courses

Full time courses meet 5 times each week.

Part Time Courses

Part time courses meet 2 or 3 times per week.

Required Courses

A required course must be taken by all students. Examples of required courses are English, World Cultures, and Health and Physical Education. These courses are necessary to meet graduation requirements. Students should refer to the Graduation Requirements section to identify which specific courses are required each year.

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 .5 credit.

Sequential Courses

Courses taught in sequence build on skills and theories learned in earlier courses. It is unlikely that a student receiving a "D" in one course in a sequence will have a satisfactory experience in the next course in the sequence. Examples of sequential courses are found in Business, Computer, and Information Technology, Mathematics, and World Languages.

Schedule Changes

All students have an opportunity in the spring of each year to select courses appropriate to their needs. Students are also permitted to adjust their course selections prior to **March 15, 2021**. **Following this date, all course selections will be considered final, and schedule change requests will only be considered for the following reasons:**

1. Mechanical error. Example: Course left off schedule.
2. Level change (that does not require a waiver). Example: Approved and scheduled for Honors English 3 but unable to meet the course demand; needs to be rescheduled into Academic English 3 if seats are available in the class. Level changes can only occur within the first 20 days of school. After day 20, level changes will not be permitted.
3. Schedule a course to meet graduation requirement. Example: Failed required course and must drop elective or study hall to schedule a make-up course.
4. Fill study hall. Example: Replace study hall with an elective course without adjusting any other parts of schedule and if seats are available in the class and within first five school days.

Waiver Procedure

Philosophy

A waiver is a contract between the student and parent(s) and the School District. It provides a course placement which supersedes the teacher-approved level. Students who pursue a waiver must 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. Additionally, students are reminded that they may not waive through course prerequisites to seek a higher-level course. Students who attempt to waive into higher-level courses in the same content area in consecutive years may be denied entrance into the higher-level course.

Procedures

- The current teacher shares approved course level with the student.
- If the parent/student indicates intent to opt for a course other than the approved course:
 - Communication is initiated by the parent and student to the appropriate teacher, School Counselor, or Administrator. Information is shared with the parent and student regarding the approved course level, student achievement, and past performance of waived students in the course being considered.
 - If a waiver contract is still desired, the waiver form is given to the student by the current teacher. The student is responsible to obtain all the needed signatures on the form except for the Principal's signature. **All waivers for students in grades 8-11 are due on March 5, 2021.** This submission implies the acknowledgment of the conditions identified on the form. Any appeal to waiver into a class past the **March 5, 2021** deadline must be made to the Building Principal. The Principal will consult with appropriate staff members on the matter prior to making a judgment on the appeal. Teachers and counselors do not have the authority to grant exceptions to this deadline.
- A list of waived students is generated by the School Counseling Office in each building and is distributed to the Department Chairperson and Administration by the end of the school year.
- Students cannot waive past a prerequisite course.
- Students who waive into a course for which they are unprepared will have the opportunity to transfer to a lower level. **However, all student grades in the course into which the student waived will be transferred to the new course, and schedules may not be able to be changed based on the current enrollment of courses into which the student is attempting to transfer.**
- If a student does withdraw from a course for which a waiver contract has been signed, one of the following consequences will occur for a full year course. (For a semester course, the 40 is replaced with a 20).

If withdrawal occurs . . .

- during days 1-15 a change in the course may be made without a notation appearing on the student's transcript.
- after the 15th day, a "W" will be placed on the official high school transcript. There will be no exceptions.
- beyond the 40th day of the year or the 20th day of the semester for a semester course an "E" will be placed on the official high school transcript. There will be no exceptions.
- ***all grades from the course from which the student has waived will transfer to the new class the student selects.***

Withdrawal from Course(s)

A STUDENT WILL RECEIVE A FAILING GRADE FOR COURSES DROPPED AFTER 20 DAYS FOR A SEMESTER COURSE AND AFTER 40 DAYS FOR A FULL YEAR COURSE. The "E" grade will be included in the QPA calculation.

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, 2021**. 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 for more details.

Division I

If you want to participate in athletics or receive an athletics scholarship during your first year and be considered a Full Qualifier, you must:

- Graduate from high school;
- Complete these 16 core courses:
 - Four years of English;
 - Three years of Mathematics (Algebra 1 or higher level);
 - Two years of natural or physical Science (including one year of lab science if offered by your high school);
 - One extra year of English, Mathematics, or natural/physical Science;
 - Two years of social Science; and
 - Four years of extra courses (from any category above, or world language, non-doctrinal religion, or philosophy)
 - Ten of the 16 core courses must be complete before the seventh semester (senior year) of high school.
 - Seven of the 10 core courses must be in English, Mathematics, or Science.
 - Earn a minimum Core-Course GPA of 2.300; and
 - Earn a combined SAT or ACT sum score that matches your core-course grade-point average and test score sliding scale (for example, a 2.400 core-course grade-point average needs an 860 SAT score or 71 ACT sum score).

If you want to participate in athletics or receive an athletics scholarship during your first year and be considered an Academic Redshirt, you must:

- Graduate from high school;
- Complete 16 core courses;
- Earn a minimum Core-Course GPA of 2.000;
- Complete 16 core courses
- Earn a combined SAT or ACT sum score that matches your core-course grade-point average and test score sliding scale (for example, a 2.400 core-course grade-point average needs an 860 SAT score or 71 ACT sum score.)

Division II

Any core-courses used toward your initial eligibility must be completed prior to full time collegiate enrollment. If you enroll full time in a Division II college and want to participate in athletics or receive an athletics scholarship during your first year, you must:

- Graduate from high school;
- Complete these 16 core courses:
 - Three years of English;
 - Two years of Mathematics (Algebra 1 or higher level);
 - Two years of natural or physical Science (including one year of lab Science if offered by your high school);
 - Three years of English, mathematics, or natural/physical Science;
 - Two years of social Science; and
 - Four years of additional core-courses (from any category above, or world language, non-doctrinal religion, or philosophy).
 - Earn a 2.0 grade-point average or better in your core-courses.

And

Scheduling Terms (continued)

- Earn a combined SAT score of 820 or an ACT sum score of 68. For individuals enrolling at a college or university in Puerto Rico, earn a combined Prueba de Aptitud Académica score of 730.

The following are updates for any college-bound student-athlete first entering an NCAA Division II college or university on or after August 1, 2021. Students may be considered a Qualifier, Partial Qualifier, or a Non-qualifier. Please visit www.eligibilitycenter.org for more details.

- Complete 16 core-courses (same distribution as the current requirements);
- Meet the sliding scale of core-course grade-point average (minimum of 2.2) and SAT/ACT sum score; and Graduate from high school.

Division III

Division III colleges and universities develop student-athlete potential through a holistic educational approach that includes rigorous academics, competitive athletics, and opportunity to pursue many interests and passions. Student-athletes are responsible for their own paths and are provided with many opportunities to develop within a comprehensive educational experience. Division III minimizes the conflicts between athletics and academics through shorter playing and practicing seasons, a lower number of contests, no redshirting or out-of-season organized activities, and a focus on regional in-season and conference play.

Division III college-bound student-athletes are not certified by the NCAA Eligibility Center because Division III colleges and universities each set their own admissions standards and there are no initial-eligibility requirements in the division. College-bound student-athletes should contact their Division III college or university regarding policies on admission, financial aid, and athletics eligibility.



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. 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.

ACADEMIC REQUIREMENTS

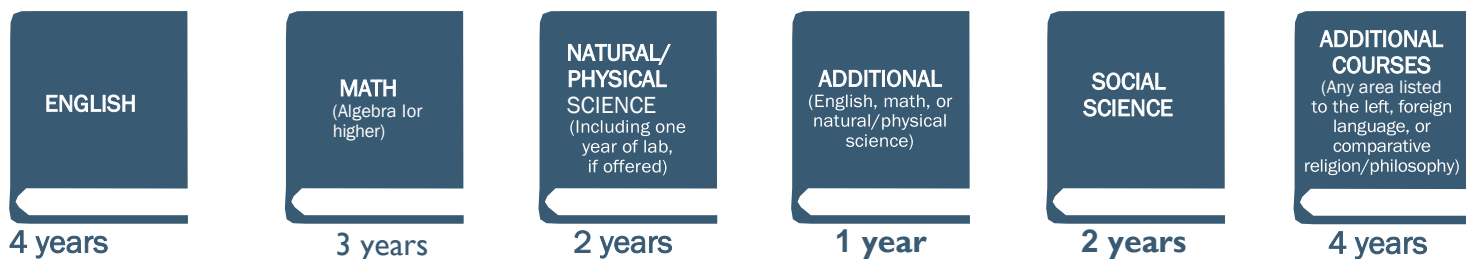
To play sports at a Division I or II school, you must graduate from high school, complete 16 NCAA-approved core-courses, earn a minimum GPA and earn an ACT or SAT score that matches your core-course GPA.

CORE COURSES

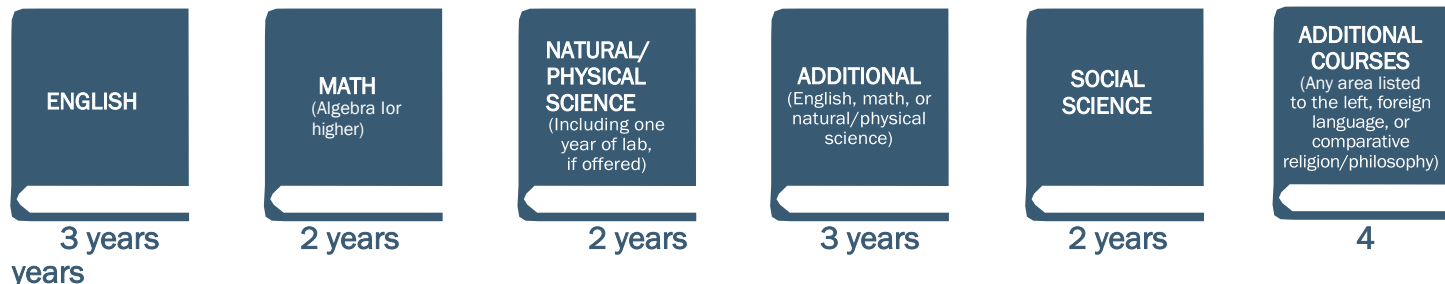
Only courses that appear on your high school's list of NCAA core-courses will count toward the 16 core-course requirements visit: eligibilitycenter.org/courselist for a full list of your high school's approved core-courses. Complete 16 core-courses in the following areas:

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.

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.



HIGH SCHOOLTIMELINE

9TH 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 eligibilitycenter.org/courselist
- Sign up for a free Profile Page at eligibilitycenter.org for information on NCAA requirements.

10TH 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 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.

11TH 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.

12TH 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 scores 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 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 list will receive a certification.

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

9th Grade

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

4 core courses

10th Grade

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

4 core courses

11th Grade

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

4 core courses

12th Grade

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

4 core courses

For more information: ncaa.org/playcollegesports | eligibilitycenter.org
Search Frequently Asked Questions: ncaa.org/studentfaq

Follow us: @NCAAECEC @playcollegesports @ncaaec



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 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. 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.

College Admissions

Requirements for admission to college usually go far beyond the minimum requirements for high school graduation. College-bound students should consult websites or catalogs of colleges in which they are interested to be sure that they are selecting the right courses.

Many colleges expect students to schedule at least two consecutive years of a World Language at the high school level. Highly selective colleges often require serious applicants to take more challenging courses (Advanced Placement and Honors) whenever possible. Students with questions or concerns about course requirements for college should contact their School Counselor.

Phasing of Courses

In the academic course areas of English, Science, Social Studies, and Mathematics, courses are phased according to difficulty and complexity of skills and content. Phasing indicates the level of sophistication in a particular course. Students and parents should read phasing definitions carefully to assist in making the most appropriate selection of courses. A student may qualify for a Phase IV course in one area but be in a Phase II course in another. Course descriptions list phases when appropriate.

Phase I

Phase I courses emphasize the basic skills of the subject. These courses provide practice in learning and applying the basic skills. Teacher and counselor approvals are required for Phase I courses. The IMPACT Program at the Intermediate High School and the Essentials of English and Fundamentals of Modern American History courses at the Senior High School are examples of Phase I courses.

Phase II

Phase II courses place emphasis on the continued application of core skills in a specific subject area. Students should select this level if they wish to devote additional effort in refining, reviewing, and practicing skills to demonstrate proficiency in the subject area. Most Phase II courses generally utilize the same rigorous academic content as Phase III courses, thereby meeting the eligibility criteria for Phase III and falling under both categories. The vast majority of Phase II students move on to four-year colleges and other varieties of post-secondary education upon graduation. World Cultures at the Intermediate High School and Environmental Science at the Senior High School are examples of Phase II/III courses.

Phase III

Phase III courses are designed for students who are college-bound or those with better than average ability. Students in this phase display a strong command of core skills and can meet the demands required of the rigorous academic content. Higher-level thinking skills are emphasized, as students demonstrate proficiency through a variety of educational modules. Academic English 1 and 2 at the Intermediate High School and Academic English 3 and 4 at the Senior High School are examples of Phase III courses.

Phase IV

Phase IV courses are the most challenging ones in each subject area. Critical thinking, writing, and research skills are emphasized, and material is covered at a rapid pace. Strict prerequisites are required for Phase IV courses. Honors courses and Advanced Placement courses are examples of Phase IV courses.

Criteria for Weighting Honors Courses

The following criteria are used to determine if a course is designated as an Honors level course. Meeting several of these criteria does not ensure such designation, nor is the list all-inclusive. However, addressing each course's specific adaptations to the criteria is considered critical. Each course is evaluated on its individual merits by members of the appropriate department and the Department Chairperson, the Curriculum Senate, the Secondary Support Team, and the relevant Assistant Superintendent. Final recommendations are submitted to the Superintendent of Schools, and the Board of School Directors for approval.

1. Honors level courses must have distinct features in terms of extended content and additional workload, which set them apart from regular high school courses in the same subject.
2. Honors level courses must have appropriate prerequisites for admission.
3. Honors level courses are for students possessing a high degree of proficiency prior to enrollment in the class. Factors to be considered include: previous course work, grades, Q.P.A., class rank, achievement test scores, diagnostic tests, and/or teacher approval.
4. Honors level courses are taught at an accelerated pace. Students are expected to function and to be evaluated at higher cognitive levels.
5. Honors level courses require students to demonstrate advanced communication skills.
6. Honors level courses may have the same name as another course in the subject area; however, it is a more comprehensive, in-depth study of the subject matter. It is more rigorous and challenging than a course with a similar title.
7. Honors level courses are primarily designed for and geared to address the abilities and needs of Phase IV and/or advanced students.
8. Honors level courses are part of an accelerated/advanced program.
9. Honors level course content is designed to enable students to perform better on achievement or placement tests, but not specifically on Advanced Placement examinations.
10. Honors level courses must have a comprehensive final student evaluation.

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

Honors Factor = .125

AP/Honors Weight = (“Earned Credits” X Appropriate Factor) / # semesters completed

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

Cumulative QPA – Includes 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

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. 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. Please note that a student must attend four consecutive semesters at North Allegheny to be considered for Top Scholar recognition in their senior year.

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

North Allegheny Graduation Requirements:

24 Credits Total

English 4 credits

Social Studies 4 credits
(3 credits if you attend Beattie for 2 years)

Mathematics 3 credits
(recommend 4)

Science (includes Biology) 3 credits
(recommend 4)

Health and Physical Education 2 credits
(.5 credit/year)

Wellness for Life .5 credits

Electives (Arts & Humanities, other) 6.5 credits

S.T.E.M. 1 credit
(Science, Technology, Engineering, Mathematics)



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 & Related Services
Agricultural Business
Business Administration & Management
Business/Commerce General
Finance & Financial Management
Hospitality Administration/Management
Marketing
Sales & Marketing Operations

Business – 2–Year Programs:

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

Communications – 4–Year Programs:

Journalism
Communication & Media Studies
Public Relations & Advertising
Communication
Radio, Television & 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

Business, Computer, and Information Technology:

9-10
Intro to Business
Accounting 1 & 2
Microsoft Office Applications 1 & 2
11-12
Accounting 1 & 2
Advertising & Promotion
Business Communications
Business Management
Advanced Marketing
Entrepreneurship
Financial Literacy
Honors Advanced Accounting 1 & 2
Honors Finance & Investments
Honors International Business
Marketing

English:

9-10
Leadership 1 & 2
Intro to Journalism:
NAEye News
Yearbook
Intro to Television
Creative Writing
Intro to Theater
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
Independent Living

11-12

The Real World
Foods for You
Foods Americana

Mathematics:

(Please refer to District Mathematics Phase 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
Television Production
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
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



Technical Careers

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

College Majors

Engineering – 4–Year Programs:

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

Engineering – 2–Year Programs:

Agricultural & Agricultural Operations
Automotive Technology

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; Web Site 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

Business, Computer and Information Technology:

9-10
Microsoft Office App. 1 & 2

11-12
Web Page Design (9-12)
Microsoft Office App. 1 & 2
Intro to Information Science
Cybersecurity and the Law
Computer Security
Financial Literacy

Family & Consumer Sciences:

9-10
Adventures in Foods
International Foods
Fashion & Design

11-12
Foods Americana
Foods for You
Fashion Art
Interior Design

Mathematics:

Personal Finance
AP Statistics
Probability & Statistics
AP Computer Science
Honors Linear Algebra
Computer Sciences A, B, & C
AP Computer Science Principles

(Please refer to District Mathematics Phase Sequence Chart)

Music:

Electronic Music
Advanced Electronic Music
Computer Multimedia Arts

Science:

9-10
Honors Chemistry

11-12
Academic Physics
Honors Physics
AP Physics 1
AP Physics 2
Academic Chemistry
Honors Chemistry
AP Chemistry
Honors Environmental Science
Honors Earth Science
Honors Meteorology

(For Allied Health and Medicine)

9-10
Honors Biology

11-12
Honors Organic Chemistry
Honors Anatomy & Physiology
Academic Anatomy & Physiology
AP Biology
Honors Environmental Science

Technology & Engineering Education:

9-10
Exploring CADD
Manufacturing 1
Exploring Emerging Technologies
Exploring Creation and Innovation
Electricity & Electronics
Exploring Robotic Engineering
Honors Intro to Engineering Design
Honors Principles of Engineering

11-12
Exploring CADD
Mechanical CADD
Architectural CADD
Emerging Technologies
Materials
Robotics
Advance Stage Technology and Production
Honors Intro to Engineering Design
Honors Principles of Engineering
Honor Computer Integrated Manufacturing
Honors Civil Engineering and Architecture

(For Computer & Information Specialties)

9-10

Game Development
Electricity & Electronics
Intro to Media Production
Advanced Media Production:
Broadcasting

11-12

Game Development
Advanced Game Development
Honors Computer Integrated Manufacturing

Visual Arts

9-10
Digital Imaging & Media Arts
Introduction to Pottery & Sculpture
Arts and Crafts

11-12

Photography 1 & 2
Pottery 1 & 2
Sculpture
Jewelry & Metalsmithing
Computer Multimedia Arts

World Languages:

4-year sequence of at least one language

A.W. Beattie Career Center
10 - 12

Science & Technology Careers

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



College Majors

Engineering – 4-Year Programs:

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

Engineering – 2-Year Programs:

Agricultural & Agricultural Operations
Automotive Technology
Drafting/Design Technologies
Electrical Engineering Technology
Mechanical Engineering Technology

Medicine & Allied Health – 4-Year Programs:

Communication Disorders
Medicine
Nursing

Medicine & Allied Health – 2-Year Programs:

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

Science & Math – 4-Year Programs:

Animal Sciences
Biology
Plant Sciences
Chemistry
Geography & Cartography
Mathematics & Statistics
Science Education

Science & Math – 2-Year Program:

Biological Sciences

Possible Careers/Occupations:

Engineering & Technologies – Architect, Engineers (for example, 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:

Family & Consumer Sciences:

9-10

International Foods
Adventures in Foods
Intro to Sports Nutrition
Child Development

11-12

Foods for You
Foods Americana
Sports Nutrition
Interior Design
Child Development

Health and Physical Education:

9-10

Advanced Physical Education

11-12

Focus on Fitness

Mathematics:

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

Music:

9-12

Music Theory I & II
Choir
Band
Orchestra

11-12

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

Science:

9-10

Honors Chemistry

11-12

Academic Physics
Honors Physics
AP Physics 1
AP Physics 2
AP Physics 1 & 2
AP Physics C
Academic Chemistry
Honors Chemistry
AP Chemistry
Honors Environmental Science
Honors Earth Science
Honors Meteorology
(For Allied Health and Medicine)

9-10

Honors Biology

11-12

Honors Organic Chemistry
Honors Anatomy & Physiology
Academic Anatomy & Physiology
AP Biology
Honors Environmental Science

(For Mathematics and Science)

9-10

Honors Biology
Honors Chemistry

11-12

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 Anatomy & Physiology
AP Biology
Honors Earth Science

Social Studies:

9-10

Psychology

11-12

AP Psychology
Psychology
Sociology
Law and Justice
Honors History of East Asia
Honors History of Europe
Honors American Foreign Policy
Honors Introduction to Philosophy
Multicultural Experience

Technology & Engineering Education:

9-10

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

11-12

Exploring CADD
Mechanical CADD
Architectural CADD
Emerging Technologies
Creation and Innovation
Robotic Engineering

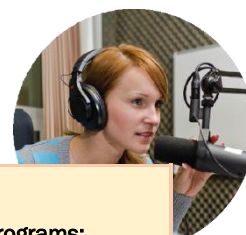
Career Clusters

Science & Technology Careers (Continued from page 22)

Advanced Stage Technology and 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 and Development	Technology & Engineering Education: (For Mathematics and Science) 9-10 Exploring Emerging Technologies Game Development Electricity & Electronics 11-12 Tech Design & Application Game Development	Advanced Game Development App 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 Computer Multimedia Arts Honors Art AP Art and Design World Languages: 4-year sequence of at least one language A.W. Beattie Career Center 10 - 12
---	--	---	--

Arts 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.



College Majors

Arts – 4–Year Programs: Design & Applied Arts Communications & Media Studies Drama/Theatre Arts English Language & Literature Fine and Studio Arts	Foreign Language & Literatures Language Arts Education Music – Music Education Arts – 4–Year Programs: Design & Applied Arts	Communications – 4–Year Programs: Communications & Media Studies Journalism 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 Marketing Advanced Marketing Advertising & Promotion Web Page Design (9-12) English: 9-10 Introduction to Journalism: NAEye News Yearbook Leadership 1 & 2 Intro to Television Production Intro to Theater Intro to Film Speech and 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 2 3 Film Studies Broadcasting Family & Consumer Sciences: 9-10 Fashion & Design 11-12 Fashion Arts Fashion Merchandising Interior Design Mathematics: <i>(Please refer to District Mathematics Phase Sequence Chart)</i> Music: 9-12 Songwriting I & II Electronic Music Advanced Electronic Music Music Theory I & II Choir Band Orchestra	11-12 Computer Multimedia Arts Honors Music Theory AP Music Honors Chamber Choir Technology & Engineering Education: 9-10 Exploring Creation and Innovation 11-12 Game Development Advanced Game Development Creation and Innovation Materials 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 Computer Multimedia Arts Senior High Drawing & Design Senior High Painting & Color Sculpture Jewelry & Metalsmithing World Languages: 4- year sequence of at least one language A.W. Beattie Career Center 10 - 12
---	--	---	---

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 Program:

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 – 4–Year Program:

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
Sports and Entertainment Management
Career Development

English:

9-10
Leadership 1 & 2
Speech and Debate
11-12
Speech
Honors Argument

Family & Consumer Sciences:

9-10
Introduction to Child Development
Independent Living
International Foods
11-12
Child Development (CHS)
The Real World
Foods for You
Preschool Practicum

Mathematics:

AP Statistics
Probability & Statistics

(Please refer to District Mathematics Phase Sequence Chart)

Music:

11-12
Music Theory I & II
Computer Multimedia Arts
Honors Music Theory
AP Music

Health and Physical Education:

9-10
Advance 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 and Russia
Honors History of East Asia
Law and Justice
Honors Introduction to Philosophy
Multicultural Experience

Visual Arts:

9-10
Drawing and Painting 1, 2, & 3
Digital Imaging & Media Arts
11-12
Senior High Drawing & Design Concepts
Senior High Painting & Color Concepts
Photography 1 & 2
Computer Multimedia Arts
Honors Art
AP Art and Design

World Languages:

4-year sequence of at least one language

A.W. Beattie Career Center
10 - 12

Course Descriptions

Aerospace Science and Leadership (AFJROTC)

The Air Force Junior Reserve Officer Training Corps (AFJROTC) is a program designed to develop citizens of character, dedicated to serving their nation and community. AFJROTC classes are blends of material from an Aerospace Science component course (40%), a Leadership Education component course (40%) and a wellness program (20%). In addition to classroom academics, leadership components include wear of the cadet AFJROTC uniform. The **weekly uniform wear requirement** is designed to teach attention to detail, discipline, and dedication to duty. Leadership demonstration performance activities involve basic drill and ceremonies. Drill and ceremony activities apply individual skills at the team level and require cadets to learn to function as a unit. Each of the classes listed below are for students who desire to participate in the AFJROTC Program. Uniforms will be issued at no cost. ***NO MILITARY OBLIGATION IS IMPOSED, EXPECTED OR INCURRED, WHEN A STUDENT PARTICIPATES IN AFJROTC.**

AFJROTC ASL 100 Gr. 9# 9414

AFJROTC ASL 300 Gr. 11# 9416

AFJROTC ASL 200 Gr. 10# 9415

AFJROTC ASL 400 Gr. 12# 9417

AEROSPACE SCIENCE AND LEADERSHIP

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 course. Throughout the course, 21st 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 affective 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. 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.

