



North Allegheny School District

2019-2020 PROGRAM OF STUDIES COURSE SELECTION

Grades 9-12



Preparing All
Students for Success
in a Changing World



NORTH ALLEGHENY SCHOOL DISTRICT

2019 – 2020 Program of Studies Course Selections for Grades 9–12

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Executive Council Members who made this *Program of Studies* possible.

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An Introduction to the 2019 – 2020 Program of Studies from the Superintendent of Schools

It is with great pride that we share with you the *2019 – 2020 Program of Studies*. In order to prepare our students for success in a changing world, we annually 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 2019 – 2020 school year, the following elective courses have been added:

- Aerospace Science and Leadership 400 in the Aerospace and Leadership (AFJROTC)
- Creative Writing in the English Language Arts Department at NAI
- AP United States Government and Comparative Politics in the Social Studies Department
- Honors Introduction to Philosophy in the Social Studies Department