AEROSPACE SCIENCE AND LEADERSHIP

AFJROTC ASL 200:

*Full Year/Full Time
Grade 10*

No. 9415

Credit 1.0

The aerospace science component, *Survival: Survive-Return*, is a synthesis of the basic survival information found in Air Force Regulation 64-4 Survival Training. The survival instruction will provide training in skills, knowledge, and attitudes necessary to successfully perform fundamental tasks needed for survival. Survival also presents “good to know”, “common sense” information that would be useful in any situation. The information learned in this course is just as useful to an individual who is lost while hunting, stranded in a snowstorm, or off the trail while hiking. The leadership education component of this course; *Communication, Awareness, and Leadership*, is a customized course designed to improve communication, enhance awareness of self and others, and provide fundamentals of leadership and followership. The course focuses on the AFJROTC mission; “to develop citizens of character, dedicated to serving their nation and community”. Woven throughout is the underlying theme of developing personal integrity. The course also emphasizes leadership and values such as service and excellence. Skills such as teaching other cadets, learning through critical thought, communication with others, collaboration and creativity will be practiced daily. Military drill and ceremonies will progress from followership into leadership of teams. Performance of THE AFJROTC 30 DRILL SEQUENCE will be standard for all second-year cadets. 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.

(Continued...)

Course Descriptions

Aerospace Science and Leadership (AFJROTC)

AEROSPACE SCIENCE AND LEADERSHIP

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 12th grade cadets. Curriculum associated with ASL 300 and 400 will be rotated each year to ensure cadets receive a well-rounded AFJROTC experience.

AEROSPACE SCIENCE AND LEADERSHIP

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 11th 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
Keyboarding/Microsoft Word	# 7503
Microsoft Office Applications 1 ¹	# 7406
Microsoft Office Applications 2 ¹	# 7410
Web Page Design ¹ (CHS)	# 7908

Grade 10 – Electives

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

Grades 11, 12 – Electives

Keyboarding/Microsoft Word	# 7503
Microsoft Office Applications 1 ¹	# 7406
Microsoft Office Applications 2 ¹	# 7410
Web Page Design ¹ (CHS)	# 7908
Intro to Information Science ¹ (CHS)	# 7906
Cybersecurity and the Law ¹	# 7909
Business Communications (CHS)	# 7905
Sports and Entertainment Management.....	# 7506
Business Management	# 7606
Computer Security ¹	# 7919
Financial Literacy	# 7929
Financial Literacy (Online Option)	# 9929
Principles of Accounting 1 ¹ (CHS)	# 7505
Principles of Accounting 2 ¹ (CHS)	# 7605
Honors Advanced Accounting 1 ¹ (CHS)	# 7705
Honors Advanced Accounting 2 ¹ (CHS)	# 7805
Honors International Business.....	# 7508
Honors Finance and Investments	# 7509
Entrepreneurship	# 7907
Marketing	# 0403
Advertising and Promotion	# 0405

Grade 12 Only – Elective

Advanced Marketing	# 0404
Career Development.....	# 0348
Co-op	Refer to course description

¹ 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

Business, Computer, and Information Technology

INTRODUCTION TO BUSINESS

No. 7403

Full Year/Full Time

Grades 9, 10

Credit 1.0

Introduction to Business tackles issues such as current business topics, types of business organization, and economic systems, as well as personal financial planning. Decision-making skills, economics, entrepreneurship, management styles, investment securities, consumerism, banking, money management, and taxes will all be explored in this dynamic course. In addition, students will participate in a web-based simulation, Family Financial Management. Making wise decisions and 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.

Criteria for Selection – None.

KEYBOARDING/MICROSOFT WORD

No. 7503

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

Keyboarding/Microsoft Word is designed to provide an opportunity to learn to touch type on the computer keyboard using correct techniques as well as the development of speed and accuracy. Students will use computer software as well as teacher led instruction to learn and master the keyboard. Students will then apply their skill to generate documents using the current version of Microsoft Word. Documents such as reports, letters, tables, and outlines will be properly formatted and produced. Proofreading, composing, technique refinement, and skill development are important aspects of this course.

Criteria for Selection – None.

MICROSOFT OFFICE APPLICATIONS 1

No. 7406

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

This is a hands-on course in which students will use Microsoft Office and the Windows operating environment. An online, interactive textbook will be utilized in this course to personalize the experience with assignments that guide students to analyze, apply, and improve thinking, allowing them to measure skills and outcomes with ease in Word, Excel, and PowerPoint. The course will include three components of the Microsoft Office suite including 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 will be used as a tool to create spreadsheets and graphs to analyze and solve business-related applications. In PowerPoint, the students will learn how to create presentation slides combining text, charts, drawings, and clip art. Students will acquire software skills that will prepare them for college and beyond.

Criteria for Selection – None.

MICROSOFT OFFICE APPLICATIONS 2

No. 7410

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

Microsoft Office Applications 2 will take the skills acquired in Microsoft Office 1 to a higher level. In this course the students will complete advanced applications in Word, Excel, and PowerPoint. An online, interactive textbook will again be used in this course to personalize the experience with assignments that guide students to analyze, apply, and improve thinking, allowing them to measure skills and outcomes with ease in Word, Excel, and PowerPoint.

Criteria for Selection – 'C' or better in Microsoft Office Applications 1 (7406).

WEB PAGE DESIGN (CHS)

No. 7908

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

This course introduces students to basic web design using Hypertext Markup Language (HTML) and CSS (Cascading Style Sheets). This course teaches you how to create webpages from scratch using the most current standards. Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, basic JavaScript, text formatting, graphics, images, and multimedia; and producing a functional,

(Continued...)

Business, Computer, and Information Technology

multi-page website. In addition, students will apply responsive design principles for an optimal viewing experience across a range of devices to achieve multiplatform display. Prior knowledge of HTML or web design is not required.

In addition, the students (grades 10-12, not grade 9) may obtain three college credits through La Roche University. To obtain this credit, the student must successfully complete the course as specified by the University, and pay tuition charged by the University.

Criteria for Selection – None.

INTRO TO INFORMATION SCIENCE (CHS)

No. 7906

Semester/Full Time

Grades 11, 12

Credit .5

This course will introduce both information theory and the design and structure of information systems. Students will learn how computers and networks work at a fundamental level. Students will explore how social networks, collection of information (databases), and programming languages work. The course will spend particular attention on security and privacy issues. The course will provide you with basic skills such as building web pages, programming using simple JavaScript on web pages, design and use of simple databases, and manipulation of digital media. The course is designed for students with minimal prior technical coursework and does not require previous programming experience.

This course will be completed in partnership with the University of Pittsburgh's College in High School Program. To obtain collegiate credit, the student must enroll and pay the corresponding tuition charged by the University.

Criteria for Selection – None.

CYBERSECURITY AND THE LAW

No. 7909

Semester/Full Time

Grades 11, 12

Credit .5

Computers, the Internet, and mobile information have become routine elements of our daily lives. The percentage of our social, professional, and political discourse mediated by information systems increases each year. Critical infrastructure likewise follows suit, with financial, healthcare, energy and other utilities leveraging the Internet to increase both capability and efficiency. In the physical world, we publish rules (laws) to govern our interactions with one another. These rules tell us what behaviors are permissible and what responsibilities we have to one another. In cyberspace, where these rules exist – and what they require – are less clear. This course explores questions surrounding how we “govern” cyberspace in the context of cybersecurity and privacy issues. We will examine a series of examples, both real-world and hypothetical, to investigate what policy “tools” are in place, available, and should be available to address Internet security and privacy issues.

Criteria for Selection – None.

BUSINESS COMMUNICATIONS (CHS)

No. 7905

Semester/Full Time

Grades 11, 12

Credit .5

Effective communication skills help foster cooperation, productivity, and teamwork within an organization. These are some of the most important 21st Century skills required to succeed in business. Possessing essential interpersonal skills will boost your influence and effectiveness with individuals and groups in all settings. Developing the ability to relate to and effectively express your point in different situations is essential for growth and advancement in the business world and in life.

This course will explore overcoming barriers to communication, listening skills, presenting, and the use of technology and social media in business. Students will also learn to analyze and relate to an audience, and to understand the impact that gender and cultural diversity can have on communication. The latest technological advancements for communicating will be used. Students will be given the tools that will help them achieve goals, secure employment, adapt to environments, and communicate effectively.

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

Criteria for Selection – None.

Course Descriptions

Business, Computer, and Information Technology

SPORTS AND ENTERTAINMENT MANAGEMENT

Semester/Full Time
Grades 11, 12

No. 7506

Credit .5

Offered in over 500 Universities across the country, Sports and Entertainment Management has become one of the most popular majors of the past five years. This introductory course will emphasize basic management concepts and principles as they relate to the business of sports and entertainment. Students will be introduced to sports marketing and promotions, supervision, ethics, event planning and entertainment, as well as other related areas. There will be a strong focus on amateur, college, and professional sports, as well as leadership and the entertainment industry. Students will develop critical thinking skills and improve decision-making and communication. College exploration and career outlook will be researched. Current and future trends will be identified, and job shadowing opportunities offered. Field trips to and speakers from organizations such as local professional, college, and amateur sports teams, and the local entertainment industry will be incorporated throughout the course. The mission is to provide future managers with a solid business foundation as well as knowledge of the unique facets of the Sports and Entertainment Industries.

Criteria for Selection – None.

ENTREPRENEURSHIP

Semester/Full Time
Grades 11, 12

No. 7907

Credit .5

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

Criteria for Selection – None.

BUSINESS MANAGEMENT

Semester/Full Time
Grades 11, 12

No. 7606

Credit .5

Business Management is an introduction to business concepts, management skills, and management theories. The four functions of management: planning, organizing, leading, and controlling are covered. Students will learn how to think strategically and conceptually to achieve organizational goals. Understanding the issues involved in both managing and being managed will be taught, providing students with the skills necessary to be more effective contributors within an organization. Decision-making techniques and leadership qualities will be reinforced. Additional topics covered include: management of the global corporation, mergers and acquisitions, ethics and social responsibility, the securities markets, and current trends in management practice and theory.

Criteria for Selection – None.

COMPUTER SECURITY

Full Year/Full Time
Grades 11, 12

No. 7919

Credit 1.0

This course covers the fundamental concepts in Computer security and privacy. The course is intended to expose the various security threats and vulnerabilities in computer systems and provide an understanding of the various defense and protection mechanisms. Primarily, the course will focus on models and mechanisms related to insuring confidentiality, integrity, and availability related to computer and information systems. We will cover the basic concepts of cryptography including symmetric and public key encryption schemes. We then focus on program security issues such as buffer overflow attacks and discuss various control mechanisms to handle malicious code. The second half of the course will cover the topics of database security and general security issues in Operating Systems. Toward the end, we discuss various security and privacy issues in the context of emerging cloud computing systems.

Criteria for Selection

1. 'B' (80%) or better in Academic Algebra 2 (3103) OR 'B' (80%) or better in Honors Algebra 2 (3202) AND
2. 'C' (70) or better in Computer Science A (3523) OR 'C' (70%) or better in AP Computer Science Principles (3010) OR 'C' (70%) or better in Intro to Information Science.

Course Descriptions

Business, Computer, and Information Technology

FINANCIAL LITERACY

No. 7929

FINANCIAL LITERACY (ONLINE VERSION)

No. 9929

Semester/Full Time

Grades 11, 12

Credit .5

Financial literacy is the ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security. The aim of this course is to equip students with the introductory financial skills needed for success in today's economy. This comprehensive course will provide students with the financial knowledge necessary to create household budgets, initiate savings plans, manage debt, and make strategic investment decisions for their retirement or their children's education. Having these basic financial planning skills can help individuals and families to meet their short-term obligations and to maximize their longer-term financial well-being.

Students will have two choices for enrollment in this course. It can be taken as a regular semester teacher-led course or as an online, self-paced, teacher-facilitated, semester course. Either way, this course is highly recommended for every student.

Criteria for Selection – None.

PRINCIPLES OF ACCOUNTING 1 (CHS)

No. 7505

First Semester/Full Time

Grades 10, 11, 12

Credit .5

Accounting is such an integral part of business that accounting has been called the "language of business." Principles of Accounting 1 is designed to provide students with an understanding of accounting for a service business organized as a proprietorship by completing the entire accounting cycle. This course is a must for students who plan to major in Accounting, Marketing, Business Management, or Finance in college. Accounting is a core requirement for all business majors in college (such as economics, finance, management, marketing, international business, and accounting). This course provides a great foundation 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.

Criteria for Selection – None.

PRINCIPLES OF ACCOUNTING 2 (CHS)

No. 7605

Second Semester/Full Time

Grades 10, 11, 12

Credit .5

The accounting skills acquired in Principles of Accounting 1 will be expanded this semester. Emphasis is placed on accounting for a merchandising business organized as a corporation. Students continue applications of accounting principles using Microsoft Excel for problem-solving. This course will be beneficial when 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.

Criteria for Selection – 'C' or better in Principles of Accounting 1 (7505).

HONORS ADVANCED ACCOUNTING 1 (CHS)

No. 7705

First Semester/Full Time

Grades 11, 12

Honors Wt.

Credit .5

Honors Advanced Accounting 1 is the first half of the second full year in accounting principles. It is designed to acquaint students with accounting concepts and principles and their underlying theories. The course begins with a quick review of the Accounting Cycle and the financial statements for a Sole Proprietorship. More emphasis is placed on analysis of the data to use in decision-making. An in-depth coverage of the following topics completes the course: Merchandising Operations, the accounting for inventory, and accounting for Plant Assets.

Course Descriptions

Business, Computer, and Information Technology

In addition, the student may obtain three college credits through 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.
Criteria for Selection – 'C' or better in Principles of Accounting 2 (7605).

HONORS ADVANCED ACCOUNTING 2 (CHS)

*Second Semester/Full Time
Grades 11, 12*

No. 7805

*Honors Wt.
Credit .5*

Honors Advanced Accounting 2 picks up where Honors Advanced Accounting 1 leaves off with an in-depth coverage of the following topics: Disposal of Plant Assets and Intangibles; current liabilities (with an emphasis on accruals) and long-term liabilities (Bonds); Corporations paid-in capital and the balance sheet; accounting for cash dividends; Corporations effects on retained earnings and the income statement; accounting for stock dividends and treasury stock; the statement of Cash Flows; and Partnerships.

In addition, the student may obtain three college credits through 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.
Criteria for Selection – 'C' or better in Honors Advanced Accounting 1 (7705).

HONORS INTERNATIONAL BUSINESS

*Semester/Full Time
Grades 11, 12*

No. 7508

*Honors Wt.
Credit .5*

Honors International Business will provide an up-to-date and complete exploration of international business issues and practices. With a strong foundation of international business theory, this course will include current examples, case studies, and insights showing how global businesses apply these concepts and theories. Controversies in international business will be reflected upon, as will the impact of international business practices on countries, corporations, and individuals. The course will examine the role and impact of culture and also includes the exploration world maps, time zones, and currencies, helping students develop and refine a global perspective. This course adopts a truly global approach with attention given to topics that are critical to the international manager in the global business environment.

Criteria for Selection – 'B' or better in prior Social Studies Course.

HONORS FINANCE AND INVESTMENTS

*Semester/Full Time
Grades 11, 12*

No. 7509

*Honors Wt.
Credit .5*

Honors Finance and Investments will introduce 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 will provide you with a breadth of knowledge of finance. It is a foundation on which you may build. 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.

Criteria for Selection – 'B' or better in prior Mathematics Course.

MARKETING

*Full Year/Full Time
Grades 11, 12*

No. 0403

Credit 1.0

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

Criteria for Selection – Simultaneous enrollment in Advertising and Promotion (0405) is recommended but not required.

Course Descriptions

Business, Computer, and Information Technology

ADVANCED MARKETING

Full Year/Full Time
Grade 12

No. 0404

Credit 1.0

This course is designed for students interested in marketing as a career and will build upon and reinforce the skills, ideas, and techniques that were first highlighted in the Marketing course. Through hands-on learning experiences and problem-centered activities, the curriculum focuses on market research, analysis, risk management, and international marketing.

Students may receive credit and early dismissal from school for part-time employment taking Co-op. Also, students may participate in DECA – Preparing emerging leaders and entrepreneurs.

Criteria for Selection – Successful completion of Marketing (0403) is required, and Advertising and Promotion (0405) is recommended.

ADVERTISING AND PROMOTION

Semester/Full Time
Grades 11, 12

No. 0405

Credit .5

Students will learn the various promotional concepts and strategies, and how advertisers are responding to the new challenges they face in this digital age. They will also develop skills in advertising, professional selling, and visual merchandising. Creative projects are utilized to provide hands-on learning experiences. Skills are demonstrated in the preparation of advertising projects in various media, such as newspaper layouts and television commercials. Sales demonstrations are role-played to give students experience in personal selling techniques.

Criteria for Selection – Simultaneous enrollment in Marketing (0403) is recommended, but not required.

CAREER DEVELOPMENT

Full Year/Full Time
Grade 12

No. 0438

Credit 1.0

Developing life skills in a changing world is very important, yet often overlooked. The more prepared students are to handle the daily stress of becoming an adult, the more successful they will be. It is never too early to start to develop these skills, and in this unique business course offering, students will gain this valuable experience. Some course topics include: career exploration and advancement, resume writing, interviewing skills, time management, banking, money management, and more. These skills will be explored in-depth to give students a clear understanding of what lies ahead. Communication skills and the secrets to developing strong personal relationships will be addressed with students as well. Students will have the opportunity to participate in job shadowing experience relating 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 valuable course for all students.

Criteria for Selection – None.

CO – OP

Semester/Full Time
Grade 12

Credit 1.0

For an additional credit, students enrolled in Career Development or Advanced Marketing can receive an 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 station and are encouraged to work at a job related to their career goals. The work experience is supervised by the co-op coordinator and the student's work supervisor. 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. The teacher-coordinator will assist in the placement of students who do not have jobs.

CO – OP

Semester 1 Period 9 Full Time

No. 0433

CO – OP

Semester 1 Periods 8-9 Full Time

No. 0431

Course Descriptions

Business, Computer, and Information Technology

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

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

Grades 9, 10, 11, 12 – Electives

Beginning Computer Applications ¹ (Semester/FT)	# 0289
Beginning Computer Applications ¹ (FY/PT)	# 0288
Advanced Computer Applications ¹ (Semester/FT)	# 0291
Advanced Computer Applications ¹ (FY/PT)	# 0290

Other Courses Using Computers as A Primary Focus:

Grades 9, 10 – Electives

Keyboarding/Microsoft Word	# 7503 (See Business, Computer, and IT Section)
Microsoft Office Applications 1 ¹	# 7406 (See Business, Computer, and IT Section)
Microsoft Office Applications 2 ¹	# 7410 (See Business, Computer, and IT Section)
Web Page Design ¹ (CHS)	# 7908 (See Business, Computer, and IT Section)
Computer Science A ¹	# 3523 (See Mathematics Section)
Computer Science B ¹	# 3524 (See Mathematics Section)
AP Computer Science Principles	# 3010 (See Mathematics Section)
Digital Imaging and Media Arts ¹	# 6202 (See Visual Arts Section)
Exploring CADD (Computer-Aided Drawing & Design 1) (FY/FT)	# 9706 (See Tech & Engineering Ed Section)
Game Development ¹	# 9505 (See Tech & Engineering Ed Section)
Advanced Game Development ¹	# 9605 (See Tech & Engineering Ed Section)

Grades 11, 12 – Electives

Keyboarding/Microsoft Word	# 7503 (See Business, Computer, and IT Section)
Microsoft Office Applications 1 ¹	# 7406 (See Business, Computer, and IT Section)
Microsoft Office Applications 2 ¹	# 7410 (See Business, Computer, and IT Section)
Web Page Design ¹ (CHS)	# 7908 (See Business, Computer, and IT Section)
Intro to Information Science ¹ (CHS)	# 7906 (See Business, Computer, and IT Section)
Cybersecurity and the Law ¹	# 7909 (See Business, Computer, and IT Section)
Computer Security ¹	# 7919 (See Business, Computer, and IT Section)
Computer Science A ¹	# 3523 (See Mathematics)
Computer Science B ¹	# 3524 (See Mathematics)
AP Computer Science ¹	# 3011 (See Mathematics)
Exploring CADD (Computer-Aided Drawing & Design)	# 9806 (See Tech & Engineering Ed Section)
Mechanical CADD (Computer-Aided Drawing & Design)	# 9411 (See Tech & Engineering Ed Section)
Architectural CADD (Computer-Aided Drawing & Design) ..	# 9412 (See Tech & Engineering Ed Section)
Game Development ¹	# 9505 (See Tech & Engineering Ed Section)
Advanced Game Development ¹	# 9605 (See Tech & Engineering Ed Section)
Computer Multimedia Arts ¹	# 6201 (See Visual Arts Section)

¹ 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).

Course Descriptions

Computer Education

BEGINNING COMPUTER APPLICATIONS / FT

Semester/Full Time

Grades 9,10,11,12 Phase I, II, III, IV

No. 0289

Elective

Credit .5

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 webpages, 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.

Criteria for Selection - None.

BEGINNING COMPUTER APPLICATIONS / PT

Full Year/Part Time

Grades 9,10,11,12 Phase I, II, III, IV

No. 0288

Elective

Credit .5

This part-time version of Beginning Computer Applications is designed for those students who are unable to take the full time version because of scheduling constraints. This part-time course provides flexibility in that it can be scheduled back-to-back with Science Labs or Physical Education courses for the whole year. For the course description, see course #0289.

Criteria for Selection - None.

ADVANCED COMPUTER APPLICATIONS / FT

Semester/Full Time

Grades 9,10,11,12 Phase I, II, III, IV

No. 0291

Elective

Credit .5

Advanced 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. Skills learned will be highly beneficial to the student in college or in the workplace. Content is similar to that of the Beginning Computer Applications course but includes coverage of more advanced features of each application.

Topics include: creating and updating web pages, database creation and management, 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.

Criteria for Selection - Successful completion of any introductory computer applications course including Beginning Computer Applications or having acquired elementary application skills.

ADVANCED COMPUTER APPLICATIONS / PT

Full Year/Part Time

Grades 9,10,11,12 Phase I, II, III, IV

No. 0290

Elective

Credit .5

This part-time version of the Advanced Computer Applications course is designed for those students who are unable to take the full time version because of scheduling constraints. This part-time course provides flexibility in that it can be scheduled back-to-back with Science Labs or Physical Education courses for the whole year. For the course description, see course #0291.

Criteria for Selection - Successful completion of any introductory computer applications course including Beginning Computer Applications or having acquired elementary application skills.

Course Descriptions

English Language Arts

Grade 9 – One Credit Required

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

Grade 10 – One Credit Required

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

Grades 9, 10 – Special Options

English as a Second Language	# 1009
------------------------------	--------

Grades 9, 10 – Electives

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

* 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 Credit Required

Essential English 3	# 1211
English 3	# 1611
Academic English 3	# 1711
Honors English 3	# 1015
AP English 3: Language & Composition.....	# 1011

Grade 12 – One Credit Required

Essential English 4	# 1212
English 4	# 1512
Academic English 4	# 1712
Honors English 4	# 1017
AP English 4: Literature & Composition (CHS).....	# 1012

Grades 11, 12 – Special Options

English as a Second Language	# 1009
------------------------------------	--------

Grades 11, 12 – Electives

Honors Journalism 11,12	
Grade 11 (CHS)	# 1803
Grade 12.....	# 1404
Yearbook	
Grade 11.....	# 1903
Grade 12	# 1504
Creative Writing 1: Poetry.....	# 1604
Creative Writing 2: Poetry.....	# 1614
Creative Writing 1: Fiction.....	# 1704
Creative Writing 2: Fiction.....	# 1714
Contemporary Novels	# 1715
Speech (CHS).....	# 1805
Acting 1: Taking the Stage	# 1405
Acting 2: Drama in Motion	# 1505
Honors Shakespeare (CHS)	# 1911
Honors Argument (CHS).....	# 1908
Film and TV Production 1	# 1111
Film and TV Production 2	# 1113
Film and TV Production 3	# 1114
Broadcasting.....	# 1112
Film Studies (CHS)	# 1912

(CHS) Indicates College in High School Course

Course Descriptions

English Language Arts

ESSENTIAL ENGLISH 1 (IMPACT)

No. 1209

Full Year/Full Time

Grade 9 Phase 1

Credit 1.0

Students who are experiencing deficiencies in reading, writing, grammar, speaking, listening, and organizational skills will find this course is designed to meet their individual needs. Students participate in individual and group structured activities that improve reading comprehension, writing, grammar usage, organizational skills, and vocabulary development. 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. Materials are the same as those used in the *Academic English* curriculum, but literature selections are based on students' abilities. Phase 1 students must take this course.

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

ENGLISH 1

No. 1409

Full Year/Full Time

Grade 9 Phase II, III

Credit 1.0

The English 1 curriculum emphasizes the continued application of core skills in the English area which covers reading, writing, speaking, listening, and critical thinking. Students reinforce their skills by formulating clearly written sentences and applying the correct usage of grammar in their written work. Students will continue to refine their writing skills by using the writing process to compose core writing assignments and to respond to timed writing prompts. Vocabulary development and word recognition skills are developed throughout the course. The study of literature emphasizes the analysis of short stories, nonfiction, poetry, drama, and novels. This course generally utilizes the same rigorous academic content used in the *Academic English* curriculum. Students may select the course if they wish to devote additional effort in enhancing, reviewing, and practicing communication arts skills to reach a proficient level. Students also apply their knowledge of the library and its technology in a workshop setting.

Criteria for Selection – Approval by 8th grade English teacher.

ACADEMIC ENGLISH 1

No. 1509

Full Year/Full Time

Grade 9 Phase III

NCAA

Credit 1.0

In this college preparatory communication 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. Longer works that are used as a foundation to student-driven inquiry projects include *The Hate U Give*, *Tell the Wolves I'm Home*, & *Other Fillers*, *The Tragedy of Romeo and Juliet*, and *To Kill a Mockingbird*. Students follow the writing process while composing core writing assignments and timed writing prompts. Students also apply their knowledge of the library and its technology in a workshop setting.

Criteria for Selection – Approval by 8th grade English teacher.

HONORS ENGLISH 1

No. 1109

Full Year/Full Time

Grade 9 Phase IV

NCAA

Honors Wt.

Credit 1.0

Honors English 1 is a survey course that acts as the academic foundation for students interested in future Honors English and AP English courses. Honors 1 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. Literary terms and elements will be studied along with grammar and mechanics. This is a rigorous course in terms of material and high-level thinking.

Course Descriptions

English Language Arts

Criteria for Selection –

1. Approval by 8th grade English teacher.
2. 8th grade English grade of 'A' or high 'B'.
3. Overall QPA of 3.4 or higher.

ESSENTIAL ENGLISH 2 (IMPACT)

No. 1210

Full Year/Full Time

Grade 10 Phase I

Credit 1.0

In Essential English 2, students who have deficiencies in skills related to reading, writing, speaking, and listening will focus on improving these areas. Students participate in directed reading activities, guided paragraph, and essay writing, and in the use of context clues, roots, and prefixes to increase vocabulary and usage. Students increase reading comprehension and listening and writing skills through high interest literature, including short stories, non-fiction, drama, poetry, and the in-depth study of a novel. Students practice basic and organizational skills in a highly structured atmosphere. All materials are geared to students' interests and ability levels.

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

ENGLISH 2

No. 1410

Full Year/Full Time

Grade 10 Phase II, III

Credit 1.0

The English 2 curriculum continues the application of core skills in the communication arts areas of listening, speaking, reading, writing, and critical thinking, all within a supportive environment. The composition and literature content build upon the skills developed in the English 1 class. In composition, this course emphasizes the varieties of sentence structure, paragraphing, mechanics, usage, and response to literature. Attention is also focused on spelling, vocabulary, and context usage. On the literary side, students study the short story, poetry, non-fiction, a novel, and both a contemporary and a Shakespearean play. This course generally utilizes the same rigorous academic content used in the *Academic English* curriculum. Students may select the course if they wish to devote additional effort in enhancing, reviewing, and practicing English skills to reach a proficient level.

Criteria for Selection – Approval by 9th grade English teacher.

ACADEMIC ENGLISH 2

No. 1510

Full Year/Full Time

Grade 10 Phase III

Credit 1.0 NCAA

Academic English 2 will take students through a comprehensive study of literature. Students will explore and improve various styles and types of writing in preparation for their post-high school academic experiences. Grammar and vocabulary skills will be strengthened through an integrated approach to reading and writing.

Criteria for Selection – Approval by 9th grade English teacher.

HONORS ENGLISH 2

No. 1110

Full Year/Full Time

Grade 10 Phase IV

Honors Wt.

Credit 1.0 NCAA

Students undertake a comparative analysis of literature from and about a variety of cultures including classical Greek and Roman as well as medieval, Elizabethan, and modern European. Throughout the course, students continue to develop their writing craft through rigorous practice in various modes supported by a series of writers' workshops. Honors English 2 is designed for students interested in a challenging and accelerated study of literature and who intend to advance to Honors or AP English.

Criteria for Selection –

1. Approval by 9th grade English teacher.
2. 9th grade English grade of 'A' or high 'B'.
3. Overall QPA of 3.4 or higher.

(Continued...)

Course Descriptions

English Language Arts

ENGLISH AS A SECOND LANGUAGE

No. 1009

Full Year/Full Time

Grades 9, 10

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.

INTRODUCTION TO JOURNALISM: NAEYE NEWS

Grade 9

No. 1403

Grade 10

No. 1603

Full Year/Part Time

Credit .5

Students in this course are placed at the controls of the NAI student media newspaper, NAEYE. The principles and ethics of online journalism serve as ongoing topics of study throughout the duration of the course, 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. Top student productions will be submitted to local and national competitions.

Criteria for Selection – Approval by an English teacher.

YEARBOOK 9, 10

Grade 9

No. 1503

Grade 10

No. 1506

Full Year/Full Time

Credit 1.0

In this workshop course, students gain first-hand experience in planning, writing, organizing, and laying out materials essential to the theme, development, and publication of the Intermediate High School Yearbook, *The Tiger Tale*. Students will learn to use Photoshop and InDesign software to create the publication.

Criteria for Selection – None.

LEADERSHIP 1

No. 1905

Semester/Full Time

Grades 9, 10

Credit .5

In this course, students will learn leadership skills that will allow them to succeed in school, clubs, activities, and on the job. Students will explore units in personal skills, leadership styles and theories, goal setting, project planning, and time management. "Hands-on" class participation and group activities create a dynamic learning environment in which students will discover their strengths as leaders. Students will plan, implement, and evaluate a self-selected project as a culminating experience.

Criteria for Selection – None.

LEADERSHIP 2

No. 1906

Semester/Full Time

Grade 10

Credit .5

Using a team approach, Leadership 2 students apply learned Leadership 1 skills as both leaders and followers in school and community 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.

Criteria for Selection – Completion of prerequisite course Leadership 1 with grade "C" or higher.

(Continued...)

Course Descriptions

English Language Arts

INTRODUCTION TO FILM

No. 1206

Semester/Full Time

Grades 9, 10

Credit .5

This course introduces students to the art of reading a film. Students learn a framework for interpreting film, so they see film as readable text and see the relationship between fiction narratives and film. The course investigates the narrative structure of film and how cinematic elements combine with literary elements to produce moving pictures as literature. Students will explore film “pre-writing” through the use of storyboards, examine the main elements of cinematic language, and identify the distinguishing characteristics of major film genres. The evolution of specific genres (western, comedy, sci-fi, film noir) is examined as record of how the stories a culture tells about itself reflect as well as shape that society.

Criteria for Selection – None.

CREATIVE WRITING

No. 1703

Semester/Full Time

Grades 9, 10

Credit .5

This course is open to freshmen and sophomores 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 a part of a writing community through activities and workshops.

Criteria for Selection – None.

INTRODUCTION TO THEATER

No. 1909

Semester/Full Time

Grades 9, 10

Credit .5

In Introduction to Theater, students explore five major aspects of the theater: history of the theatre, acting, stagecraft, costumes and make-up, and audition preparation. Students participate in activities such as making a history-of-theatre timeline, examining a script for stage directions, blocking, studying body language, performing pantomimes and improvisations, and creating a set design. Students also practice vocal variety, pitch, volume, and choral reading, and then apply learned skills to numerous classroom performances and presentations. Students must practice some memorization skills.

Criteria for Selection – None.

INTRODUCTION TO TELEVISION PRODUCTION No. 1910

Semester/Full Time

Grades 9, 10

Credit .5

Students will have the opportunity to explore TV Production in this course. They will learn the basic aspects of production, including script writing, directing, editing, camera techniques, and special effects. The primary emphasis of the class will be the cooperative culmination of these areas to create a daily news program that will be shown to the entire student body every morning. The class is open to any student interested in communications, public relations, acting, or technical production.

Criteria for Selection – None.

SPEECH AND DEBATE

No. 1907

Semester/Full Time

Grades 9, 10

Credit .5 NCAA

Speech and Debate is the art of public speaking. In this course, students become confident speakers by practicing basic speaking techniques. Students will present a variety of speeches, including prose reading, impromptu/ extemporaneous speaking, dramatic/humorous interpretation, 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.

Criteria for Selection – None.

(Continued...)

Course Descriptions

English Language Arts

ENGLISH 3

Full Year/Full Time
Grade 11 Phase II, III

No. 1611

Credit 1.0

This year-long junior course is designed for Phase II/III students interested in enhancing their core English skills. Relying heavily on American-based writers, the course utilizes a wide variety of relevant literature to help students connect to the texts. Students will enhance their reading comprehension skills through close reading, comparisons, and reflections. Additionally, a key component of the course is the integration and reinforcement of fundamental writing techniques, including grammar, organization, and content. Students may select the course if they wish to devote additional effort in enhancing, reviewing, and practicing communication arts skills. Through literary study, writing, grammar, vocabulary development, and usage, students will become proficient readers and writers, fully prepared for whatever they decided to do upon graduation.

Criteria for Selection – Approval by 10th grade English teacher.

ESSENTIAL ENGLISH 3

Full Year/Full Time
Grade 11 Phase I

No. 1211

Credit 1.0

Students in this course will have the opportunity to improve their reading, writing, speaking, and critical thinking skills through their study of literature, grammar, and composition. Students read high-interest short stories and novels which serve as models for a wide variety of writing assignments. Students also study problem-solving strategies at each stage of the writing process. Students who are recommended for this course, should also register for Fundamentals of Democracy (No. 2211). This course is required for Phase 1 students. A component of the course is the College/Career Project.

Criteria for Selection – Approval by 10th grade English teacher and School Counselor.

ACADEMIC ENGLISH 3

Full Year/Full Time
Grade 11 Phase III

No. 1711

Credit 1.0 NCAA

This year-long junior course is designed for motivated college preparatory students interested in enhancing their literary analysis abilities and composition skills. This course, a survey of American Literature, requires students to read, interpret, and analyze poetry, essays, short stories, drama, and novels from Early American Writings and the Romantic Movement through Regionalism and Naturalism up to Modernism and Contemporary Literature. By the end of the year, students will develop an appreciation of these unique literary styles and genres in diverse American writings. In response to their reading and literary analyses, students develop skills for speaking and listening, for vocabulary development and also for refinement of their writing skills. Students continue to use the building blocks of the writing process to develop essays of persuasion, compare – contrast, cause – effect, description and literary analysis that originate from the literature. By incorporating multiple factors of literary study, writing, grammar, vocabulary development, and usage, students will become advanced readers and writers, fully prepared for senior level Academic English 4. A component of the course is the College/Career Project.

Criteria for Selection – Approval by 10th grade English teacher.

HONORS ENGLISH 3

Full Year/Full Time
Grade 11 Phase IV

No. 1015

Honors Wt.
Credit 1.0 NCAA

Successful completion of Honors English 2 provides preparation for the extensive responsibilities of Honors English 3. This challenging, year-long junior course is designed for exceptional language arts students interested in enhancing their literary analysis abilities and composition skills. The focus on American Literature is highlighted by critical reviews and analyses that demand intense and significantly high levels of outside reading and writing. In addition to the study of literary periods from colonial to modern, students read eight classic American novels. Students continue to use The Writing Process for the introduction and enhancement of multi-paragraph essays in modes including narration, description, exposition, and persuasion. MLA style is reinforced through all research and writing assignments. An ability to think conceptually, comprehend and retain facts, and perceptively discuss literary topics is essential. Intensive integration of vocabulary, grammar, and speaking skills are key components of this course. This course features a mandatory summer assignment in preparation for the first week of school. A component of the

Course Descriptions

English Language Arts

course is the College/Career Project. Students complete research by investigating career and college options through a variety of online and traditional sources. The college application essay and a job application cover letter are the writing foci of this unit.

Criteria for Selection –

1. Successful completion of Honors English 2.
2. Approval by Honors English 2 teacher.
3. A' or high 'B' final Honors English 2 grade.
4. Overall QPA of 3.5 or higher.

AP ENGLISH 3: LANGUAGE & COMPOSITION

Full Year/Full Time
Grades 11, 12 Phase IV

No. 1011

AP Wt.
Credit 1.0 NCAA

This year-long, college-level course, intended for top-performing juniors, develops the skills of argumentation, rhetorical analysis, and critical reading. The pace is often rigorous, and a majority of each semester's assessments are timed essays and various writing vehicles. Proficiency in grammar, confidence with timed writings, a desire for a challenging, intellectual atmosphere, and the ability to manage a significant amount of outside reading characterize the qualified AP English student. The AP English 3 student must reconcile the need to read with great scrutiny and even assume the need for a second reading of materials. The course demands academic maturity and an increased level of industry. The literature of the course reflects a diverse sampling of genres and historical eras including a strong focus on nonfiction titles. Featured authors in the course include, but are not limited to, Plato, Aristotle, Shakespeare, Melville, and Wilson. The course additionally samples classic authors of American literature – Emerson, Thoreau, Wolfe, Fitzgerald, Steinbeck, Hemingway, Poe – and culminates in the College Project. The course also features an ongoing study of SAT-level vocabulary, and a mandatory summer assignment in preparation for the first few weeks of class. At the end of the year, successful students are strongly encouraged to take the Advanced Placement English Exam and qualify for college credits and/or course placement.

Criteria for Selection –

1. Successful completion of Honors English 2.
2. Recommendation of the Honors English 2 teacher.
3. 'A' in Honors English 2.
4. Overall QPA of 3.6 or higher.

ESSENTIAL ENGLISH 4

Full Year/Full Time
Grade 11 Only, Phase I

No. 1212

Credit 1.0

In Essential English 4, students refine their language skills by engaging in individual and group activities that reinforce reading, writing, critical thinking, and presentational speaking. Students read literature ranging from traditional and contemporary classics to newspaper and magazine articles. Students who are recommended for this course should also register for Fundamentals of Democracy II (2212).

Criteria for Selection – Approval by 11th grade English teacher and School Counselor.

ENGLISH 4

Full Year/Full Time
Grade 12 Phase II, III

No. 1512

Credit 1.0

English 4 challenges Phase II/III students to interpret, analyze, and synthesize literature through discussion, creative projects, and critical essays. Students will continue to enhance their core communication arts skills as developed throughout their academic careers. Additionally, students will improve their research and writing skills through a variety of different writing modes that reinforce grammar, sentence structure, diction, and style. Students may select the course if they wish to devote additional effort in enhancing, reviewing, and practicing English skills. English 4 provides a supportive environment including in-class workshops, drafting opportunities and peer-to-peer evaluations so that students may demonstrate proficiency in their reading and writing skills. The majority of students

Course Descriptions

English Language Arts

who select this course will move on to four-year colleges and other varieties of post-secondary education upon graduation.

Criteria for Selection – Approval by 11th grade English teacher.

ACADEMIC ENGLISH 4

No. 1712

Full Year/Full Time

Grade 12 Phase III

Credit 1.0 NCAA

In this challenging, college-preparatory course, seniors will study British and world literary and non-fiction works. As they critically analyze the literature in conjunction with the social, historical, and cultural forces which influence writers, students will use and develop their reading, listening, speaking, and composition skills. The course emphasizes expository, persuasive, and analytical writing with a focus on critical thinking skills, mechanics, style, and voice. An in-depth term paper that includes documented research will culminate the course. Phase 3 students are required to complete this final English course before joining the world of academic discussion, writing, and analysis.

Criteria for Selection – Approval by 11th grade English teacher.

HONORS ENGLISH 4

No. 1017

Full Year/Full Time

Grade 12, Phase IV

Honors Wt.

Credit 1.0 NCAA

Successful completion of the Honors English 3 class forms the basis for students to continue their rigorous explorations of language and literature in Honors English 4. 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 from various historical periods 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 expository skills. Additionally, literature-based compositions will be used regularly as evaluation tools. Intensive integration of vocabulary skills, public speaking, and word usage round out the components of this course.

Criteria for Selection –

1. Successful completion of Honors English 3.
2. Approval by Honors English 3 teacher.
3. 'A' or High 'B' final grade in Honors English 3.
4. Overall QPA of 3.5 or higher.

AP ENGLISH 4: LITERATURE & COMPOSITION (CHS)

No. 1012

Full Year/Full Time

Grade 12, Phase IV

AP Wt.

Credit 1.0 NCAA

Advanced Placement English is a college-level course for students with superior reading and writing skills as well as an interest in a challenging, fast-paced environment. In this class, students build upon and complement the critical and analytical skills developed in AP Language and Composition (Grade 11), and students frequently write about literary selections covering a wide range of authors and genres. 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. Authors represent a World Literature perspective, and works by Euripides, Shakespeare, Dostoyevsky, Austen, Conrad, Camus, etc. are critically analyzed. The course also emphasizes the purpose of poetry. Poetic language, devices, form, and function are carefully studied. In May, students are strongly encouraged to take the Advanced Placement English exam and qualify for college credits and/or course placement.

There is a mandatory summer assignment in preparation for the first week of class.

Criteria for Selection –

1. Successful completion of AP English 3: Language and Composition.
2. Approval by AP English 3: Language and Composition teacher.
3. 'A' or High 'B' final grade in AP English 3.
4. Overall QPA of 3.6 or higher.

(Continued...)

Course Descriptions

English Language Arts

ENGLISH AS A SECOND LANGUAGE

No. 1009

Full Year/Full Time

Grades 11, 12

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. The 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.

YEARBOOK 11, 12

Grade 11

No. 1903

Grade 12

No. 1504

Full Year/Full Time

Credit 1.0

In this workshop course, students plan, write, organize, and design the High School Yearbook, *Safari*, under the supervision of the Yearbook Advisor. Students with previous yearbook experience and advanced skills in writing, photography, and computer literacy are encouraged to enroll in this class. Due to the workload and multiple production deadlines, after-school and weekend meetings are required. Student must complete an application form and submit it to the Yearbook Advisor during an interview process before they can enroll in the course. After the advisor approves the application, students then complete the course selection sheet which is later processed through the School Counseling Office.

Criteria for Selection –

1. One year of yearbook experience.
2. Completed application.
3. Interview with advisor.

CREATIVE WRITING 1: POETRY

No. 1604

Semester/Full Time

Grades 11, 12 Phases I-IV

Credit .5 NCAA

In this course, creative writers explore self-expression by exposing themselves to a variety of poetic structures and techniques. They learn the nature of sound, language, and ideas as they are expressed in poetry by reading and discussing both contemporary and traditional works. With the assistance of their peers, students compile a collection of original poetry that they share in class. Students conduct extensive peer editing sessions, maintain a writing journal throughout the course, and read and respond to a wide collection of poetry. Creative Writing students also engage in discussions and writing about creating art, exploring artistry, and the nature of artistic work. 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.

Criteria for Selection – None.

CREATIVE WRITING 2: POETRY

No. 1614

Semester/Full Time

Grades 11, 12 Phases I-IV

Credit .5

This course is open to juniors and seniors and requires completion of Creative Writing 1: Poetry as a prerequisite. Creative Writing 2: Poetry builds upon the foundations established in Creative Writing 1: Poetry by continuing to explore the genre in more deliberate and satisfying ways. In addition to writing, submitting, and reading original works of poetry, students will be expected to play more active leadership roles in peer editing sessions and to lead student workshops in class. While discussions of art and art making persist, Creative Writing 2: Poetry students will be much more engaged in developing their own style and voice in their poetry as they further explore

Course Descriptions

English Language Arts

the genre 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.

Criteria for Selection – Successful completion of Creative Writing 1: Poetry.

CREATIVE WRITING 1: FICTION

No. 1704

Semester/Full Time

Grades 11, 12; Phase III-IV

Credit .5 NCAA

This course is open to both juniors and seniors interested in the art of storytelling and the process of writing fictional pieces. The course is offered with no prerequisite and is a semester-long program. Students enrolled in the course will experience opportunities to read, respond to, and create a variety of fictional pieces. A highly collaborative course design complete with in-class workshops and peer-to-peer discussion offers students an environment to develop their writing skills and confidence. Writing short stories, flash fiction, novel chapters, and other varieties of fiction writing are core projects. All types of writers interested 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.

Criteria for Selection – None.

CREATIVE WRITING 2: FICTION

No. 1714

Semester/Full Time

Grades 11, 12; Phase III-IV

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. While there is some overlap between the two courses, writers enrolled in Creative Writing 2: Fiction are expected to be more actively involved in the process of peer review and to develop more skill and focus in the art of storytelling and fictional writing. A highly collaborative course design complete with in-class workshops and peer-to-peer discussion continues to offer students an environment in which to develop their writing skills and confidence. Writers that 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.

Criteria for Selection – Successful completion of Creative Writing 1: Fiction.

CONTEMPORARY NOVELS

No. 1715

Semester/Full Time

Grades 11, 12; Phase II-III-IV

Credit .5

Contemporary Novels provides a vehicle for the avid reader to choose and explore novels that have a particular appeal to high school students. Throughout the course, students will experience unique fictional adventures, compelling debates, innovative writing styles, and thought-provoking lessons. Utilizing various types of literary criticism will enhance students' ability to engage in lively classroom and online discussion of texts. Reader response journals, creative writing, theme-related activities, and Socratic Seminars will present additional opportunities for individual expression. This elective promotes reading as a life-long habit, exposes students to themes, concepts, and philosophies that may challenge their current comfort levels, and encourages the acceptance of diverse ideas in an increasingly global environment. The teacher and the students agree as a group on two or three contemporary novels to be read throughout the semester.

Criteria for Selection – None.

SPEECH (CHS)

No. 1805

Semester/Full Time

Grades 11, 12; Phase II-III-IV

Credit .5 NCAA

In an interactive setting designed to develop public speaking skills and techniques, students will also work on acquiring listening skills. Students present a wide variety of speech types including but not limited to impromptu,

(Continued...)

Course Descriptions

English Language Arts

informative, persuasive, and issues-oriented topics. Students will also explore and utilize modern technology in shaping their presentations. Additionally, students will learn to focus on the needs of their audience to tailor their speeches. College-bound students find this an excellent introduction to the basics of public speaking while general students develop a strong sense of confidence. Although not required, this course is highly recommended for all levels.

Criteria for Selection – None.

ACTING 1: TAKING THE STAGE

No. 1405

Semester/Full Time

Grades 11, 12 Phases II-III-IV

Credit .5

This energetic course calls all actors, and those who simply love acting, to engage in the art of performing on stage. Working through a multitude of performance-based projects ranging from improvisation to scene work, participants engage in performance every day. Everyone has heard the cliché, “It is not what you said, but how you said it!” For the stage, this is the key! Discussion and analysis will focus on going beyond obvious textual inferences and implications by examining the role nonverbal communication plays in providing 85% of all messages. All participants will be eligible to attend fantastic field experiences in both local and out of state field trips. All field experiences are student funded. Ultimately, this course will help to provide each student with skills for speaking and presenting in public forums. All students taking the course will be encouraged to participate in the production of the fall play and spring musical, but they are not required to do so.

Criteria for Selection – None.

ACTING 2: DRAMA IN MOTION

No. 1505

Semester/Full Time

Grades 11, 12 Phases II-III-IV

Credit .5

Based on the analysis of some of today’s Pulitzer Prize winning authors, this performance-based course asks participants to analyze whole scripts as a large group and apply key elements by participating in paired scene work. Geared for those students who enjoy analyzing “what is said between the lines,” this course helps performers learn the value of incorporating subtext as a basis for motivation on the stage. All students will analyze and perform approximately four pieces. In addition, a separate unit on Children’s Theater will require all to adapt favorite childhood stories into skits for the stage; a collection of student generated material will be polished and then presented in field experiences at the elementary level. Ultimately, this course will help those students interested in going beyond the obvious thematic intent of an author to unravel and create strong interpretations for the stage.

Criteria for Selection – None.

HONORS SHAKESPEARE (CHS)

No. 1911

Semester/Full Time

Grades 11, 12

NCAA

Honors Wt.

Credit .5

This seminar-style semester Honors elective is designed for students who wish to further their appreciation of Shakespeare beyond the plays taught in the English core curriculum. The course combines text and film analysis, with special emphasis on Shakespeare’s enduring influence on modern culture. Shakespeare’s comedies, histories, and tragedies receive equal attention. Plays may include *A Midsummer Night’s Dream*, *Much Ado About Nothing*, *The Tempest*, *King Lear*, *Othello*, *Richard III*, and *Henry V*, reflecting the variety of Shakespeare’s dramatic talent. Course work consists of written responses, digital video and audio projects, and short dramatic performances. A genuine interest in a participatory, collaborative, creative, and intellectual literary environment characterizes the qualified student.

Criteria for Selection –

1. **B+ (88%) or above average in English classes.**
2. **English teacher’s approval.**

(Continued...)

Course Descriptions

English Language Arts

HONORS ARGUMENT (CHS)

Semester/Full Time

Grades 11, 12

No. 1908

Honors Wt.

Credit .5

This course is designed to introduce students to the fundamentals of argument. Students will construct, present and refute arguments and develop critical thinking skills necessary for worthwhile evaluation and criticism of argument. Students will become more articulate as well as sensitive to the intricacies of argument, debate, and discourse. Students will learn, apply, and practice argument theory and philosophical constructs. In addition, students will demonstrate their skills in research and argumentation through performance activities, including, but not limited to, Student Congress, L/D Debate, Mock Trial, and Policy Team Debate. Honors Argument is offered as a College in High School class in cooperation with the University of Pittsburgh. Students may choose to receive three college credits from the University at reduced tuition rates.

Criteria for Selection –

1. **B+ (88%) or above average in English classes.**
2. **English teacher's approval.**

FILM AND TV PRODUCTION 1

Semester/Full Time

Grades 11, 12

No. 1111

Credit .5

Situated in the NATV Studio, this hands-on course introduces students to cinematography, digital editing, and multi-camera news broadcasting. Using professional cameras, audio equipment, and lighting, students learn to shoot both creative and journalistic pieces. Adobe Premiere Pro is used for editing, and Tricaster is used for multi-camera production. The goals of the course are to develop literacy and proficiency in the production process and to spark interest in video production. Successful students are encouraged to continue their involvement in the program by taking Film and TV Production 2.

Criteria for Selection – None.

BROADCASTING

Full Year/Full Time

Grades 11, 12

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, real-world 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.

Criteria for Selection – None.

FILM AND TV PRODUCTION 2

Full Year/Full Time

Grades 11, 12

No. 1113

Credit .5

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. An additional unit in this course teaches students how to shoot a multi-camera production at a location outside of the TV Studio. 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.

Criteria for Selection – Successful Completion of Film and TV Production 1, or special approval by teacher.

Course Descriptions

English Language Arts

FILM AND TV PRODUCTION 3

No. 1114

Semester/Full Time

Grades 11, 12

Credit .5

Situated in the NATV Studio, this course enables advanced students to fully explore their interest in video production. Using professional audio and video equipment, students will pitch, script, storyboard, and produce a variety of short, independent films throughout the semester. 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 of audio, video, lighting, and editing 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.

Criteria for Selection – Successful Completion of Film and TV Production 2.

HONORS JOURNALISM 11, 12

Grade 11 (CHS)

No. 1803

Grade 12

No. 1404

Full Year/Full Time

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 throughout the duration of the course, 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. Top student productions will be submitted to local and national competitions.

Criteria for Selection – None.

FILM STUDIES (CHS)

No. 1912

Semester/Full Time

Grades 11, 12

Credit .5

Film Studies will introduce students to the medium of film analysis and examine how the medium artistically represents history and how scholarly criticism elevates landmark films to the status of literary art. The NASH Film Studies course will focus on film as a mechanism for reflecting two angles: how art reflects life, and how life can reflect art. The course will explore a representative film from several of the following categories/genres: Silent Film, Film Noir, Golden Era Drama, the Avant-Garde, Documentaries, Foreign Films, Modern Classics, and Contemporary Independent Films. In addition to the close visual study of film, students will engage in critical readings and response writing throughout the semester. The course will culminate in a final project consisting of a paired presentation displaying analysis of an AFI award winning film utilizing at least three elements discussed during the semester. A number of the films covered in the course are R-rated, and as such, contain scenes appropriate for a mature audience. Care is taken to freeze the screen and mute sound to circumvent moments of inappropriate material while at the same time maintaining the integrity of the film and the director's intent. To that end, some scenes that include violence, strong language, and the like, are not removed. Ultimately, these materials will be award winning pieces, and in no way will any adult or mature material become the crux of our discussion; instead, the focus will remain on the more poetic and profound thematic issues and how they both reflect and relate to society.

Criteria for Selection – None.

Course Descriptions

Family and Consumer Sciences

Grades 9, 10 – Electives

Adventures in Food	# 8403
Introduction to Child Development	# 8705
Fashion and Design.....	# 8703
International Foods.....	# 8503
Independent Living	# 8803
Introduction to Sports Nutrition.....	# 8507

Grades 11, 12 – Electives

Fashion Merchandising	# 8302
The Real World.....	# 8505
Fashion Art	# 8405
Foods Americana.....	# 8504
Foods for You	# 8604
Sports Nutrition	# 8607
Interior Design	# 8904
Child Development (CHS)	# 8704

Grade 12 only

Preschool Practicum.....	# 8804
--------------------------	--------

(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 .5

Through this course, students will develop an understanding of food and basic nutrition, food and kitchen safety and sanitation, and review basic cooking techniques and skills. After creating a foundation of basic skills, students will continue to build upon these, working on more challenging techniques and recipes. The goal is to push students out of their comfort zones, trying new foods and new cooking skills. Adventures will also examine and incorporate social food trends including: food in the social media world, food bloggers/blogs, and social food issues (food waste, sustainability, farm to table, etc.). Communication, organization, and teamwork skills are emphasized.

Criteria for Selection – None.

INTRODUCTION TO CHILD DEVELOPMENT

No. 8705

Semester/Full Time

Grades 9, 10

Credit .5

This course covers how to become a more confident and attentive caregiver who encourages healthy, happy babies and healthy, loving families that contribute to productive communities. It offers insight into infant and childcare topics with opportunities for hands-on experiences, including the use of Real Care baby simulators. Concepts and theories of child development are explored. Factors that influence the physical, social, emotional, moral, and intellectual development are studied.

Criteria for Selection – None.

FASHION AND DESIGN

No. 8703

Semester/Full Time

Grades 9, 10

Credit .5

Fashion and Design is an introduction to the creative world of design, from fashion to interiors to events. Students will explore fashion design from a designer's perspective, working through basic fashion principles to creating and sketching pieces for a clothing line. Understanding garment construction is executed through working on multiple construction projects using textile equipment. Students will have the opportunity to use interior design concepts to design a room, planning the room layout, budgeting for furniture, and sourcing supplies needed to furnish the room. With event planning and design, students will theme an event and must work with a budget to meet the needs of the event, which will then be executed in class. Working through various areas of design will expose students to careers in each of these industries.

Criteria for Selection – None.

INTERNATIONAL FOODS

No. 8503

Semester/Full Time

Grades 9, 10

Credit .5

This course gives students the opportunity to prepare foods from around the world. Students explore selected international cuisines and customs while preparing various ethnic foods in weekly labs. Students will understand the principles of food science and its relationship to healthy individuals, families, and communities.

Communication, organization, conservation, and money management skills are emphasized.

Criteria for Selection – None.

INDEPENDENT LIVING

No. 8803

Semester/Full Time

Grades 9, 10

Credit .5

Independent Living is built as a peer mentoring class, where students will be working in the kitchens learning basic cooking, safety, and nutrition skills. In addition to food preparation, students will learn basic finances and budgeting. Students interested in these learning life skills, a career in education, or mentoring their peers needing these skills, would be benefited by this course.

Criteria for Selection – None.

(Continued...)

Course Descriptions

Family and Consumer Sciences

INTRODUCTION TO SPORTS NUTRITION

No. 8507

Semester/Full Time

Grades 9, 10

Credit .5

This course introduces students to the basics of nutrient use in exercise and nutrition strategies to improve exercise performance. It enables students to examine the relationship between physical activity, proper nutrition, sports performance, and overall wellness. Students will learn what foods are needed for healthy lifestyles and peak performance. Students will prepare healthy foods, modify recipes, and analyze personal eating habits.

Criteria for Selection – None.

FASHION MERCHANDISING

No. 8302

Semester/Full Time

Grades 11, 12

Credit .5

The ever-changing world of fashion is both competitive and exciting. Becoming successful in the field is based on having an eye for fashion and design. Fashion Merchandising is a class which allows students to see all the inner workings of the Fashion Industry before the garments make it to the sales floor. Learn to understand the how and why of clothing, the impact of historical costumes, designer inspiration, fashion cycles, styles for your body type, and so much more. Try your hand at designing or recreating a recycled garment. Create a window display or participate in a fashion event. Careers in the fashion industry will be explored.

Criteria for Selection – None.

THE REAL-WORLD

No. 8505

Semester/Full Time

Grades 11, 12

Credit .5

Writing a check, preparing for an interview, managing stress, and creating easy, healthy meals are some of the topics covered in Life 101. Designed to provide the skills students need for life beyond high school, this course will focus on how to manage personal finances, apply principles of food and nutrition to meal planning, how to ace a job interview and how to manage the demands of adulthood.

Criteria for Selection – None.

FASHION ART

No. 8405

Semester/Full Time

Grades 11, 12

Credit .5

Fashion Art is a semester course which provides students with an opportunity to study the fashion industry. Students will apply the principles of art and design while creating hands-on projects with textiles and accessories. Career opportunities in the field of fashion design and merchandising will be investigated. Students will explore fashion throughout history as well as today's latest fashion trends, including personal color analysis and style analysis. Various fibers and fabrics will be studied and used in projects. Individual project work is included in this course and students will be required to purchase supplies. Creativity in fashion and accessories will be emphasized as students complete class projects, a community service project, and individually designed projects. There is no limit to the types of projects that can be created.

Criteria for Selection – None.

FOODS AMERICANA

No. 8504

Semester/Full Time

Grades 11, 12

Credit .5

Rediscover the flavors and traditions of true American Cuisine! This country is a huge melting pot of cultures. In each region, the people brought with them their Old-World cuisines and customs. Then combined them with regional ingredients and both new and old traditions to create foods uniquely American. Foods Americana will apply various cooking techniques as we taste the food variations across the United States illustrating the American way of transforming diversity into unity. This course tells the story of what Americans eat and why... and finally "let's eat"! Various forms of technology will be experienced in meal preparation and in the discovery of career options.

Criteria for Selection – None.

Course Descriptions

Family and Consumer Sciences

FOODS FOR YOU

Semester/Full Time

Grades 11, 12

No. 8604

Credit .5

Time to evaluate and take control of your eating habits to understand how food is being used by your body? Consider taking Foods for You! This course will utilize nutrition and meal management principles to plan and prepare balanced meals. Emphasis will be on balancing nutrients which contribute to personal wellness along with the foods you crave and enjoy. Weekly lessons and food choices will be analyzed based on individual, family, and community resources and needs. Students will examine possible career options in food science, service, and technology.

Criteria for Selection – None.

SPORTS NUTRITION

Semester/Full Time

Grades 11, 12

No. 8607

Credit .5

Many individuals who are passionate about playing sports often focus on their training regimen but lack the knowledge to fuel up properly for high-performance. In this hands-on course, students will learn ways to maximize their nutrient intake by considering their sport-specific needs. Students will cover foundations of nutrition Science with special focus on areas relevant to high school athletes such as timing of eating, hydration, increasing muscle mass, reducing body fat, eating while traveling, dietary supplements, and the negativity of eating disorders, anabolic steroid, and alcohol use. Students will prepare and sample lightened versions of food and learn to make good choices for pre- and post- workout meals that fit into a student's budget, as well as busy training schedule. This course is a perfect fit for those looking to start a career in nutrition or just enhance their wellness and function at their best.

Criteria for Selection – None.

INTERIOR DESIGN

Semester/Full Time

Grades 11, 12

No. 8904

Credit .5

In this course, students will receive an introduction to the field of interior design. Designs incorporating both functional and aesthetic elements of residential and commercial interiors are covered as students learn principles and elements of design concerning the selection and organization of furnishings, floor and wall coverings, window treatments, lighting, and accessories and the financial decisions required of owning a home. This class caters to those who have an interest in art, architecture, or design.

Criteria for Selection – None.

CHILD DEVELOPMENT (CHS)

Semester/Full Time

Grades 11, 12

No. 8704

Credit .5

This course explores the typical and atypical development of a child from conception through age three. Class will focus on promoting healthy development across the areas of physical, social, emotional, moral, and intellectual development. Students will investigate the function of the family in today's world and how to help children grow into individuals that contribute to productive communities. This course offers insight into infant and childcare topics with opportunities for hands-on experiences, including the use of reality care baby simulators. Careers working with children will be investigated, including pediatric nursing and early childhood education.

Criteria for Selection – None.

(Continued...)

Course Descriptions

Family and Consumer Sciences

PRESCHOOL PRACTICUM

No. 8804

Semester/Full Time

Credit .5

Grade 12

This course is designed to explore advanced child development concepts and theories through an actual interactive Preschool experience. Children aging from 3½ to 5 years-old participate in Preschool three days a week for most of the semester. Each senior will help plan and lead classroom activities that will enhance their child development skills. Classroom planning will include activities in the areas of the arts, science, literacy, and mathematics. Seniors who choose this course need to have an interest in children and strive to understand their needs.

This Preschool program adheres to the Child Development Laboratory Procedural Guidelines as established by the Pennsylvania Department of Education (2004). Copies of the guidelines are available upon request.

Criteria for Selection – None.

Course Descriptions

Health and Physical Education

Grade 9 – .5 Credit Required of Health and .5 Credit Required of 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

Grade 10 – .5 Credit Required

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, 10 – Electives

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

Grade 11 – .5 Credit Required

Health and Physical Education (FY/PT).....	# 7401
--	--------

Grade 12 – .5 Credit Required

Health and Physical Education (FY/PT).....	# 7401
--	--------

Grades 11, 12 – Electives

Adaptive Physical Education.....	# 7209
Health and Physical Education (Semester/FT)	# 7501
Focus on Fitness.....	# 7601
Health and Physical Education with Lifeguarding Option	# 7301
Wellness Leadership.....	# 7600

Health and Physical Education

WELLNESS FOR LIFE

Semester/Full Time

Grade 9 or 10

This is the preferred Health course of 9th grade students.

No. 8409

Credit .5

OR

WELLNESS FOR LIFE

Full Year/Part Time

Grade 9 or 10

This course may be scheduled in lieu of #8409 when necessitated by certain scheduling scenarios.

No. 8410

Credit .5

This course is designed to provide students with an opportunity to learn about the physical, mental/emotional, and social aspects of health. An emphasis is placed on the importance of making healthy decisions 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, and Personal Safety.

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. Today, "physical activity is not only a leisure time luxury – it is an essential component of a healthy lifestyle for individuals of all ages" (Young 2003). 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, determining their current level of personal physical fitness in relation to health standards, recognizing the reasons for their current fitness level, recognizing that they have the power to change their fitness level, setting short- and long-term fitness goals, and working throughout the course to reach their personal fitness goals.

The curriculum focus is on lifetime fitness and physical activity. Students are encouraged to work together in promoting course and individual goals. Activities will be broken up into four separate tracks. Each of these four separate tracks will progress in skill and intensity throughout the year. The four tracks are Aerobic Fitness/Running, Biking, Strength Training, and Adventure Education.

ADVANCED 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.

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.

Criteria for Selection – Approval by teacher.

(Continued...)

Health and Physical Education

HEALTH AND PHYSICAL EDUCATION

Full Year/Part Time

Grades 11, 12

No. 7401

Credit .5

Physical Education at the Senior High is based on the philosophy that all students are life-long learners. Activities will enable students to develop skills necessary to maintain a healthy, active adult lifestyle. Students will have the opportunity to participate in eight different activities during a two-year cycle. Every activity will emphasize the Fitness and Skill Level necessary for safe and enjoyable participation. Activities include:

1. Fitness I – Muscular strength and Endurance, Flexibility, and Stress Management
2. Tennis
3. Basic swimming skills, personal water safety skills, and boating safety
4. Rock climbing
5. Fitness II – Cardiovascular Fitness and Conditioning
6. Golf
7. Swimming for Fitness and emergency water safety skills
8. Badminton

Students will have the opportunity to utilize a variety of assessment tools, designed to promote successful participation. Assessments could be used to help determine:

- Present level of fitness
- Personal fitness plan
- Unit skills
- Level of participation
- Use of Exercise Journal
- Present skill level
- Drills for skill improvement
- Skill mastery
- Cognitive understanding

Students will participate, understand, and appreciate the benefits of an active lifestyle. A healthy, active lifestyle will improve the quality of life and lower the risk for disease associated with a sedentary lifestyle. Students will also understand the best and safest practices recommended for participation in recreational and fitness activities.

HEALTH AND 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 unit will be greatly reduced in comparison to the normal curriculum, to focus on the fitness objectives of the course. The unit activities will be incorporated to meet the 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.

Health and Physical Education

HEALTH AND PHYSICAL EDUCATION WITH LIFEGUARDING OPTION

No. 7301

*Full Year/Part Time/Required
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
- Passing grade of 80 percent on 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.

WELLNESS LEADERSHIP

No. 7600

*Semester/Full Time
Grades 11 or 12*

Credit .5

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

Grade 9 – One 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 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 (CHS)	# 3012
AP Calculus BC (CHS)	# 3022
Academic Pre-Calculus with Trigonometry	# 3104

Grade 9, 10 – Elective

Computer Science A (Semester)	# 3523
Computer Science B (Semester)	# 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

Mathematics

Grade 11 – One Credit Required in Either Grade 11 or Grade 12

Essentials of Algebra 2 (Part 1).....	# 3303
Academic Algebra 2	# 3103
Academic Algebra 3	# 3623
Academic Pre-Calculus with Trigonometry	# 3104
Honors Pre-Calculus with Trigonometry (CHS).....	# 3421
Honors Calculus (CHS)	# 3422
AP Calculus AB (CHS)	# 3012
AP Calculus BC (CHS).....	# 3022

Grade 12 – One Credit Required in Either Grade 11 or Grade 12

Essentials of Algebra 2 (Part 1).....	# 3303
Essentials of Algebra 2 (Part 2).....	# 3304
Academic Algebra 2	# 3103
Trigonometry with Functions	# 3624
Academic Pre-Calculus with Trigonometry	# 3104
Honors Pre-Calculus with Trigonometry (CHS).....	# 3421
Foundations of Calculus (Academic).....	# 3105
Honors Calculus (CHS)	# 3422
AP Calculus AB (CHS)	# 3012
AP Calculus BC (CHS).....	# 3022

Grade 11, 12 – Elective

Personal Finance (Semester)	# 3411
Probability & Statistics (CHS).....	# 3812
AP Statistics (CHS)	# 3014
Honors Linear Algebra (CHS).....	# 3032
Computer Science A (Semester).....	# 3523
Computer Science B (Semester).....	# 3524
Computer Science C	# 3525
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

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.

Criteria for Selection –

1. Acceptance into the IMPACT Program
2. 60% or better in Essentials of Algebra 1 (Part 1) (3082) (prior to Grade 9).

ESSENTIALS OF ALGEBRA 1 (PART 2)

No. 3301

Full Year/Full Time
Grade 9

Credit 1.0

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 of 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.

Criteria for Selection – 60% or better in Essentials of Algebra 1 (Part 1) (3082) (prior to Grade 9).

ACADEMIC ALGEBRA 1

No. 3101

Full Year/Full Time
Grade 9
NCAA

Credit 1.0

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.

Criteria for Selection – An 'A' (90%) or better in Essentials of Algebra 1 (Part 1) (3082) AND a teacher approval (prior to grade 9).

HONORS ALGEBRA 2

No. 3202

Grade 9 (listed in Grade 10 section)

ACADEMIC ALGEBRA 2

No. 3103

Grade 9 (listed in Grade 10 section)

Course Descriptions

Mathematics

HONORS GEOMETRY

Full Year/Full Time

Grades 9, 10

No. 3201

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 'B' (80%) or better in Advanced Algebra 1 (3084) (prior to grade 9.)
2. A 95% or better OR a teacher approval in Academic Algebra 1 (3083) (prior to grade 9.)

ACADEMIC GEOMETRY

Full Year/Full Time

Grades 9, 10

NCAA

No. 3102

Credit 1.0

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.

Criteria for Selection – A 'C' (70%) or better in Academic Algebra 1 (3083).

NOTE: Students with less than a 'C' in Academic Algebra 1 will be recommended to repeat Academic Algebra 1 at the high school level.

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

Course Descriptions

Mathematics

GRADE 10 COURSE SELECTIONS

ESSENTIALS OF GEOMETRY (IMPACT)

No. 3334

Full Year/Full Time

Grade 10

Credit 1.0

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.

Criteria for Selection –

1. Acceptance into the IMPACT Program.
2. 60% or better in Essentials of Algebra 1 (Part 2) (3301).

ESSENTIALS OF GEOMETRY

No. 3302

Full Year/Full Time

Grade 10

Credit 1.0

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.

Criteria for Selection – 60% or better in Essentials of Algebra 1 (Part 2) (3301).

HONORS GEOMETRY

No. 3201

Grade 10 (listed in Grade 9 section)

ACADEMIC GEOMETRY

No. 3102

Grade 10 (listed in Grade 9 section)

HONORS ALGEBRA 2

No. 3202

Full Year/Full Time

Grades 9, 10

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection -

1. A 'B' (80%) or better in Honors Geometry (3201).
2. A 95% or better in Academic Geometry (3102), OR a teacher's approval from Academic Geometry.

Course Descriptions

Mathematics

ACADEMIC ALGEBRA 2

Full Year/Full Time

Grades 9, 10, 11, 12

No. 3103

Credit 1.0 NCAA

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.

Criteria for Selection – 60% or better in Academic Geometry (3102).

NOTE: Students with less than a 'B' in Honors Geometry will be recommended for Academic Algebra 2.

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 (CHS)

Grade 10 (listed under Grade 12)

No. 3012

AP CALCULUS BC (CHS)

Grade 10 (listed under Grade 12)

No. 3022

ACADEMIC PRE-CALCULUS WITH TRIGONOMETRY

Grade 10 (listed under Grade 11)

No. 3104

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 11 COURSE SELECTIONS

ESSENTIALS OF ALGEBRA 2 (PART 1)

Full Year/Full Time

Grades 11, 12

No. 3303

Credit 1.0

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 of 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.

Criteria for Selection – 60% or better in Essentials of Geometry (3302).

(Continued...)

Course Descriptions

Mathematics

ACADEMIC ALGEBRA 2

Grade 11 (listed under Grade 10)

No. 3103

ACADEMIC ALGEBRA 3

Full Year/Full Time

Grade 11

No. 3623

Credit 1.0 NCAA

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.

Criteria for Selection – Less than a 'B' (79%) or below in Academic Algebra 2 (3103).

ACADEMIC PRE-CALCULUS WITH TRIGONOMETRY

Full Year/Full Time

Grades 10, 11, 12

No. 3104

Credit 1.0 NCAA

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 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. 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.

Criteria for Selection –

1. A 'B' (80%) or better in Academic Algebra 2 (3103).
2. Less than a 'B' (79%) or below in Honors Algebra 2 (3202).
3. Between (90%) and (94%) in Academic Algebra 3 (3623).
4. Approval by the Mathematics teacher.

HONORS PRE-CALCULUS WITH TRIGONOMETRY (CHS)

Full Year/Full Time

Grades 9, 10, 11, 12

No. 3421

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 'B' (80%) or better in Honors Algebra 2 (3202).
2. A 95% or better in Academic Algebra 2 OR a teacher recommendation from Academic Algebra 2 (3103).
3. A 95% or better in Academic Algebra 3 OR a teacher recommendation from Academic Algebra 3 (3623).

Course Descriptions

Mathematics

HONORS CALCULUS (CHS)

Full Year/Full Time

Grade 11 (listed under Grade 12)

NOTE: For students taking this course in grade 10 or grade 11, another Calculus course (3012 or 3022) may be taken prior to graduation. For a maximum number of credits earned in Calculus courses not to exceed 2.5 credits.

No. 3422

Honors Wt.

Credit 1.0 NCAA

AP CALCULUS AB (CHS)

Grade 11 (listed under Grade 12)

No. 3012

AP CALCULUS BC (CHS)

Grade 11 (listed under Grade 12)

No. 3022

PERSONAL FINANCE

Semester/Full Time

Grades 11, 12

No. 3411

Credit .5

This practical course is designed to empower students to become more responsible consumers and to prepare them to be financially successful in the years ahead. The major topics of the course are as follows: foundation of financial planning; short- and long-term financial goal writing; an in-depth look at the influence of today's economy; budget preparation and money management; banking and investing; consumer credit; local, state, and federal taxes; car buying and financing; home mortgages; protection against identity theft; insurance basics; and the mathematics behind key financial ratios. This course is designed as an elective and is not part of any specific mathematics sequence. By developing a strong background in financial literacy, students will be ready to take control of their own personal success towards a secure future.

Criteria for Selection – Approval by the Mathematics teacher.

PROBABILITY AND STATISTICS (CHS)

Full Year/Full Time

Grades 11, 12

No. 3812

Credit 1.0 NCAA

This course develops the basic tools of probability theory and statistics. Topics studied include counting methods using permutations and combinations, axiomatic probability, descriptive statistics, and statistical inference. Statistical inference topics include parameter estimation, sampling theory, and hypothesis testing. This course provides a smooth transition to statistics needed at the college-level.

Criteria for Selection – Successful completion of Honors Algebra 2 (3202), or Academic Algebra 2 (3103).

AP STATISTICS (CHS)

Full Year/Full Time

Grades 11, 12

No. 3014

AP Wt.

Credit 1.0 NCAA

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. 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.

1. **Criteria for Selection –**
2. A 'B' (80%) or better in Honors Pre-Calculus with Trigonometry (3421)
3. A 'C' (70%) or better in Honors Calculus (3422), AP Calculus AB (3012), or AP Calculus BC (3022).
4. Approval by the Mathematics teacher.

Course Descriptions

Mathematics

HONORS LINEAR ALGEBRA (CHS) <i>Grades 11, 12 (listed under Grade 12)</i>	No. 3032
COMPUTER SCIENCE A <i>Grades 11, 12 (listed at end of Mathematics section)</i>	No. 3523
COMPUTER SCIENCE B <i>Grades 11, 12 (listed at end of Mathematics section)</i>	No. 3524
COMPUTER SCIENCE C <i>Grades 11, 12 (listed at end of Mathematics section)</i>	No. 3525
AP COMPUTER SCIENCE (CHS) <i>Grades 11, 12 (listed at end of Mathematics section)</i>	No. 3011

GRADE 12 COURSE SELECTIONS

ESSENTIALS OF ALGEBRA 2 (PART 1) <i>Grade 12 (listed under Grade 11)</i>	No. 3303
ESSENTIALS OF ALGEBRA 2 (PART 2) <i>Full Year/Full Time</i> <i>Grade 12</i>	No. 3304 <i>Credit 1.0</i>

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 of 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.

Criteria for Selection – A 60% or better in Essentials of Algebra 2 (Part 1) (3303).

ACADEMIC ALGEBRA 2 <i>Grade 12 (listed under Grade 10)</i>	No. 3103
TRIGONOMETRY WITH FUNCTIONS <i>Full Year/Full Time</i> <i>Grade 12</i>	No. 3624 <i>Credit 1.0 NCAA</i>

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.

Criteria for Selection –

1. A 60% or better in Academic Algebra 2 (3103) in 11th grade.
2. A 69% or less in Academic Pre-Calculus with Trigonometry (3104).
3. A 60% or better in Academic Algebra 3 (3623) in 11th grade.

Mathematics

ACADEMIC PRE-CALCULUS WITH TRIGONOMETRY

Grade 12 (listed under Grade 11)

No. 3104

HONORS PRE-CALCULUS WITH TRIGONOMETRY (CHS)

Grade 12 (listed under Grade 11)

No. 3421

FOUNDATIONS OF CALCULUS (ACADEMIC)

Full Year/Full Time

Grades 11, 12

No. 3105

Credit 1.0 NCAA

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.

Criteria for Selection-

1. A 70% or better in Academic Pre-Calculus with Trigonometry (3104).
2. OR a 79% or less in Honors Pre-Calculus with Trigonometry (3421).
3. Approval by Mathematics teacher.

HONORS CALCULUS (CHS)

Full Year/Full Time

Grade 12

No. 3422

Credit 1.0 NCAA

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 meets many of the requirements for an AP course. 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. This course covers many similar concepts as AP Calculus AB (3012) but at a slower pace.

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.

Criteria for Selection –

1. A 'B' (80%) or better in Honors Pre-Calculus with Trigonometry (3421).
2. A 95% or better in Academic Pre-Calculus with Trigonometry OR an approval from Academic Pre-Calculus with Trigonometry (3104).
3. Approval from a Mathematics teacher.

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 (CHS)

Full Year/Full Time

Grade 12

No. 3012

AP Wt.

Credit 1.0 NCAA

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) 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.

Criteria for Selection –

1. An 'A' (90%) or better in Honors Pre-Calculus with Trigonometry (3421).
2. Approval by Mathematics teacher.

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

No. 3022

AP Wt.

Credit 1.5 NCAA

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) 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.

Criteria for Selection –

1. An 'A' (95%) or better in Honors Pre-Calculus with Trigonometry (3421).
2. An 'A' (90%) or better in Honors Calculus (3422).
3. Approval by a Mathematics teacher.

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.*

PERSONAL FINANCE

Grades 11, 12 (listed under Grade 11)

No. 3411

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

No. 3032

Honors Wt.

Credit 1.0 NCAA

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), 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.

Criteria for Selection –

1. A 'B' (80%) or better in AP Calculus BC (3022).
2. An 'A' (90%) or better in AP Calculus AB (3012).
3. Approval from a Mathematics teachers.

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

COMPUTER SCIENCE C

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

No. 3525

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

No. 3523

Credit .5

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.

Criteria for Selection – Successful completion of Algebra 1 (prior to Grade 9) OR co-requisite of Algebra 1 (3101).

COMPUTER SCIENCE B

Semester/Full Time

Grades 9, 10, 11, 12

No. 3524

Credit .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.

Criteria for Selection –

1. A "C" (70%) or better in Computer Science A using Python (3523).
2. Approval by Computer Science A teacher.

Course Descriptions

Mathematics

COMPUTER SCIENCE C

Full Year/Full Time

Grades 11, 12

No. 3525

Credit 1.0

This curriculum is designed for students who have completed Computer Science A (3523) AND Computer Science B (3524) using Python as a programming language. This course builds on the Computer Science A and B foundation, covering additional programming and computer science topics such as sets and maps, and then applying and extending computational programming – solving skills in a variety of application areas. Units will apply computation in the areas of art, science, mathematics, data analysis, visualization, simulations, game design, web applications, security, machine learning, and artificial intelligence.

Criteria for Selection – A ‘B’ (80%) or better in Computer Science B (3524) using Python.

AP COMPUTER SCIENCE PRINCIPLES

Full Year/Full Time

Grades 9, 10

No. 3010

AP Wt.

Credit 1.0

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.

Criteria for Selection – Successful completion of Algebra 1 (prior to Grade 9) OR co-requisite of Algebra 1 (3101).

AP COMPUTER SCIENCE (CHS)

Full Year/Full Time

Grades 11, 12

No. 3011

AP Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A ‘B’ (80%) or better in Computer Science A (3523). Completion of Computer Science B (3524) is strongly recommended.
2. A ‘B’ (80%) or better in AP Calculus BC (3022) or AP Calculus AB (3012).
3. An ‘A’ (90%) or better in AP Computer Science Principles (3010).
4. Approval by Computer Science teacher is required.

District Mathematics Phase Sequence Chart

North Allegheny School District Mathematics Program

Pathway	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade	9 th Grade	10 th Grade	11 th Grade	12 th Grade
M4 PLUS	5 th Grade Elementary Math	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	
M4	4 th Grade Elementary Math	5 th Grade Elementary Math	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 Elective
M3	4 th Grade Elementary Math	5 th Grade Elementary Math	Academic Math 6	Academic Pre-Algebra	Academic Algebra 1	Academic Geometry	Academic Algebra 2	Academic Pre-Calculus with Trigonometry	Foundations of Calculus Trigonometry with Functions Math Elective
								Academic Algebra 3	Honors Pre-Calculus with Trigonometry Academic Pre-Calculus with Trigonometry Trigonometry with Functions Math Elective
M3						Academic Algebra 1	Academic Geometry	Academic Algebra 2	Honors Pre-Calculus with Trigonometry Academic Pre-Calculus 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) Math Elective

MATHEMATICS ELECTIVES INCLUDE: Personal Finance, Computer Science A, Computer Science B, Computer Science C, 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

Music

Grades 9, 10 – Electives

Music Theory and Composition 1 ¹	# 6408
Music Theory and Composition 2 and Jazz Studies ¹	# 6508
Electronic Music ¹	# 6707
Song Writing ¹	# 6807
Song Writing 2 ¹	# 6609
String Orchestra.....	# 6906
Honors Chamber Orchestra.....	# 6907
Choral Ensemble.....	# 6910
Honors Wind Ensemble.....	# 6407
Concert Band.....	# 6805
Symphonic Band.....	# 6905
Choral 1 — 9th grade (FY/FT).....	# 6506
Choral 1 — 9th grade (FY/PT).....	# 6606
Choral 2 — 10th grade (FY/FT).....	# 6706
Choral 2 — 10th grade (FY/PT).....	# 6806

Grade 10 only – Electives

Advanced Electronic Music ¹	# 6808
Honors Chamber Choir.....	# 6610
Honors Music Theory and Composition 3 ¹	# 6608

Grades 11, 12 – Electives

String Orchestra.....	# 6908
Honors Chamber Orchestra.....	# 6909
Honors Wind Ensemble.....	# 6406
Concert Band.....	# 6914
Symphonic Band.....	# 6915
Song Writing ¹	# 6807
Song Writing 2 ¹	# 6609
Honors Chamber Choir.....	# 6610
Concert Choir – Female.....	# 6611
Concert Choir – Male.....	# 6612
Mixed Choir.....	# 6613
Music Theory and Composition ¹	# 6408
Music Theory and Composition 2 and Jazz Studies ¹	# 6508
Honors Music Theory and Composition 3 ¹	# 6608
Electronic Music ¹	# 6707
Advanced Electronic Music ¹	# 6808
Honors Music Theory ¹	# 6300
Advanced Placement Music ¹ (CHS).....	# 6301
Computer Multi-Media Arts ¹	# 6201
Advanced Computer Multi-Media Arts ¹	# 6211

¹ These courses may be used towards satisfying the one credit S.T.E.M.* (Science, Technology, Engineering, and Mathematics) requirement (details on pages 3 and 4).

(CHS) Indicates College in High School Course

Course Descriptions

Music

GRADES 9, 10, 11, 12 COURSE SELECTIONS

MUSIC THEORY AND COMPOSITION 1

No. 6408

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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.

Criteria for Selection – None.

MUSIC THEORY AND COMPOSITION 2 AND JAZZ STUDIES

No. 6508

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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.

Criteria for Selection – Successful completion of Music Theory and Composition 1 (6408).

ELECTRONIC MUSIC

No. 6707

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

This course improves a students' listening, reading music, performing, and creating skills. The student will learn how to operate electronic music-making equipment, how to program and play a sound synthesizer and a music computer. The students create original music projects using these techniques. Students do not have to be able to play an instrument to take this course.

Criteria for Selection – None.

SONG WRITING

No. 6807

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

Activities 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.

Criteria for Selection – Successful completion of Music Theory and Composition 1 (6408).

SONG WRITING 2

No. 6607

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

Activities 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.

Criteria for Selection – Successful completion of Song Writing (6807).

Course Descriptions

Music

GRADES 9, 10 COURSE SELECTIONS

STRING ORCHESTRA

Full Year/Full Time

Grades 9, 10

No. 6906

Credit 1.0

The String Orchestra is for students with previous experience playing a string instrument. This course provides students the opportunity to improve techniques unique to orchestra and string music and prepares them for public performance. String Orchestra students perform with all students of the High School Orchestra Program in the "Golden Strolling Strings" program. 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 interested in participating in PMEA Honors Festivals must be enrolled in String Orchestra or Chamber Orchestra.

Criteria for Selection – Approval from the Orchestra Director.

HONORS CHAMBER ORCHESTRA

Full Year/Full Time

Grades 9, 10

No. 6907

Credit 1.0

The Honors Chamber Orchestra is for the most serious and advanced string players in grades 9 and 10. This ensemble will rehearse, study, and perform the most advanced music written for string orchestra. Students are expected to have a highly developed sense of tone, intonation, rhythm, and harmony. Honors Chamber Orchestra students perform with all students of the High School Orchestra Program in the "Golden Strolling Strings" program. 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 interested in participating in PMEA Honors Festivals must be enrolled in String Orchestra or Honors Chamber Orchestra.

Criteria for Selection – This course is only available by audition and recommendation of the Director.

CHORAL ENSEMBLE

Full Year/Full Time

Grades 9, 10

No. 6910

Credit 1.0

This course is for the beginning or inexperienced singer to have the opportunity and training to grow as a vocalist.

Criteria for Selection – Student must be able to match pitch and demonstrate acceptable tone quality. Recommendation for the course is through the High School Choral Department.

HONORS WIND ENSEMBLE

Full Year/Full Time

Grades 9, 10

No. 6407

Credit 1.0

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 MENC 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.

Criteria for Selection – This course is available only by audition and recommendation of the Director.

CONCERT BAND

Full Year/Full Time

Grade 9

No. 6805

Credit 1.0

The Intermediate High School Concert Band is designed for brass, woodwind, and percussion students in grades 9. This advancing 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

Course Descriptions

Music

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 MENC 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.

Criteria for Selection – This course is available only by audition, recommendation of the Director, and instrumentation needs.

SYMPHONIC BAND

No. 6905

Full Year/Full Time

Credit 1.0

Grade 10

The Intermediate High School Symphonic Band is designed for the advancing brass, woodwind, and percussion students in grade 10. 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 MENC 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.

Criteria for Selection – This course is available only by audition, recommendation of the Director, and instrumentation needs.

CHORAL 1

No. 6506

Full Year/Full Time

Credit 1.0

Grade 9

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.

Criteria for Selection – Match Pitch

CHORAL 1

No. 6606

Full Year/Part Time

Credit .5

Grade 9

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.

Criteria for Selection – Match Pitch.

CHORAL 2

No. 6706

Full Year/Full Time

Credit 1.0

Grade 10

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.

Criteria for Selection – Must match pitch 8 note scale.

CHORAL 2

No. 6806

Full Year/Part Time

Credit .5

Grade 10

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.

Criteria for Selection – Must match pitch 8 note scale.

Course Descriptions

Music

GRADES 10, 11, 12 COURSE SELECTIONS

ADVANCED ELECTRONIC MUSIC

No. 6808

Semester/Full Time

Grades 10, 11, 12

Credit .5

This course is a continuation of Electronic Music 6707. 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 ear-training and music analysis skills.

Criteria for Selection – Successful completion of Electronic Music (6707).

HONORS MUSIC THEORY AND COMPOSITION 3

No. 6608

Semester/Full Time

Grades 10, 11, 12

Honors Wt.

Credit .5

This course covers advanced harmony, ear training and analysis. The students will continue to develop the skills needed to hear and write music, read, analyze, and to create original music compositions. This course is essential for those planning to pursue a career in the music industry or to major in music in college.

Criteria for Selection – Successful completion of Music Theory and Composition 2 (6508).

HONORS CHAMBER CHOIR

No. 6610

Full Year/Full Time

Grades 10, 11, 12

Honors Wt.

Credit 1.0

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.

Criteria for Selection – This course is available by audition and the recommendation by Choir Director.

GRADES 11, 12 COURSE SELECTIONS

SONG WRITING

No. 6807

Semester/Full Time

Grades 11, 12

Credit .5

Activities 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.

Criteria for Selection – Successful completion of Music Theory and Composition 1 (6408).

SONG WRITING 2

No. 6609

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

Activities 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.

Criteria for Selection – Successful completion of Song Writing (6807).

Course Descriptions

Music

STRING ORCHESTRA

Full Year/Full Time

Grades 11, 12

No. 6908

Credit 1.0

The String Orchestra is for students with previous experience playing a string instrument. This course gives students the opportunity to improve techniques unique to orchestra and string music and prepares them for public performance. String Orchestra students perform with all students of the High School Orchestra Program in the "Golden Strolling Strings" program. 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 interested in participating in PMEA Honors Festivals must be enrolled in String Orchestra or Chamber Orchestra.

Criteria for Selection – Recommendation from the Orchestra Director.

HONORS CHAMBER ORCHESTRA

Full Year/Full Time

Grades 11, 12

No. 6909

Honors Wt.

Credit 1.0

The Honors Chamber Orchestra is for the most serious and advanced string players in grades 11 and 12. This ensemble will rehearse, study, and perform the most advanced music written for string orchestra. Students are expected to have a highly developed sense of tone, intonation, rhythm, and harmony. Honors Chamber Orchestra students perform with all students of the High School Orchestra Program in the "Golden Strolling Strings" program. 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 interested in participating in PMEA Honors Festivals must be enrolled in String Orchestra or Honors Chamber Orchestra.

Criteria for Selection – This course is only available by audition and recommendation of the Director.

HONORS WIND ENSEMBLE

Full Year/Full Time

Grades 11, 12

No. 6406

Honors Wt.

Credit 1.0

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 MENC 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.

Criteria for Selection – This course is available only by audition and recommendation of the High School Band Director.

CONCERT BAND

Full Year/Full Time

Grades 11, 12

No. 6914

Credit 1.0

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 MENC 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.

Criteria for Selection – This course is available only by audition, recommendation of the Director, and instrumentation needs.

Course Descriptions

Music

SYMPHONIC BAND

Full Year/Full Time

Grades 11, 12

No. 6915

Credit 1.0

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 MENC 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.

Criteria for Selection – This course is available only by audition, recommendation of the Director, and instrumentation needs.

CONCERT CHOIR – FEMALE

Full Year/Full Time

Grades 11, 12

No. 6611

Credit 1.0

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

Criteria for Selection – Approval by the Choir Department.

CONCERT CHOIR – MALE

Full Year/Full Time

Grades 11, 12

No. 6612

Credit 1.0

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

Criteria for Selection – Approval by the Choir Department.

MIXED CHOIR

Full Year/Full Time

Grades 11, 12

No. 6613

Credit 1.0

Emphasis is placed on learning and performance of choral music of various periods. 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.

Criteria for Selection – Approval by the Choir Department.

HONORS MUSIC THEORY

Full Year/Full Time

Grades 11, 12

No. 6300

Honors Wt.

Credit 1.0

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 20th Century music including non-traditional instruments and technologies.

Course Descriptions

Music

Criteria for Selection –

1. Successful completion of AP Music (6301) with a 'B' or better.
2. Recommendation of a member of the North Allegheny Music Faculty in consultation with the Music Department Chair.

ADVANCED PLACEMENT MUSIC (CHS)

No. 6301

Full Year/Full Time

AP Wt.

Grades 11, 12 Phase III and IV

Credit 1.0

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 meets every day for the entire school year. It incorporates 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.

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 their junior year and Honors Music Theory during their senior year.

Criteria for Selection –

1. Successful completion of Music Theory and Composition 1 (6408) or Electronic Music (6707) or Song Writing (6807) with a 'B' or better. This criterion can be replaced through successful completion of the Music Theory Placement Test.
2. Recommendation of a member of the North Allegheny Music Faculty in consultation with the Music Department Chair.

COMPUTER MULTI-MEDIA ARTS

No. 6201

Semester/Full Time

Credit .5

Grades 11, 12

In this course, the students design and create original media rich web sites and computer multimedia presentations that include animation, video, photography, graphics, sound, and MIDI music. 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 MIDI 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.

Criteria for Selection – None.

ADVANCED COMPUTER MULTI-MEDIA ARTS

No. 6211

Semester/Full Time

Credit .5

Grades 11, 12

Advanced 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, and post-production video effects. Students will have the opportunity to create architectural projections, 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.

Criteria for Selection – Successful completion of Computer Multi-Media Arts (6201).

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 Credit Required

Biology *	# 4210
Biology	# 4410
Academic Biology	# 4510
Honors Biology	# 4609

Grade 10 – One Credit Required

Introduction to Physics & Chemistry *	# 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 coordinator or school counselor.

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
Earth Science and Astronomy	# 4461
Honors Earth Science and 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

INTRODUCTION TO PHYSICS & CHEMISTRY (IMPACT)

No. 4209

Full Year/Full Time

Grade 10 Phase I

Credit 1.0

Introduction to Physics and Chemistry is a study of the nature and behavior of matter and energy. 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.

Criteria for Selection – This course is reserved for students in the IMPACT program.

INTRODUCTION TO PHYSICS & CHEMISTRY

No. 4409

Full Year/Full Time

Grade 10 Phases I, II, III

Credit 1.0 NCAA

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 with a final test at the end of each semester. Scientific models are developed and used to explore and explain physical and chemical phenomena. 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.

Criteria for Selection – None.

ACADEMIC INTRODUCTION TO PHYSICS & CHEMISTRY

No. 4509

Full Year/Full Time

Grade 10 Phases III, IV

Credit 1.0 NCAA

Academic Introduction to Physics and Chemistry is designed for the student with a higher mathematical ability than those who register for the Introduction to Physics and Chemistry course. In this course, students will observe, analyze, and solve physical and chemical problems in nature by using the scientific method and through the development and application of mathematical formulas. Students will have one semester of introductory physics and one semester of introductory chemistry with a final test at the end of each semester. Students should be capable of learning by inquiry and working cooperatively in small group and large group laboratory situations. In addition, students are required to complete several self-directed research activities throughout the year. This class meets five periods per week.

Criteria for Selection – Students must meet the following three criteria:

1. 80% or above in Honors Geometry (or a higher-level Mathematics course) OR 85% or above in Academic Geometry.
2. 80% or higher in Academic Biology OR 95% or higher in Biology.
3. Approval by a Science teacher.

HONORS BIOLOGY

No. 4609

Full Year/Full Time

Grade 9 Phase IV

Honors Wt.

Credit 1.5 NCAA

This course is an in-depth approach to life science with emphasis on cellular, molecular, and environmental concepts. This phase requires a high level of reading and mathematical computation skills, and independence. Students will frequently work cooperatively to perform hands-on experiments and activities in areas such as biochemistry, genetics, evolution, microbiology, and cell functions. This class meets seven/eight periods each week. Students should expect a more rigorous workload commensurate with the level of the class.

Criteria for Selection –

1. 93% or higher in 8th grade Science.
2. 7th grade IOWA test score (Mathematics Total) at or above the 85th National Percentile Rank.
3. 85% or above in Advanced Algebra 1 (or a higher-level Mathematics course) or 95% or above in Academic Algebra 1.

(Continued...)

Course Descriptions

Science

BIOLOGY (IMPACT)

Full Year/Full Time

Grade 9 Phase I

No. 4210

Credit 1.0

This course includes the processes, structures, and functions of living organisms. Students will use an ecological approach to study the relationships of living things in their environment. Laboratory experiments and demonstrations will supplement classroom discussion.

Criteria for Selection – This course is reserved for students in the IMPACT program.

BIOLOGY

Full Year/Full Time

Grade 9 Phases I, II

No. 4410

Credit 1.0

This course introduces the fundamental principles necessary to promote biological literacy among students. Classroom discussions, investigations, demonstrations, laboratory activities, and the use of various media will enhance student learning. Topics include: living organisms, cell functions, heredity, evolution, and ecology with practical applications for each.

Criteria for Selection – None.

ACADEMIC BIOLOGY

Full Year/Full Time

Grade 9 Phases III, IV

No. 4510

Credit 1.5 NCAA

This course is a traditional approach to life science with labs and demonstrations, supplementing text, lecture, and technology. It provides a dual microscopic/macrosopic approach that covers life at all levels of biological organization. This class meets seven/eight periods each week.

Criteria for Selection in grade 9 –

1. 85% or higher in 8th grade Science.
2. 7th grade IOWA test score (Math Total) at or above the 65th National Percentile Rank.
3. 75% or above in Advanced Algebra 1 (or a higher-level Mathematics course) or 85% or above in Academic Algebra 1.

HONORS CHEMISTRY

Full Year/Full Time

Grades 10, 11, 12 Phases III, IV

No. 4610

Honors Wt.

Credit 1.5 NCAA

Students will be introduced to a problem-oriented approach to chemistry that will prepare them for future academic challenges. This course explores the theoretical and mathematical aspects of chemistry. Mathematics, including geometry, and algebra, will be used extensively in this course to solve problems and develop relationships between physical quantities; a proficiency on the Keystone: Algebra I exam is highly recommended. The class meets 7½ periods per week. It is geared toward the student who is mathematical/science oriented. It is recommended that students are enrolled concurrently in Honors Algebra II or a higher-level mathematics course.

Criteria for Selection – For grade 10 –

1. 80% or higher in Honors Biology (4609) and 85% or higher in Honors Geometry (3201) or a higher-level Mathematics course or 95% or higher in Academic Geometry (3102).
2. Approval by current Science teacher.

OR

1. 95% or higher in Academic Biology (4510) and 85% or higher in Honors Geometry (3201) or a higher-level Mathematics course, or 95% or higher in Academic Geometry (3102).
2. Approval by current Science teacher.

For grades 11 and 12 –

1. 85% or higher in Honors Biology (4609) or 95% or higher in Academic Biology (4510) and 85% or higher in Academic Introduction to Physics, and Chemistry (Formerly Academic Physical Science (4509).
2. 80% or higher in Honors Geometry (3201) or a higher-level Mathematics course, or 95% or higher in Academic Geometry (3102).
3. Approval by current Science teacher.

Course Descriptions

Science

APPLIED SCIENCE 1

Full Year/Full Time

Grades 11, 12 Phase I

No. 4411

Credit 1.0

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 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 need for graduation) at the Senior High.

Criteria for Selection – Approval by School Counselor or previous Science Teacher is required.

APPLIED SCIENCE 2

Full Year/Full Time

Grades 11, 12 Phase I

No. 4414

Credit 1.0

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.

Criteria for Selection – Approval by School Counselor or previous Science Teacher is required.

ENVIRONMENTAL SCIENCE

Full Year/Full Time

Grades 11, 12 Phases II, III

No. 4451

Credit 1.0 NCAA

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.

Criteria for Selection – Successful completion of a Physical Science course (4409 or 4509) and a Biology course (4410 or 4510).

HONORS ENVIRONMENTAL SCIENCE

Full Year/Full Time

Grades 11, 12 Phases III, IV

No. 4115

Honors Wt.

Credit 1.0 NCAA

This course is a study of interrelationships that equips 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. We 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. This course concludes with sustainability on the personal, local, and global levels. Lab activities and case studies will play a major role in the course. Principles of scientific inquiry are integrated throughout the course. Students should have developed skills in reading, writing, biology, chemistry, and mathematics to support their work.

Criteria for Selection –

1. Successful completion of a Physical Science course (4409 or 4509) and a Biology course (4410 or 4510) with an 80% average or above.
2. It is recommended, but not necessary, that the student be enrolled in, or have completed a Chemistry course.

Course Descriptions

Science

EARTH SCIENCE AND ASTRONOMY

No. 4461

Full Year/Full Time

Grades 11, 12 Phases II, III

Credit 1.0 NCAA

This course emphasizes historical contributions in the development of scientific thought about the earth and space. In this course we will explore our universe starting on earth with the celestial sphere, seasons, models of the universe, and the governing laws; then space explorations and colonization; an overview of the solar system; and finally, on to 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!

Criteria for Selection – Successful completion of some level of Algebra 1 (3301, 3101).

HONORS EARTH SCIENCE AND ASTRONOMY

No. 4462

Full Year/Full Time

Grades 11, 12 Phases III, IV

Honors Wt.

Credit 1.0 NCAA

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, students have the opportunity to apply laws and principles learned in the core sciences to understand how the Earth's systems and the cosmos operate. Among the fascinating aspects of our universe that will be studied are stars and constellations; the solar system; space exploration; and colonization. This course is designed to provide students with a broad enough background in astronomy that they will be able to follow current developments years after. The analysis and calculations of some topics is more in-depth than in the regular Earth Science and Astronomy course (4461). Strong Algebra skills are recommended. 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!

Criteria for Selection –

1. **Successful completion of some level of Algebra 1 (3301, 3101).**
2. Although not required, current enrollment in or completion of any level of Chemistry or Physics is suggested.
3. This course CANNOT be taken in conjunction with Earth Science and Astronomy (4461).

ACADEMIC CHEMISTRY

No. 4911

Full Year/Full Time

Grades 11, 12, Phase III

Credit 1.5 NCAA

Academic Chemistry is a college preparatory course that explores the fundamental principles of chemistry through classroom lecture, laboratory experimentation, and discussion. Solving various mathematical problems related to chemical concepts is an integral part of the course. Academic Chemistry meets seven/eight periods per week.

Criteria for Selection –

1. 80% or higher in Academic Algebra 1 (3101), 90% or higher in Essentials of Algebra I Part 2 (3301) or 75% or higher in a high-level Mathematics course.
2. 80% or higher in Academic Introduction to Physics and Chemistry or 90% or higher in Introduction to Physics and Chemistry.
3. Approval by current Science teacher.
4. Approval by current Mathematics teacher.

HONORS ORGANIC CHEMISTRY

No. 4811

Full Year/Full Time

Grades 11, 12, Phases III, IV

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. 80% or higher in Honors Chemistry (4610) or 90% or higher in Academic Chemistry (4911).
2. Successful completion of Academic Algebra 2 (3103) or Honors Algebra 2 (3202) or higher-level Mathematics course.
3. Approval by teacher.

Course Descriptions

Science

AP CHEMISTRY

Full Year/Full Time
Grades 11, 12 Phase IV

No. 4012

AP Wt.
Credit 1.5 NCAA

This course is designed to meet the demands of the AP Chemistry syllabus as published by the College Board. The topics covered in detail include, but are not limited to, atomic theory and structure, chemical bonding and geometry, classes of chemical reactions, stoichiometry, equilibrium (acid/base, solubility, and complexation), kinetics, thermodynamics, states of matter (solids, liquids, and gases), and buffers. The large number of objectives for the course and the highly analytical nature make it demanding. The course is the equivalent of two semesters of chemistry at the college-level. With success in the class, the student has the opportunity to earn college credit by taking the AP Chemistry exam at the end of the year. As with any AP class, the experience of having a college-level science class in high school will be invaluable, developing time-management and organization skills. AP Chemistry can be taken as either a junior or senior but taking it as a junior will prepare the student for other advanced science courses as a senior.

Criteria for Selection –

1. 80% or higher in Honors Chemistry (4610) or 90% or higher in Academic Chemistry (4911).
2. Successful completion of or Academic Algebra 2 (3103) or Honors Algebra 2 (3202) or higher-level Mathematics course.
3. Approval by teacher.

HONORS METEOROLOGY

Full Year/Full Time
Grades 11, 12 Phases III, IV

No. 4111

Honors Wt.
Credit 1.0 NCAA

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.

Criteria for Selection – Current enrollment in, or completion of, Academic Physics (4412) or Honors Physics (4512), or AP Physics C (4092), or AP Physics 1 (4062), or AP Physics 1 & 2 (4082).

ACADEMIC PHYSICS

Full Year/Full Time
Grades 11, 12, Phase III

No. 4412

Credit 1.0 NCAA

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.

Criteria for Selection –

1. Successful completion of Academic Chemistry (4911) or Honors Chemistry (4610) or teacher approval.
2. Successful completion of some level of Algebra 1 (3301, 3101) or higher-level mathematics course or teacher approval.

HONORS PHYSICS

Full Year/Full Time
Grades 11, 12 Phases III, IV

No. 4512

Honors Wt.
Credit 1.5 NCAA

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 7½ periods each week.

Criteria for Selection –

1. Successful completion of Honors Chemistry (4610) or 90% or higher in Academic Chemistry.
2. Successful completion of Academic Algebra 2 (3103) or Honors Algebra 2 (3202) or higher-level Mathematics course.

Course Descriptions

Science

AP PHYSICS 1 & 2

Full Year/Full Time

Grades 11, 12 Phase IV

No. 4082

AP Wt.

Credit 1.5 NCAA

This course is designed to meet the demands of both the AP Physics 1 & 2 syllabi as published by the College Board. The topics covered include Classical Mechanics, Thermodynamics, Fluid Dynamics, Electricity and Magnetism, Light and Sound, 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. 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. A student can earn college credit by taking the AP Physics exams at the end of the year. This of course depends upon how well the student does on the exam and the college and major in which the student enrolls. Please contact the specific college or university for more information.

Mathematics, including trigonometry, geometry, and algebra will be used extensively in this course to solve problems and develop relationships between physical quantities. Although it is beneficial to have had Honors Physics or Academic of Physics prior to AP Physics 1 & 2, it is not required. This course meets 7½ periods each week and is not available for students who have already completed AP Physics 1.

Criteria for Selection –

1. 80% or higher in Honors Algebra 2 (3202); or higher-level Mathematics course; or 95% or higher in Academic Algebra 2 (3103).
2. 80% or higher in Honors Chemistry (4610) or 90% or higher in Academic Chemistry (4911).
3. Approval by prior year's Science Teacher.

AP PHYSICS 1

Full Year/Full Time

Grades 11, 12 Phase IV

No. 4062

AP Wt.

Credit 1.0 NCAA

This course is designed to meet the demands of the AP Physics 1 syllabus as published by the College Board. The topics covered include Classical Mechanics, Waves and Sound, and an introduction to Electric Circuits. This course is equivalent to a one-semester terminal 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 can earn college credit by taking the AP Physics 1 exam at the end of the year. This of course depends upon how well the student does on the exam and the college and major in which the student enrolls. Please contact the specific college or university for more information. Mathematics, including trigonometry, geometry, and algebra will be used extensively in this course to solve problems and develop relationships between physical quantities. Although it is beneficial to have had Honors Physics or Academic of Physics prior to AP Physics 1, it is not required. This course meets five periods each week.

Criteria for Selection –

1. 80% or higher in Honors Algebra 2 (3202); or higher-level Mathematics course; or 90% or higher in Academic Algebra 2 (3103).
2. 80% or higher in Honors Chemistry (4610) or 90% or higher in Academic Chemistry (4911).
3. Approval by prior year's Science Teacher.

AP PHYSICS 2

Full Year/Full Time

Grade 12 Phase IV

No. 4072

AP Wt.

Credit 1.0 NCAA

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, 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.

Criteria for Selection –

1. 80% or higher in Honors Physics (4512) or AP Physics 1 (4062).
2. Approval by prior year's Science Teacher.

Course Descriptions

Science

AP PHYSICS C

Full Year/Full Time

Grade 12 Phase IV

No. 4092

AP Wt.

Credit 1.5 NCAA

This course is designed to meet the objectives of the AP Physics C syllabus as published by the College Board. Students will be prepared to take both the Mechanics and Electricity/Magnetism AP Physics C exams. Mechanics is that part of physics dealing with motion and energy and the way objects behave when acted on by forces. The electricity and magnetism section of the course starts with electrostatics and the use of Gauss's Law to determine electric fields, moves through electrodynamics, and finishes with a complete description of electromagnetic induction (including LRC circuits). Completing both sections of the course can be quite demanding. High-level mathematics, including calculus, is used to model relationships among physical quantities and to solve problems.

This course will provide an outstanding preparation base for rigorous college science majors such as engineering, computer science, astrophysics, and pure sciences such as physics or chemistry. Please note that each college or university has its own policy about granting credit based on AP exam scores. Each student should investigate the requirements of the college program in which he or she is interested. Regardless of whether the student takes the AP exams (most do), the experience of taking this academically demanding, yet highly interesting class, is valuable as a steppingstone to higher levels of accomplishment at the university level.

Criteria for Selection –

1. 80% or higher in AP Chemistry (4012) or Honors Chemistry (4610).
2. 80% or higher in Honors Physics (4412) or AP Physics 1&2 (4082) or AP Physics 1 (4062).
3. Co-requisite: AP Calculus (3012 or 3022) or Honors Calculus (3422).
4. Approval by prior year's Science Teacher.

ACADEMIC ANATOMY & PHYSIOLOGY

Full Year/Full Time

Grades 11, 12 Phase III

No. 4711

Credit 1.0 NCAA

Academic Anatomy & Physiology is intended for students who are interested in the structure, function, and disorders pertaining to the human body. This course will place emphasis on the body systems, their interactions, and genetics as well as 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 the understanding of the human body.

Criteria for Selection –

1. Successful completion of some level of Biology (4410, 4510, or 4609).
2. This course CANNOT be taken concurrently with (or after) Honors Anatomy and Physiology (4721).

HONORS ANATOMY & PHYSIOLOGY

Full Year/Full Time

Grades 11, 12 Phase III, IV

No. 4721

Honors Wt.

Credit 1.0 NCAA

This course is intended for college-bound students who are interested in the structure and function of the human body. Considerable time is devoted to lecture, clinical, practical, and laboratory applications. Students will explore areas such as an Introduction to the Human Organism, the Skeletal System, Articulations, the Muscular System, the Nervous System, and the Cardiovascular System. Dissection, anatomy lab, and cadaver lab field trips are also provided in the course. Honors Anatomy and Physiology is recommended for any college-bound student, especially those interested in a medical or science related field.

Criteria for Selection –

1. Successful completion of Honors Biology (4609) or 80% or higher in Academic Biology (4510), or 90% or higher in Academic Anatomy & Physiology (4711).
2. Successful completion of Academic Chemistry (4911) with an 80% or higher, or Honors Chemistry (4610) with a 75% or higher.
3. This course CANNOT be taken concurrently with Academic Anatomy & Physiology (4711).

Course Descriptions

Science

AP BIOLOGY

Full Year/Full Time

Grades 11, 12 Phase IV

No. 4011

AP Wt.

Credit 1.5 NCAA

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.

Criteria for Selection –

1. Successful completion of Honors Biology (4609) or 80% or higher in Academic Biology (4510).
2. Successful completion of Honors Chemistry (4610) with a 75% or higher, or successful completion of Honors Anatomy and Physiology (4721) with an 80% or higher.

Science Phase Sequence 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 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.

PHASE	GRADE COURSE	OPTIONS/ELECTIVES
I	9 Biology (IMPACT) (4210) 10 Intro. to Physics & Chemistry (IMPACT) (4209) 11 or 12.... Applied Science 1 (4411) or Applied Science 2 (4414)	Intro. to Physics & Chemistry (4409) Biology (4410)
II	9 Biology (4410) 10 Intro. to Physics & Chemistry (4409) 11 or 12.... Environmental Science (4451) 11 or 12.... Earth Science and Astronomy (4461)	
III	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	NASH Only Electives: Environmental Science (4451) Honors Environmental Science (4115) Earth Science and Astronomy (4461) Honors Earth Science & 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)
IV	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 AP Physics 1&2 (4082) or AP Physics C (4092) and/or AP Biology (4011) and/or AP Chemistry (4012) and/or Science Elective	Honors Anatomy & Physiology (4721) Honors Environmental Science (4115) Honors Earth Science & 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 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 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 coordinator or school counselor.

Grade 11 – One 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 Credit Required for Grade 12

AP United States History (CHS)	# 2011
AP European History (CHS)	# 2012
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	# 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

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

(CHS) Indicates College in High School Course

Course Descriptions

Social Studies

AMERICAN HISTORY 1 (IMPACT)

No. 2209

Semester/Full Time

Grade 9 Phase I

Credit .5 NCAA

Continuing chronologically from where the 8th grade American History course ended, this American History course develops the major themes of the late 1800's through the mid-1900's. 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.

Criteria for Selection – Students must be recommended by a School Counselor and/or a teacher for the IMPACT Program. An interview process is also in place as a means of selection.

EUROPEAN HISTORY (IMPACT)

No. 2309

Semester/Full Time

Grade 9 Phase I

Credit .5 NCAA

The History of the Western World develops the major themes of the Western World from the 1500's 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.

Criteria for Selection – Students must be recommended by a School Counselor and/or a teacher for the IMPACT Program. An interview process is also in place as a means of selection.

AMERICAN HISTORY 1

No. 2409

Semester/Full Time

Grade 9 Phases II, III, IV

Credit .5 NCAA

Continuing chronologically where the 8th grade American History course ends, this course covers the time period from 1890-1945. Major topics include: Immigration, Reform Movement, Economic Development, the Emergence of the United States as a World Power, the Boom and Collapse of the 1920's, The Great Depression, and World War II. A major objective is the attempt to help students understand contemporary society by illustrating its origins. Examples of local and Pennsylvania history are used to demonstrate this connection.

Criteria for Selection – None.

EUROPEAN HISTORY

No. 2509

Semester/Full Time

Grade 9 Phases II, III, IV

Credit .5 NCAA

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.

Criteria for Selection – None.

HONORS AMERICAN HISTORY 1

No. 2408

Semester/Full Time

Grade 9 Phases III, IV

Honors Wt.

Credit .5 NCAA

This course focuses on key historical events and problems facing the development of the United States from the New Immigration at the turn of the 20th Century through World War II. Students will develop critical thinking skills and problem-solving techniques. Emphasis will be placed on dissecting events and information via cultural, political, and social/economical avenues as well as geographic analysis. Throughout the semester, the student will create a combination of projects ranging from oral history research, and multi-media slide shows, to written papers, dramatic presentations, and exploration of career opportunities.

Criteria for Selection –

1. A 93% average in 8th grade Social Studies course.
2. Approval by 8th grade Social Studies teacher.

(Continued...)

Course Descriptions

Social Studies

HONORS EUROPEAN HISTORY

Semester/Full Time
Grade 9 Phases III, IV

No. 2414

Honors Wt.
Credit .5 NCAA

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 will be on analyzing information, writing essays, working with technology, and developing research skills.

Criteria for Selection –

1. A 93% average in 8th grade Social Studies course.
2. Approval by 9th grade Social Studies teacher.

WORLD CULTURES (IMPACT)

Full Year/Full Time
Grade 10 Phase I

No. 2210

Credit 1.0 NCAA

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.

Criteria for Selection – Students must be recommended by a School Counselor and/or a teacher for the IMPACT Program. An interview process is also in place as a means of selection.

WORLD CULTURES

Full Year/Full Time
Grade 10 Phases II, III, IV

No. 2410

Credit 1.0 NCAA

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.

Criteria for Selection – None.

HONORS WORLD CULTURES

Full Year/Full Time
Grade 10 Phases III, IV

No. 2415

Honors Wt.
Credit 1.0 NCAA

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 Far East Asia, Latin America, the Middle East, Africa, and Europe with an emphasis on their history, current economic and political condition, and relationship with the United States. Course work will involve high level reading and writing assignments, extensive research on a variety of topics, the development of problem-solving skills, and the use of logical decision-making techniques.

Criteria for Selection –

1. Final grade of 'A' in all required 9th grade Social Studies classes or an 'A' or 'B' in a 9th grade Honors Level Social Studies course.
2. Approval by 9th grade Social Studies teachers.

AP HUMAN GEOGRAPHY

Full Year/Full Time
Grade 10 Phase IV

No. 2416

AP Wt.
Credit 1.0 NCAA

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 AP Human Geography course is the highest phase of the required 10th grade World Cultures course. The purpose of this course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Students learn to employ spatial concepts and

(Continued...)

Course Descriptions

Social Studies

landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and application. Students will develop specific skills that enable them to: 1) interpret maps and analyze geospatial data; 2) understand and explain the implications of associations and networks among phenomena in places; 3) recognize and interpret the relationships among patterns and processes at different scales of analysis; 4) define regions and evaluate the regionalization process; and 5) characterize and analyze changing interconnections among places. 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.

Criteria for Selection -

1. Enrollment in Honors American History 1, Honors European History and Honors English 1 in 9th grade.
2. A 93% or better average in first semester required Honors level social studies course.
3. Approval by 9th grade social studies teacher.
4. Successful completion of an analytic writing sample.

FUNDAMENTALS OF MODERN AMERICAN HISTORY

No. 2211

Full Year/Full Time

Grade 11, 12 Phase I

Credit 1.0 NCAA

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.

Criteria for Selection – Students must be recommended by a School Counselor and a Social Studies teacher.

FUNDAMENTALS OF AMERICAN GOVERNMENT AND LAW

No. 2212

Full Year/Full Time

Grade 11, 12 Phase I

Credit 1.0 NCAA

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.

Criteria for Selection – Students must be recommended by a School Counselor and a Social Studies teacher.

MODERN AMERICAN HISTORY AND POLITICS

No. 2411

Full Year – Required/Full Time

Grade 11 Phases II, III, IV

Credit 1.0 NCAA

This full year course is the final phase of Modern 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 the impact 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 develop an understanding of the philosophical foundations upon which the American political system is based, and the constitutional frame in which our government operates. Students will utilize readings and case studies to analyze public opinion, political parties, voting patterns, and interest group behavior in our political process. The institutions of the federal government, Congress, the Presidency, and federal courts, will be explored in-depth, with particular emphasis on Supreme Court cases addressing civil rights and liberties. The course will conclude with discussion and analysis of current critical public policy issues such as social security, health care, immigration, and elections.

Criteria for Selection – None.

Course Descriptions

Social Studies

HONORS MODERN AMERICAN HISTORY AND POLITICS (CHS)

Full Year – Required/Full Time
Grade 11 Phases III, IV

No. 2111

Honors Wt.
Credit 1.0 NCAA

This Honors course is the final phase of 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 develop an understanding of the philosophical foundations upon which the American political system is based, and the constitutional frame in which our government operates. Students will utilize readings and case studies to analyze public opinion, political parties, voting patterns, and interest group behavior in our political process. The institutions of the federal government, Congress, the Presidency, and federal courts, will be explored in-depth, with particular emphasis on Supreme Court cases addressing civil rights and liberties. The course will conclude with discussion and analysis of current critical public policy issues such as social security, health care, immigration, and election reform. This course will also include a cumulative final exam and a substantive research paper.

Criteria for Selection –

1. Final grade of 'A' in required 10th grade Social Studies class or an 'A' or 'B' in Honors World Cultures or AP Human Geography.
2. Approval by 10th grade Social Studies teacher.

AP UNITED STATES HISTORY (CHS)

Full Year/Full Time
Grades 11, 12 Phase IV

No. 2011

AP Wt.
Credit 1.0 NCAA

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. Much reading, discussion, analytical thinking, and evaluation are required.

Criteria for Selection –

1. A 3.5 or higher academic average.
2. 'A' in all 9th and 10th grade Social Studies courses, or an 'A' or 'B' in AP Human Geography.
3. Approval by 10th and/or 11th grade Social Studies teacher(s).

AP EUROPEAN HISTORY (CHS)

Full Year/Full Time
Grades 11, 12 Phase IV

No. 2012

AP Wt.
Credit 1.0 NCAA

This 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.

Criteria for Selection –

1. A 3.5 or higher academic average.
2. Approval by 10th or 11th grade Social Studies teacher(s).

AP ECONOMICS

Full Year/Full Time
Grades 11, 12 Phase IV

No. 2013

AP Wt.
Credit 1.0 NCAA

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

Course Descriptions

Social Studies

develops familiarity with economic performance measures, economic growth, and international economics.

Criteria for Selection –

1. 3.5 or higher academic average.
2. Approval by 10th or 11th grade Social Studies teacher(s).
3. Enrollment Placement elective course is limited to 11th and 12th grade students only.

AP PSYCHOLOGY (CHS)

Full Year/Full Time

Grades 11, 12 Phase IV

No. 2014

AP Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 3.5 or higher academic average.
2. Approval by 10th or 11th grade Social Studies teacher(s).
3. Enrollment in this Advances Placement elective course is limited to 11th and 12th grade students only.

AP UNITED STATES

GOVERNMENT AND COMPARATIVE POLITICS

Full Year/Full Time

Grades 11, 12 Phase IV

No. 2016

AP Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 3.5 or higher academic average.
2. Approval by 10th or 11th grade Social Studies teacher(s).
3. Enrollment in this Advances Placement elective course is limited to 11th and 12th grade students only.

ECONOMICS

Semester/Full Time

Grades 9, 10, 11, 12 Phases II, III, IV

No. 2511

Credit .5 NCAA

Economics explores the principles and problems of the American economy and offers an overview of the consumer and producer as decision-makers. Students will study problems of employment, inflation, supply and demand, monetary and fiscal policy, rational analysis, international trade, and the market economy based upon private enterprise.

Criteria for Selection – None.

HONORS AMERICAN FOREIGN POLICY: 1945 – PRESENT (CHS)

Semester/Full Time

Grades 11, 12 Phases III, IV

No. 2611

Honors Wt.

Credit .5 NCAA

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

Course Descriptions

Social Studies

lifetime learning. In addition, the course presents extensive background and analysis of recent U.S. foreign policy to enable modern citizens to develop informed views about current international issues.

Criteria for Selection –

1. Grades of “A” or “B” in previous Social Studies courses.
2. Approval by Social Studies teacher.

HONORS HISTORY OF EUROPE AND RUSSIA: 1945 – PRESENT (CHS)

No. 2712

Semester/Full Time
Grades 11, 12 Phases III, IV

Honors Wt.
Credit .5 NCAA

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.

Criteria for Selection –

1. Grades of “A” or “B” in previous Social Studies courses.
2. Approval by Social Studies teacher.

HONORS HISTORY OF EAST ASIA: 1945 – PRESENT (CHS)

No. 2711

Semester/Full Time
Grades 11, 12 Phases III, IV

Honors Wt.
Credit .5 NCAA

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, Taiwan, Vietnam, and Indonesia. 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./East Asian relations.

Criteria for Selection –

1. Grades of “A” or “B” in previous Social Studies courses.
2. Approval by Social Studies teacher.

HONORS INTRODUCTION TO PHILOSOPHY

No. 2713

Semester/Full Time
Grades 11, 12 Phases III, IV

Honors Wt.
Credit .5 NCAA

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.

Criteria for Selection –

1. Grades of “A” or “B” in previous Social Studies courses.
2. Approval by Social Studies teacher.

Course Descriptions

Social Studies

LAW AND JUSTICE

No. 2412

Semester/Full Time

Grades 11, 12 Phases I, II, III, IV

Credit .5 NCAA

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.

Criteria for Selection – None.

MULTICULTURAL EXPERIENCE (CHS)

No. 2610

Semester/Full Time

Grades 11, 12 Phases II, III, IV

Credit .5 NCAA

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.

Criteria for Selection – None.

SOCIOLOGY (CHS)

No. 2911

Semester/Full Time

Grades 11, 12 Phases II, III, IV

Credit .5 NCAA

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.

Criteria for Selection – None.

PSYCHOLOGY

No. 2612

Semester/Full Time

Grades 9, 10, 11, 12 Phases II, III, IV

Credit .5 NCAA

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.

Criteria for Selection – None.

Course Descriptions

Technology and Engineering Education

Grade 9, 10 – Electives

Game Development ¹	# 9505
Advanced Game Development ¹	# 9605
Exploring CADD ¹ (Computer-Aided Drawing & Design)	# 9806
Manufacturing 1	# 9503
Manufacturing 2	# 9604
Electricity and Electronics ¹	# 9805
Exploring Emerging Technologies ¹	# 9704
Exploring Creation & Innovation ¹	# 9601
Exploring Robotic Engineering ¹	# 9506
Robotic Engineering ¹	# 9507
Television Production	# 1910
Honors Introduction to Engineering Design ¹ PLTW (CHS)	# 9703
Honors Principles of Engineering ¹ PLTW (CHS)	# 9702

Grades 11, 12 – Electives

Exploring Robotic Engineering ¹	# 9506
Robotic Engineering ¹	# 9507
Advanced Robotic Engineering ¹	# 9502
Game Development ¹	# 9505
Advanced Game Development ¹	# 9605
Materials – Wood, Metal, and Plastic	# 9504
Materials – Wood, Metal, and Plastic	# 9404
Exploring CADD ¹ (Computer-Aided Drawing & Design)	# 9806
Home Maintenance and Repair	# 9608
Mechanical CADD ¹ (Computer-Aided Drawing & Design)	# 9411
Architectural CADD ¹ (Computer-Aided Drawing & Design)	# 9412
Emerging Technologies ¹	# 9408
Creation & Innovation ¹	# 9602
Stage Technology and Production	# 9908
Advanced Stage Technology and Production	# 9909
Honors Introduction to Engineering Design PLTW ¹ (CHS)	# 9703
Honors Digital Electronics ¹ PLTW (CHS)	# 9701
Honors Principles of Engineering ¹ PLTW (CHS)	# 9702
Honors Computer Integrated Manufacturing ¹ PLTW (CHS)	# 9705
Honors Civil Engineering and Architecture ¹ PLTW (CHS)	# 9708
Honors Engineering Design and Development ¹ PLTW	# 9707

¹ These courses may be used towards satisfying the one credit S.T.E.M.* (Science, Technology, Engineering, and Mathematics) 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 .5

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 taught will be transferable to other S.T.E.M.* career paths. Game Development will begin with drag-n-drop programming and advance to more complex projects that involve writing code. The engineering problem-solving cycle plays a large role 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.

Criteria for Selection – None.

ADVANCED GAME DEVELOPMENT

No. 9605

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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.

Criteria for Selection – Successful completion of Game Development #9505.

EXPLORING CADD

No. 9806

(COMPUTER-AIDED DRAWING & DESIGN)

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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 learn techniques of drawing, dimensioning modeling, and symbol use. Areas of engineering addressed will include mechanical, architectural, and structural. Both 2-D and 3-D modeling will be taught, including rendering (color and shadowing of drawings). Students will learn about the materials used in manufacturing, the machines and methods of manufacturing, and related careers.

Criteria for Selection – None.

MANUFACTURING 1

No. 9503

Semester/Full Time

Grades 9, 10

Credit .5

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.

Criteria for Selection – None.

(Continued...)

Technology and Engineering Education

MANUFACTURING 2

No. 9604

Semester/Full Time

Grades 9, 10

Credit .5

Advanced use of CADD (Computer Aided Drawing and Design) software, a CNC (Computer Numerical Controlled) Router, a Laser Engraver and 3-D printer will be used to aide 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.

Criteria for Selection – Successful completion of Manufacturing 1.

ELECTRICITY & ELECTRONICS

No. 9805

Semester/Full Time

Grades 9, 10

Credit .5

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 Multi-meters, 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. S.T.E.M.* concepts will be addressed throughout the course.

Criteria for Selection – None.

EXPLORING EMERGING TECHNOLOGIES

No. 9704

Semester/Full Time

Grades 9, 10

Credit .5

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

No. 9506

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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 RobotC and 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. S.T.E.M.* concepts will be addressed throughout the course.

Criteria for Selection – None.

Course Descriptions

Technology and Engineering Education

ROBOTIC ENGINEERING

No. 9507

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

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 radio controls. Students will use this knowledge along with the design process to create custom robots that will prepare them for challenges and competitions.

Criteria for Selection – Successful completion of Exploring Robotic Engineering #9506.

EXPLORING CREATION & INNOVATION

No. 9601

Semester/Full Time

Grades 9, 10

Credit .5

Exploring Creation and Innovation is an emerging course where students apply critical thinking and creativity through the use of the design process. Using the latest technology tools and software including: Laser Engravers, CNC routers, vinyl and die-cutting machines, embroidery machines and programmable devices, students will analyze current innovations and trends and create improvements upon them. STEM concepts will be addressed throughout as students are exposed to and become active members of the “Maker” movement.

Criteria for Selection – None.

CREATION & INNOVATION

No. 9602

Semester/Full Time

Grades 11, 12

Credit .5

Creation and Innovation is a course where students apply critical thinking and creativity through the use of the design process. Using automated technology tools and software including: Laser Engravers, CNC routers, vinyl and die-cutting machines, embroidery machines and programmable devices, students will analyze current innovations and trends to create prototypes and solutions they have designed. STEM concepts will be addressed throughout as students are exposed to and become active members of the “Maker” movement.

Criteria for Selection – None.

TELEVISION PRODUCTION

No. 1910

Semester/Full Time

Grades 9, 10

Credit .5

Students will have the opportunity to explore TV Production in this course. They will learn the basic aspects of production including script writing, story board preparation, audio production, directing, editing, camera techniques, and special effects. The class is open to any student interested in communications, public relations, acting, or technical production.

ADVANCED ROBOTIC ENGINEERING

No. 9502

Full Year/Full Time

Grades 11, 12

Credits 1.0

Students will capstone a S.T.E.M.* 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 off problems presented by industry using mechatronic components and concepts such as material processing, machining, CNC milling, and 3-D printing. Additionally, students will explore career opportunities, employer expectations, and educational needs in the robotics industry.

Criteria for Selection – Successful completion of Robotics Engineering #9507.

Course Descriptions

Technology and Engineering Education

MATERIALS – WOOD, METAL, AND PLASTIC

No. 9404

Full Year/Full Time

Grades 11, 12

Credit 1.0

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, plastic and metal are explored and can be utilized in the students 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.

Criteria for Selection – None.

MATERIALS – WOOD, METAL, AND PLASTIC

No. 9504

Semester/Full Time

Grades 11, 12

Credit .5

This course is the semester version of course #9404.

Criteria for Selection – None.

HOME MAINTENANCE and REPAIR

No. 9608

Semester/Full Time

Grades 11, 12

Credit .5

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.

Criteria for Selection – None.

EMERGING TECHNOLOGIES

No. 9408

Semester/Full Time

Grades 11, 12

Credit .5

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.

Criteria for Selection – None.

MECHANICAL CADD (COMPUTER-AIDED DRAWING & DESIGN)

No. 9411

Full Year/Full Time

Grades 11, 12

Credit 1.0

This course involves the development of advanced drafting techniques. Areas of study include surface development, auxiliary views, modeling, working drawings, and assembly drawings. Advanced 3-D modeling techniques will be used, and animations will be generated from the CADD files. 3-D printing and laser engraving problems will be enhanced within the course. Portfolio development will be a focus. Autodesk products will be used on the PC including AutoCAD, Inventor, and Fusion 360.

Criteria for Selection – Successful completion of Exploring CADD #9806.

Course Descriptions

Technology and Engineering Education

ARCHITECTURAL CADD (COMPUTER-AIDED DRAWING & DESIGN)

No. 9412

Full Year/Full Time
Grades 11, 12

Credit 1.0

The focus of this course will be the design and development of residential and commercial structures. Units of study introduce students to standard practice in the design of single-family homes and provides an opportunity for students to develop a small single-family home that incorporates sustainable design practices as well as universal design features. Students will also design commercial buildings following local building codes.

Criteria for Selection – Successful completion of Exploring CADD #9806.

STAGE TECHNOLOGY AND PRODUCTION

No. 9908

Full Year/Full Time
Grades 11, 12

Credit 1.0

This course will cover the principles and techniques of stagecraft, including stage terminology, theatre 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.

Criteria for Selection – None.

ADVANCED STAGE TECHNOLOGY & PRODUCTION

No. 9909

Full Year/Full Time
Grades 11, 12

Credit 1.0

This course will cover advanced principles, techniques, and technologies of stagecraft. Students will be responsible 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.

Criteria for Selection – Successful completion of Stage Technology & Production #9908.

HONORS INTRODUCTION TO ENGINEERING DESIGN PLTW (CHS)

No. 9703

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

Credit 1.0

In 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. Students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Both individual and collaborative team activities, projects, and problems, will be used to solve problems and use engineering design and development protocols such as project management and peer review. Students will develop skills in technical representation and documentation of design solutions according to accepted technical standards and will use current 3D modeling software to represent and communicate solutions. The development of computational methods that are commonly used in engineering problem-solving, including statistical analysis and mathematical modeling, are emphasized. This is an honors level course.

Recommendation: Have taken or are currently enrolled in Algebra 1.

Course Descriptions

Technology and Engineering Education

HONORS DIGITAL ELECTRONICS PLTW (CHS)

No. 9701

*Full Year/Full Time
Grades 11, 12*

Credit 1.0

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 (APB) 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. **Criteria for Selection – Successful completion of Introduction to Engineering Design #9703.**

HONORS PRINCIPLES OF ENGINEERING PLTW (CHS)

No. 9702

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

Credit 1.0

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, the strength of materials and structures, automation, and kinematics. This course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology. Students have the opportunity to develop skills and understanding course concepts through activity, project, and problem-based (APB) learning. By solving rigorous and relevant design problems using engineering and science concepts within a collaborative learning environment, APB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community. It also allows students to develop strategies to enable and direct their own learning. **Criteria for Selection – Successful completion of Introduction to Engineering Design #9703.**

HONORS COMPUTER INTEGRATED MANUFACTURING PLTW (CHS)

No. 9705

*Full Year/Full Time
Grades 11, 12*

Credit 1.0

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. **Criteria for Selection – Successful completion of Introduction to Engineering Design #9703.**

HONORS CIVIL ENGINEERING AND ARCHITECTURE PLTW (CHS)

No. 9708

*Full Year/Full Time
Grades 11, 12*

Credit 1.0

Civil Engineering and Architecture (CEA) is a specialized high school level course in the PLTW high school engineering program. 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 progress from completing structured activities to solving open ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. **Criteria for Selection – Successful completion of Introduction to Engineering Design #9703.**

(Continued...)

Technology and Engineering Education

HONORS ENGINEERING DESIGN AND DEVELOPMENT PLTW

Full Year/Full Time
Grades 11, 12

No. 9707

Credit 1.0

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 concepts covered in this course include, but not limited to: project management, documentation, teamwork, intellectual property management, prototyping, and evaluating and presenting a project.

Criteria for Selection – Successful completion of Introduction to Engineering Design #9703.

Course Descriptions

Visual Arts

Grades 9, 10 – Electives

Drawing and Painting 1	# 6403
Drawing and Painting 2	# 6503
Arts and Crafts.....	# 6703
Introduction to Pottery and Sculpture	# 6404
Digital Imaging and Media Arts ¹	# 6202
Drawing and Painting 3	# 6603
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 ¹	# 6505
Photography 2 ¹ (CHS)	# 6605
Jewelry and Metalsmithing	# 6912
Computer Multi-Media Arts ¹	# 6201
Honors Art (CHS).....	# 6010
AP Art and Design (CHS)	# 6011
Advanced Computer Multi-Media Arts ¹	# 6211

¹ These courses may be used towards satisfying the one credit S.T.E.M.* (Science, Technology, Engineering, and Mathematics) 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

Credit .5

Drawing and Painting 1 is 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. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

DRAWING AND PAINTING 2

No. 6503

Semester/Full Time

Grades 9, 10

Credit .5

Drawing and Painting 2 is 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, graphic design, digital media, and printmaking, as well as work in the artist's own personal sketchbook. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

DRAWING AND PAINTING 3

No. 6603

Full Year/Full Time

Grade 10

Credit 1.0

Drawing and Painting 3 is a full year/full time course designed for those who wish to concentrate in specialized areas of interests. A high degree of personal involvement and responsibility for developing ideas and finished work will be stressed. Artworks will include an emphasis on advanced drawing and painting, watercolor, acrylics, graphic design, digital media, printmaking, and work in the sketchbook. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection –

1. Successful completion of one or more Visual Arts courses in 9th grade.
2. OR approval from a high school art teacher.

ARTS AND CRAFTS

No. 6703

Semester/Full Time

Grades 9, 10

Credit .5

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 metal work and jewelry, wheel-thrown pottery, stencil painting on shirts, sculpture, decoupage, sand-casting, and fresco painting. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

Course Descriptions

Visual Arts

INTRODUCTION TO POTTERY AND SCULPTURE

No. 6404

Semester/Full Time
Grades 9, 10

Credit .5

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-built ceramic work, 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, sgraffito, marbled clay, polychrome, mishiima, and traditional patina finishes. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

DIGITAL IMAGING AND MEDIA ARTS

No. 6202

Semester/Full Time
Grades 9, 10

Credit .5

Digital Imaging and Media Arts introduces students to authentic experiences in creating original artwork using computers and digital media. Topics will include the design and production of digital imagery, graphics and photography, animation, video, multimedia, and game design. Students will use creative software, such as Adobe Photoshop, Premiere, Fuse, Muse, and other Creative Cloud applications to explore techniques, genres, and styles relating to graphic and web design, commercial advertising, and the fine arts. This course enables the student to meet all State Academic Standards for Visual Arts.

Criteria for Selection – None.

AP ART HISTORY (CHS)

No. 6013

Full Year/Full Time
Grade 10

AP Wt.
Credit 1.0

Advanced Placement (AP) Art History is a rigorous, full year/full time course designed to engage students at the same level as an introductory college art history survey and is intended to prepare students for the AP Art History exam.

This course offers a unique perspective into our world's rich and diverse cultural heritage through study of the history and development of 250 works of art and architecture from antiquity to present. While visual analysis is a fundamental tool of the art historian, art history emphasizes understanding 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 the creative works of various cultures and time periods. Global and thematic connections will be made through the cross-cultural comparison of art. Additionally, students will engage with the history of art through a combination of lecture, discussion, research, gallery, and museum visits, assigned projects, and hands-on studio experiences.

Students enrolled in this course are not required to take the AP exam, but it is recommended and encouraged. Transfer of passing scores on the AP Art History exam as college credit depends upon the institutions that students plan to attend. Students are advised to contact the specific colleges or universities in which they are interested in for their policies on accepting AP credit. More information about the exam can be found in the [AP Art History Course and Exam Description](#) by the College Board.

Further, students can also choose to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche University. As a Scholar Program participant, students can earn college credit in this course, but it is not required. Student transcripts are received directly from La Roche University. The AP Art History course is approved as an equivalent to La Roche University's course titled *History of Art I: Prehistoric to Gothic* (3 credits). A fee is required to enroll in the Scholar Program. This course enables the student to meet all State Academic Standards for Arts and Humanities.

(Continued...)

Course Descriptions

Visual Arts

Criteria for Selection –

1. Final grade of 'A' or higher in 9th grade Social Studies classes, or an 'A' or 'B' in a 9th grade Honors-level Social Studies course.
2. A 3.5 or higher academic average.
3. OR approval from a high school art teacher.

SENIOR HIGH DRAWING AND DESIGN CONCEPTS

No. 6504

*Semester /Full Time
Grades 11, 12*

Credit .5

All levels of artistic ability and experience are welcome in this semester course. In Senior High Drawing and Design Concepts, students will learn to utilize a wide range of media and techniques, including charcoal, pencil, pastel, and digital media. Students will learn techniques for drawing from observation that help them see with an artist's eye, a key to drawing success. Students will cultivate their imagination and ability to express your ideas visually with a variety of creative strategies. Learning to use color, light, and other visual elements will be explored. Types of artmaking that will be explored include: portraiture, still life, perspective, and conceptually derived artwork. Individual and group discussions of your artwork will help to take work to the next level. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

SENIOR HIGH PAINTING AND COLOR CONCEPTS

No. 6604

*Semester /Full Time
Grades 11, 12*

Credit .5

All levels of artistic ability and experience are welcome in this semester course. In Senior High Painting and Color Concepts, students will learn to utilize a wide range of media and techniques, including watercolor, acrylic, oils, and mixed media. Students will learn techniques for painting from direct observation as well as from your imagination and develop your ability to express your ideas visually with a variety of creative strategies. Learning to use color, light, and other visual elements will enable students to compose well-designed paintings and artworks while exploring the effects of color. Types of artmaking that will be explored include: portraiture, still life, perspective, and conceptual inspiration. Individual and group discussions of your artwork will help to take your work to the next level. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

POTTERY 1

No. 6704

*Semester/Full Time
Grades 11, 12*

Credit .5

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 bookwork instruction. Information is presented in lecture and hands-on demonstrations during class. No previous experience is necessary. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

POTTERY 2

No. 6705

*Semester/Full Time
Grades 11, 12*

Credit .5

Pottery 2 is a class designed for students who are interested in a more in-depth clay experience. Pottery 1 taken at NASH is required prior to taking Pottery 2. 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 be included focusing on contemporary masters. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – Pottery 1 taken at NASH, or approval of teacher.

Course Descriptions

Visual Arts

SCULPTURE

No. 6804

Semester/Full Time

Grades 11, 12

Credit .5

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. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

JEWELRY AND METALSMITHING

No. 6912

Semester/Full Time

Grades 11, 12

Credit .5

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. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – None.

PHOTOGRAPHY 1

No. 6505

Semester/Full Time

Grades 11, 12

Credit .5

No previous experience is necessary to enjoy this course. Students will learn how to take great photographs, develop their own film, and make prints from their negatives. All film, chemicals, and darkroom equipment are provided. Digital photography and picture editing will also be explored. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection – Students must provide a 35 mm camera (a limited number can be loaned to the students by the Department) and their own enlarging paper.

PHOTOGRAPHY 2 (CHS)

No. 6605

Semester/Full Time

Grades 11, 12

Credit .5

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. This course enables the student to meet all the State Academic Standards for Visual Arts.

In Photography 2, students can choose to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche University. As a Scholar Program participant, students can earn college credit in this course, but it is not required. Student transcripts are received directly from La Roche University. The Photography 2 course is approved as an equivalent to La Roche University’s course titled *Digital Photography* (3 credits). A fee is required to enroll in the Scholar Program.

Criteria for Selection – Students must provide a 35mm camera (a limited number of which the Department can loan students) and their own enlarging paper. Students must have completed Photography 1 with a ‘B’ average or higher.

(Continued...)

Course Descriptions

Visual Arts

HONORS ART (CHS)

Full Year/Full Time
Grades 11, 12

No. 6010

Honors Wt.
Credit 1.0

Honors Art is a studio course in which the student has more opportunity to develop a higher level of personal expression, visual aesthetic judgment, and technical skill in visual art. Creative thought and individual artistic expression are developed through the use of visual journals, gallery visits, and a variety of creative thinking strategies. Students begin to explore aesthetic preferences in the growth of an artistic style. Studio activities center on development of technical skills in a wide variety of traditional drawing, painting, and printmaking media as well as new media. Students study and critically respond to significant historical works of art, artists, and art periods in the process of refining their own artistic vision. Students begin to learn to prepare and present their work for group critiques, portfolios, and exhibitions.

Honors Art provides students with the basics, insight, and some actual work that directly connects to the AP Art and Design course. In Honors Art, students can choose to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche University. As a Scholar Program participant, students can earn college credit in this course, but it is not required. Student transcripts are received directly from La Roche University. The Honors Art course is approved as an equivalent to La Roche University's course titled, *Drawing I* (3 credits). A fee is required to enroll in the Scholar Program.

The skills, knowledge, and insight gained in this course will help prepare students for any career and life pursuit. This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection –

1. To be accepted, you must have a 'B' average or higher in Drawing and Painting 1, 2 or 3.
2. OR a teacher approval from a previous high school art teacher.
3. OR at least three sections of a semester art course in previous years and had a grade average of the three sections at a 'B' or better.

AP ART AND DESIGN (CHS)

Full Year/Full Time
Grade 12

No. 6011

AP Wt.
Credit 1.0

Advanced Placement (AP) Art and Design is designed to meet the criteria of the AP Art and Design Course and Exam ([AP Art & Design Course and Exam Description](#)) for either the AP Drawing Portfolio ([AP Drawing Portfolio](#)), 2-D Art and Design Portfolio ([2-D Art and Design Portfolio](#)) or 3-D Art and Design ([3-D Art and Design Portfolio](#)). The AP 2-D Art and Design, AP 3-D Art and Design, and AP Drawing courses are designed to be the equivalent of a one-semester, introductory college course and offer college credit for successful completion of course and passing of exam.

AP Art and Design students develop and apply skills of inquiry and investigation, practice, experimentation, revision, communication, and reflection. Students become inquisitive, thoughtful artists and designers able to articulate information about their work. Students will begin by developing an inquiry for guiding an in-depth sustained investigation of experimentation, skillful synthesis, and revision of materials, processes, and ideas. An AP Art and Design student will create a portfolio of artwork that visually demonstrates their sustained investigation, while also representing a student's 2-D, 3-D or Drawing skills, dependent on the selected exam. Some work developed during the previous year may also bridge into the AP portfolio under selected works for best demonstrating skill level or if relative to their inquiry. Students can work with any materials within their exam's framework and guided by their investigation of their inquiry. Within their portfolio submission students will provide a written statement that describes how their sustained investigation shows evidence of practice, experimentation, and revision guided by their inquiry.

Scheduled critique sessions provide guidance and an opportunity to navigate and express ideas. Art journals/sketchbooks will be used on a regular basis for the development of a personal artistic vision and to demonstrate experimentation and revision of ideas. Students will be challenged to use independent thinking skills in the development of concepts which support the development of their inquiry and sustained investigation.

Students enrolled in this course are not required to take the AP exam, but it is recommended and encouraged. Transfer of passing scores on the AP Art and Design exam as college credit depends upon the institutions that students plan to attend. Students are advised to contact the specific colleges or universities in which they are interested in for their policies on accepting AP credit.

Course Descriptions

Visual Arts

In AP Art and Design, students also have the option to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche University. As a Scholar Program participant, students can earn college credit in this course, but it is not required. Student transcripts are received directly from La Roche University. The AP Art and Design course is approved as an equivalent to La Roche University's course titled, *Drawing 1* (3 credits). A fee is required to enroll in the Scholar Program.

This course enables the student to meet all the State Academic Standards for Visual Arts.

Criteria for Selection -

1. Successful completion of Honors Arts is recommended.
2. To be accepted, you must have a "B" in a previous full-year art course or Honors Art, or Drawing and Painting 3, or a minimum of four sections of a semester art course in previous years.
3. OR approval from a High School Art teacher and submission to the AP Teacher of 4-6 recent works and a Journal/Sketchbook.
4. Teacher approval from the previous semester or year course.

COMPUTER MULTI-MEDIA ARTS

No. 6201

Semester/Full Time

Grades 11, 12

Credit .5

In this course, the students design and create original digital media that include animation, video, photography, graphics, sound, and music. Students shoot, edit, montage, and apply special digital darkroom effects in Adobe Photoshop. Students shoot, edit, composite, and create special effects in video using Adobe Premiere software. Students learn sound recording, editing and design, and compose MIDI music using Garage Band. Students create animation and dynamic web content using Adobe Flash 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, media rich website development, online exhibits, learning games, multi-media stage performances, videos, and interactive presentations on a variety of topics. The course emphasizes creative conception and planning, solving design challenges, personal artistic expression, and communication through new media technology. The course provides a foundation for those planning for careers in the growing field of Web and Multimedia Design as well as for the casual user. Visual Arts and Music faculty teach this course. This course enables the student to meet all the State Academic Standards for Visual Arts and Music.

Criteria for Selection – None.

ADVANCED COMPUTER MULTI-MEDIA ARTS

No. 6211

Semester/Full Time

Grades 11, 12

Credit .5

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, and post-production video effects. Students will have the opportunity to create architectural projections, 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 multi-media design.

Criteria for Selection – Successful completion of Computer Multi-Media Arts (6201).

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
French III	# 5407
German III	# 5507
Spanish III	# 5707

Grade 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

World Language Philosophy Statement

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

2020-2021 Grade	Essentials	Academic	Honors
9		Academic Level II	Honors Level II
10	Level III	Academic Level III	Honors Level III
11	Academic Level III	Academic Level IV	Honors Level IV
12	Academic Level IV	Honors Level V	AP

Please note:

The Essentials courses are offered only in Level III.

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

CLASSICS: LATIN

LATIN I

No. 5601

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

Credit 1.0

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.

Criteria for Selection – No prerequisites. This course is offered at the Intermediate High School. Transportation is provided.

ACADEMIC LATIN II

No. 5602

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

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 75% or higher in Latin I (5601).
2. Teacher approval

HONORS LATIN II

No. 5603

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

Honors Wt.
Credit 1.0 NCAA

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 the Roman culture in Britain and Egypt in the First Century A.D.

Criteria for Selection –

1. Cumulative grade of 85-100% in Latin I (5601).
2. Cumulative test grade of 85-100% Latin I (5601).
3. Teacher approval (considers final exam, English grades, and writing sample).

ACADEMIC LATIN III

No. 5605

Full Year/Full Time
Grades 10, 11, 12

Credit 1.0 NCAA

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 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 Roman Army in Britain and on the political intrigues in the city of Rome during the reign of Domitian.

Criteria for Selection –

1. A 75% or higher in College Prep Latin II (5602).
2. Teacher approval.

HONORS LATIN III

No. 5606

Full Year/Full Time
Grades 10, 11, 12

Honors Wt.
Credit 1.0 NCAA

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 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 Domitian.

Criteria for Selection –

1. Cumulative grade of 85-100% in Honors Latin II (5603).
2. Cumulative test grade of 85-100% in Honors Latin II (5603).
3. Teacher approval (considers final exam, English grades, and writing sample).

Course Descriptions

World Languages

HONORS LATIN III

Full Year/Full Time

Grades 10, 11, 12

No. 5606

Honors Wt.

Credit 1.0 NCAA

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 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 Domitian.

Criteria for Selection –

1. Cumulative grade of 85-100% in Honors Latin II (5603).
2. Cumulative test grade of 85-100% in Honors Latin II (5603).
3. Teacher approval (considers final exam, English grades, and writing sample).

ACADEMIC LATIN IV

Full Year/Full Time

Grades 11, 12

No. 5608

Credit 1.0 NCAA

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. This secondary skill is helpful to students who will attempt the Latin SAT achievement test or who may continue their study of Latin at the college/university level.

Criteria for Selection –

1. A 75% or higher in Academic Latin III (5605).
2. Teacher approval.

HONORS LATIN IV (CHS)

Full Year/Full Time

Grades 11, 12

No. 5609

Honors Wt.

Credit 1.0 NCAA

Students will continue the established Latin sequence via the Cambridge Latin Course. The students will also read authentic Latin texts. An anthology of Latin writings will expand the students' knowledge and appreciation of Greek and Roman myths. Students will also continue to develop their writing skills. Each unit will expand the students' ability to use a variety of Latin structures. Each unit of study is geared to prepare students for success on the SAT for the following year's work in the Advanced Placement Latin course.

Criteria for Selection –

1. Cumulative grade of 85-100% in Honors Latin III (5606).
2. Teacher approval (considers final exam, English grades, and writing sample).

HONORS LATIN V (CHS)

Full Year/Full Time

Grade 12

No. 5610

Honors Wt.

Credit 1.0 NCAA

Students will continue the established Latin sequence via the Cambridge Latin Course. The students will also read authentic Latin texts. An anthology of Latin writings will expand the students' knowledge and appreciation of Greek and Roman myths. Students will also continue to develop their writing skills. Each unit of study is geared to prepare students for success on the SAT. This course is identical to 5609, Honors Latin IV.

Criteria for Selection –

1. 'A' or 'B' in Academic Latin IV (5606).
2. Teacher approval.

Course Descriptions

World Languages

AP LATIN (CHS)

Full Year/Full Time
Grade 12

No. 5611

AP Wt.
Credit 1.0 NCAA

The primary focus of this course is to enable students to demonstrate an ability to read, analyze, and critique authentic Latin literature. Preparation for the SAT Latin achievement test and the Advanced Placement Latin test is an important goal. This course is almost exclusively a readings course. As preparation for the Aeneid, students will begin the year reading a selection of myths from Ovid's Metamorphoses. The vast majority of time, however, will focus upon the Advanced Placement syllabus of Vergil's Aeneid and Caesar's Gallic Wars.

Criteria for Selection –

1. 'A' or 'B' in Honors Latin IV (5609).
2. Teacher approval (considers final exam, English grades, and writing sample).

THE MODERN LANGUAGES: FRENCH, GERMAN, SPANISH

FRENCH I

GERMAN I

SPANISH I

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

No. 5401

No. 5501

No. 5701

Credit 1.0 NCAA

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. At the end of this course, placement into the following level is based upon teacher approval – Academic Level II, or Honors Level II.

Criteria for Selection – No prerequisite. Open to all students who have not taken the Level I A course at the middle schools, unless recommended by their middle school teacher.

ACADEMIC FRENCH II

ACADEMIC GERMAN II

ACADEMIC SPANISH II

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

No. 5402

No. 5502

No. 5702

Credit 1.0 NCAA

These courses expand and intensify the skills introduced in Level 1, which are offered to North Allegheny's middle school students. 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.

Criteria for Selection –

1. A 75% or higher in Level I.
2. Teacher approval.

HONORS FRENCH II

HONORS GERMAN II

HONORS SPANISH II

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

No. 5403

No. 5503

No. 5703

Honors Wt.
Credit 1.0 NCAA

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.

Criteria for Selection –

1. Cumulative 90% or higher in Level I.
2. Cumulative test grade of 90% or higher.
3. Teacher approval.

Course Descriptions

World Languages

ACADEMIC FRENCH III

ACADEMIC GERMAN III

ACADEMIC SPANISH III

Full Year/Full Time

Grades 9, 10, 11, 12

No. 5405

No. 5505

No. 5705

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 75% or higher in Level II.
2. Teacher approval.

HONORS FRENCH III

HONORS GERMAN III

HONORS SPANISH III

Full Year/Full Time

Grades 9, 10, 11, 12

No. 5406

No. 5506

No. 5706

Honors Wt.

Credit 1.0 NCAA

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 2 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.

Criteria for Selection –

1. Cumulative 85% or higher in Honors Level II.
2. Cumulative test grade of 85% or higher.
3. Teacher approval.

FRENCH III

GERMAN III

SPANISH III

Full Year/Full Time

Grades 9, 10, 11, 12

No. 5407

No. 5507

No. 5707

Credit 1.0

These courses continue to meet the needs of students who experience difficulties in basic language concepts. Acquisition of these language skills of listening, speaking, reading, and writing is presented at a slower pace with increased reinforcement. This is the final course in the Essentials sequence of courses.

Criteria for Selection – Teacher approval.

ACADEMIC FRENCH IV

ACADEMIC GERMAN IV

ACADEMIC SPANISH IV

Full Year/Full Time

Grades 11, 12

No. 5408

No. 5508

No. 5708

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 75% or higher in Level III.
2. Teacher approval.

Course Descriptions

World Languages

HONORS FRENCH IV (CHS)

HONORS GERMAN IV (CHS)

HONORS SPANISH IV (CHS)

Full Year/Full Time

Grades 11, 12

No. 5409

No. 5509

No. 5709

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. Cumulative 85% or higher in Honors Level III.
2. Cumulative test grade of 85% or higher.
3. Teacher approval.

HONORS FRENCH V (CHS)

HONORS GERMAN V (CHS)

HONORS SPANISH V (CHS)

Full Year/Full Time

Grades 11, 12

No. 5410

No. 5510

No. 5710

Honors Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. A 75% or higher in Level IV.
2. Teacher approval.

AP FRENCH (CHS)

AP GERMAN (CHS)

AP SPANISH (CHS)

Full Year/Full Time

Grade 12

No. 5411

No. 5511

No. 5711

AP Wt.

Credit 1.0 NCAA

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.

Criteria for Selection –

1. Cumulative 80% or higher in Honors Level IV.
2. Cumulative test grade of 80% or higher.
3. Teacher approval.

A.W. Beattie Career Center

P.M. Afternoon Session

No. 0605

Grades 10, 11, 12

Credit 3.0

General Information —

A.W. Beattie Career Center offers students an opportunity to prepare for their chosen career field through advanced career and college preparation during their 10th, 11th, and 12th, grade years.

Students attending A. W. Beattie Career Center are enrolled in the afternoon session and spend the remaining half day at NAI or NASH. Three credits are awarded each year to students successfully completing career coursework. A. W. Beattie Career Center credits and grades are included in the QPA and class rank.

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 submittal.

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 of the colleges offering free credits for your particular CTE program. Additionally, A.W. Beattie Career Center maintains many college credits articulation agreements with two- and four-year post-secondary institutions, please visit our website 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 9th, 10th or 11th grade and will be carefully reviewed. Further information concerning the A. W. Beattie Career Center's program is available in the School Counseling Office.

Course Offerings —

- Advertising Design
- Automotive Collision Technology
- Automotive Technology
- Carpentry/Building Construction
- Computer Systems, Networks & Cyber Security
 - Network Engineering & Cyber Security
 - Computer Systems Technology
- Cosmetology
- Culinary Arts
- Dental Careers
- Early Childhood Education
- Emergency Response Technology
- Health and Nursing Sciences
- Heating, Ventilating and Air-Conditioning Technology
- Pastry Arts
- Pharmacy Operations (12th Grade Only)
- Robotics Engineering Technology
- Sports Medicine – Rehab Therapy and Exercise Science Technology
- Surgical Science
- Veterinary Sciences Technology

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 Premier 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 working towards your Adobe Certified Associate Certificate in our customized designed studio.

Automotive Collision Technology – **Automotive Collision Technology** prepares students in all aspects of the industry including MIG welding, computerized paint mixing, and spraying techniques. Using the latest technology in our fully equipped auto shop keeps students up to date with current standards. The Automotive Collision Technology program utilizes the nationally recognized I-CAR curriculum. Students earn their SP/2 industry Safety Certification leading to enhanced employment opportunities. Cooperative education experiences in local area dealerships provide authentic educational experiences. The Automotive Collision Technology program is certified by NATEF (National Automotive Technicians Education Foundation) ensuring that the Career Center meets strict education and industry standards.

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.

Carpentry/Building Construction – The use of hand and power tools, blueprint reading, framing, finishing, roofing, drywall, and insulation are taught through hands-on experience in the **Carpentry/Building Construction** program. Students have the opportunity to learn skills in the carpentry, masonry, plumbing, and electrical fields. BAMP activities and competitions, as well as community projects challenge students during the year, preparing them for immediate employment. Students have the opportunity to experience live work by taking part in the ongoing project of building a modular home. Students will gain educational experiences with industrial rigging, scissor lift operations, and forklift training. Students will have the opportunity to earn their OSHA-10 Safety Certification and PA Builder's Certificate.

Computer System, Network Engineering and Cyber Security – In this integrated dual learning pathway students will have the opportunity to explore and develop their interest in two of the most sought-after skill sets in the computer field; **Network Engineering and Cyber Security and/or Computer Systems Technology**. Building, maintaining and troubleshooting computers and peripherals is part of the curriculum. Students will learn the basics of networking, build and create virtual servers, and they will also set up and maintain Internet client services. Students participate in the Cisco approved IT Essentials course through the Cisco Networking Academy. The curriculum builds upon itself to create a pathway for students to participate in the next step of the curriculum with Networking and Cyber Security. Students will be able to test for the CISCO Certified Networking Associates Certification.

Cosmetology – In **Cosmetology**, the Beattie 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 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, and relaxing, manicuring, pedicuring, and skin care. Students will also focus on professionalism and customer relations, while preparing to test for their Pennsylvania State Cosmetologist License.

Culinary Arts – The **Culinary Arts** Department has built a solid reputation as one of the finest programs throughout the State. The Beattie Dining Room, given a three-star rating by the Pittsburgh Press, serves breakfast and lunch to more than 150 people a day! Located in the Dining Room, 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, top dining room management, and banquet serving. There are many job opportunities within the always growing Culinary Industry as well as scholarships for students provided by prestigious culinary colleges. Students practice their craft in a commercially equipped kitchen and bakery while earning their ServSafe Food Safety Certification.

Dental Careers – In **Dental Careers** students learn the necessary skills for employment in Dental Assisting, Lab Technician, Infections Control Assistant, and many more opportunities within the Dental Industry. 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 Radiological Certification on the Career Centers state of the art Digital X-Ray System. Upon successful program completion and two years of employment, students will be eligible for their Dental Assisting National Board exam.

Early Childhood Education – Students enrolled in **Early Childhood Education program** experience the opportunity to apply their child development and teaching skills will engaged in a variety of settings. In addition to a variety of classroom activities, students learn the industry standards for hands-on activities with infants, toddlers, and preschool age children. Students participate in a college and career program of study in a variety of facilities, including the on-site accredited Kiddie Tech Early Learning Center, practicing and refining their creative teaching skills, as well as learning the basics in caring for and managing children. Students will participate in the Childhood Development Association (CDA) Ready Certification. Additionally, students will have the opportunity to be certified in First Aid and CPR as part of their classroom curriculum. Our ECE students are actively engaged with several community-based activities through the local libraries and Junior Achievement of Southwest Pennsylvania. The Early Childhood Education program is an excellent introduction to the post-secondary elementary education major.

Emergency Response Technology – The **ERT** course challenges students with exciting hands-on training in a fully equipped on-site lab, as well as field trips to the 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. Certification as an Emergency Medical Technician (EMT) at A. W. Beattie Career Center will prepare students for immediate employment in the growing Emergency Response Industry.

Health and Nursing Sciences – The **Health and Nursing Sciences** program will prepare students for the medical field that is rapidly growing and changing. There's never been a better time to pursue a career in the Health Industry. The core curriculum will prepare students for entry level positions, such as Medical Assisting, Nurse Assisting and Patient Care Technician. For those students that have an interest in becoming a Nurse, Radiology Technician, or related positions, this program will prepare them for post-secondary education. During the course of study, students may have the opportunity to gain valuable hands-on clinical experience in hospitals, nursing homes, physical therapy clinics, and private offices where they will practice and perfect their skills, preparing them for an exciting and rewarding career in healthcare. Certification as a Patient Care Technician is available to students who successful complete their clinical rotation and certification exam through A.W. Beattie or nurse aide certification is one post-secondary pathway with an industry partner facility. Students have an opportunity to participate in a dual enrollment opportunity through CCAC as part of this program for college credits.

Heating, Ventilating, and Air-Conditioning – In **HVAC**, students will master the necessary skills to become qualified technicians and mechanics within their field. Students learn heating installation and service, air-conditioning installation and service, plumbing, electrical wiring, refrigeration, and sheet metal fabrication. Students will put these skills into use when they participate in the plumbing, ventilating, and wiring of the Beattie modular home. They also test for their EPA certification and OSHA-10 Safety Certification at A. W. Beattie, helping to ensure immediate employment opportunities along with post-secondary opportunities. In addition, students may gain experience with industrial rigging, scissors lift operation, and forklift training.

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 ServSafe Food Safety Certification.

Pharmacy Operations – Pharmacy Technicians and Pharmacists employment openings are projected to grow at a rate of twenty-five to thirty-two percent over the next ten years. Positions exist in the public and private sector making this exciting career a sound desirable career choice. Students will experience an interactive learning environment; experimenting on state-of-the-art equipment. Students will learn firsthand the skills needed to process patient medication orders. Students will be prepared to move into advanced post-secondary studies or test for entry level employment. The potential is endless in our ever-changing society.

Robotics Engineering Technology (RET) – The Robotics Engineering Technology (RET) program is designed to train students in skills related to the rapidly developing, innovative robotics and manufacturing industries. In RET, students integrate mathematical and science concepts with cutting-edge technology in robotics and/or manufacturing. The RET curriculum has been developed in partnership with the Advanced Robotics for Manufacturing Institute based primarily at Carnegie Mellon University. Students selecting the RET program are typically preparing for a career in robotics, electronics, mechatronics, advanced manufacturing, or engineering. All students in the RET program study the core curriculum of electronics and robotics. Students also choose at least one specialty from among 3-D modeling and design (for 3-D printing and CNC machining), coding on platforms such as Arduino, Raspberry Pi, and LocoRobo, and Fanuc robotic arm operation. Individual projects assigned by the instructor or chosen by the student are encouraged. The FIRST Robotics Competition is part of the in-class robotics curriculum. Additionally, students interested in attending the competitions work in the evenings and weekends during the robot build season. RET students may earn up to 20 credits for use in post-secondary education in Robotics or Mechatronics Engineering at California University of Pennsylvania. Numerous other articulation agreements provide students with 4-14 credits at local colleges upon successful completion of the RET curriculum. Industry-related certifications are also available for students.

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. Career Pathways for SMART-EST are listed at www.beattietech.com.

Surgical Sciences – Surgical Sciences will introduce students to the operations of the Surgical Operating Room (OR). Students will experience and master the skills required to prep surgical instruments for patient care procedures. Students will learn medical terminology that will coordinate with post-secondary options and career employment. Students will learn in a simulated operating room environment where central sterile environment procedures will be practiced. Our students will interact with medical professionals that will enhance the daily learning environment. Surgical Science students will develop their communication, mathematical, and medical dexterities to prepare them to become successful adults. Join us for a career pathway that has endless potentials.

Veterinary Sciences Technology – Students enrolled in the **Veterinary Sciences** program will experience a wide variety of care and management techniques throughout the program. Students will learn to maintain medical records, schedules, offer client education, explore authentic laboratory procedures, and assist with nursing and prepare for surgical duties; along with routine exams. Students will gain a solid foundation in the Veterinary Sciences program on which to build a post-secondary degree. Students will have the opportunity to earn the following recognized industry certifications: Purina Certified Weight Coach, Pet Tech First Aid and CPR.

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 Career Center is the only 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: 412-847-1912

Fax: 412-366-9600

email: kim.zylinski@beattietech.com

Special Opportunities

- **IMPACT Program**
- **Aviation Aerospace (A.F.J.R.O.T.C.)**
- **Cooperative Work Experience**
- **Library**

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 & Chem – 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

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.

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 WorldBook. 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 Individual Student Needs

- Gifted Opportunities for Advance Learning (GOAL)
- Emotional Support Program (ES)
- Deaf and Hard of Hearing Support Program (D/HHS)
- Learning Support Program (LS)
- Life Skills Support Program (LSS)
- Autistic Support Program (AS)
- Student Assistance Program (SAP)

For additional information, students and/or parents should contact the
Student Services Department
412-635-4109

GIFTED OPPORTUNITIES FOR ADVANCED LEARNERS (GOAL)

The K-12 GOAL services (Gifted Opportunities for Advanced Learning) are required by the Commonwealth of Pennsylvania as a part of its special education mandate for those whose needs cannot be fully met in the regular classroom. GOAL provides additional 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
Problem-solving**

**Creativity
Communication Skills**

Rules and regulations governing gifted education are contained in Chapter 16: Special Education for Gifted Students, part of the Pennsylvania School Code. A copy of this law can be obtained on the PA Department of Education website at www.pde.state.pa.us or click on the "Chapter 16 Special Education for Gifted Students" webpage.

EMOTIONAL SUPPORT PROGRAM (ES)

NAI	Grades 9 and 10	Interpersonal Communication	No. 0374
	Grades 9 and 10	ES Resource Semester 1	No. 0370
	Grades 9 and 10	ES Resource Semester 2	No. 0371
	Grades 9 and 10	ES Resource Full Year/Part Time	No. 0372
NASH	Grades 11 and 12	Interpersonal Communication	No. 0379
	Grades 11 and 12	ES Resource Semester 1	No. 0370
	Grades 11 and 12	ES Resource Semester 2	No. 0371
	Grades 11 and 12	ES Resource Full Year/Part Time	No. 0372

The North Allegheny Emotional Support Program serves students who are identified as 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.

DEAF AND HARD OF HEARING SUPPORT PROGRAM (D/HHS)

NAI	Grades 9 and 10	Resource	No. 0204
NASH	Grades 11 and 12	Resource Semester 1	No. 0302
	Grades 11 and 12	Resource Semester 2	No. 0303
	Grades 11 and 12	Resource Full Year/Part Time	No. 0301

The North Allegheny School District offers assistance to any student with deafness or hearing impairment. 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.

Programs for Individual Student Needs

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 necessary supports to assist them to access 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.

LEARNING SUPPORT PROGRAM (LS)

The North Allegheny Learning Support Program serves students who are identified as Learning Support under 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.

English

NAI	Grade 9	English 9	No. 0206 (NCAA)
	Grade 10	English 10	No. 0207 (NCAA)
	Grades 9 and 10	English C	No. 0213
NASH	Grade 11	English 11	No. 0359 (NCAA)
	Grade 12	English 12	No. 0367 (NCAA)
	Grades 11 and 12	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.

Mathematics

NAI	Grade 9	Math 9	No. 0211
	Grade 10	Math 10	No. 0212
	Grades 9 and 10	Math C	No 0250
NASH	Grade 11	Math 11	No. 0328
	Grade 12	Math 12	No. 0329
	Grades 11 and 12	Consumer Math 11/12	No. 0337
	Grades 11 and 12	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.

Resource

NAI	Grades 9 and 10	Full Year/ Part Time	No. 0201
		Semester 1	No. 0202
		Semester 2	No. 0203
NASH	Grades 11 and 12	Full Year/Part Time	No. 0301
		Semester 1	No. 0302
		Semester 2	No. 0303

This is a directed study 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**

Programs for Individual Student Needs

Social Studies/Science/Health/Government

NAI	Grades 9 and 10	SS/Sci/Health	No. 0118
NASH	Grades 11 and 12	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

NAI	Grades 9 and 10	Vocational Education	No 0503
NASH	Grades 11 and 12	Daily Living Skills	No 03991
	Grades 11 and 12	Vocational Resource	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.

LIFE SKILLS SUPPORT PROGRAM (LSS)

The North Allegheny Life Skills Support Program serves students who are identified as 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

NAI	Grades 9 and 10	English 9/10	No. 0108
NASH	Grades 11 and 12	English 11/12 C	No. 0361
	Grades 11 and 12	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

NAI	Grades 9 and 10	Math 9/10	No. 0107
NASH	Grades 11 and 12	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

NAI	Grades 9 and 10	Reading 9/10	No. 0106
NASH	Grades 11 and 12	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 Individual Student Needs

AUTISTIC SUPPORT PROGRAM (AS)

The North Allegheny Autistic Support Program serves students who are identified as Autistic Support under Type of Support listed in the IEP. The AS Program is designed for students identified as having autism as a primary or secondary disability which requires 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 supports to access the curriculum successfully.

English

NAI	Grades 9 and 10	English 9/10	No. 0108
NASH	Grades 11 and 12	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

NAI	Grades 9 and 10	Math 9/10	No. 0107
NASH	Grades 11 and 12	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

NAI	Grades 9 and 10	Reading 9/10	No. 0106
NASH	Grades 11 and 12	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 is 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
 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
 German Club
 Golden Strolling Strings
 Gay Straight Alliance (GSA)
 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
 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 Peach 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:

Fall Sports

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 High, 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

Winter Sports

Basketball (Girls) – Junior Varsity, Varsity
Basketball (Boys) – Middle School, Freshman, Junior Varsity, Varsity
Diving (Girls/Boys) – Varsity
Swimming (Girls/Boys) – Varsity
Ice Hockey * (Boys) – Junior Varsity, Varsity
Indoor Track (Girls/Boys) – Varsity
Wrestling (Boys) – Junior High, Junior Varsity, Varsity
Wrestling (Girls)
Gymnastics (Girls) – Varsity

In-Line Hockey * (Girls/Boys) – Junior Varsity, Varsity
Bowling * (Girls/Boys) – Junior Varsity, Varsity

Spring Sports

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)

* Club Sport

Telephone Directory

North Allegheny Senior High School telephone: 724-934-7200

Direct Extension
724-934-

Dr. Natasha Dirda, Principal	7218
Dr. Angela McEwen, Assistant Principal	7215
Dr. William McGahee, Assistant Principal	7217
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

412-369-

Ms. Caitlin Ewing, Principal	5463
Mrs. 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

412-369-

Ms. Katherine Krivak, Principal	5425
Dr. Erin Crimone, Assistant Principal	5427
Mr. Chance Petro, Counselor (A - L)	5421
Ms. Courtney Vadnais, Counselor (M - Z)	5421

Ingomar Middle School telephone: 412-348-1470

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

724-934-

Mr. Daniel Swoger, Principal	6036
Mr. Matthew Buchak, Assistant Principal	6037
Ms. Shannon Salpeck, Counselor (M - Z)	6038
Mr. Jeff Smalley, Counselor (A - L)	6038

District Administration telephone: 412-366-2100

412-369-

Dr. Patrick O'Toole, Acting Superintendent	5419
Dr. Melissa Friez, Assistant Superintendent of Secondary Education/Deputy Superintendent	5896
Dr. Jillian Bichsel, Director of Curriculum, Assessment, and Professional Development	412-630-5826
Dr. Joseph Sciallo, Director of Student Services	412-635-4110
Mr. Roger Sechler, Director of Operations	5403

Department Chairs

Business, Computer, and Information Technology — Jordan Langue, NASH	724-934-7265
English Language Arts — Jeremy Rak, NAI	412-369-5405
Family & Consumer Sciences — Elizabeth Gallagher, NASH	724-934-7233
Health & Physical Education — David Schmidt, NAI	724-369-5807
Library — Tamara Turner, IMS	412-348-1498
Mathematics — Robert Bell, Jr., NASH.....	412-934-7200 Ext. 35370
Music — Robert Tozier, NASH	724-934-7230
ROTC — Scott Kolar, NAI	412-369-5455
School Counseling — Bryan Kiggins, NAI	412-369-5467
Science — Christopher Omasits, NASH	724-934-7207
Social Studies — Joelle Keats, NASH	724-934-7211
Special Education — Jamie Grace, NAI	412-369-5530
Technology and Engineering Education — Heath Lauster, NASH.....	724-934-7200
Visual Arts — Michael Bockoven, NAI	412-369-5530 Ext. 60208
World Language — Marcie Good, NASH.....	724-934-7273



North Allegheny School District
200 Hillvue Lane
Pittsburgh, PA 15237- 5391
412-366-2100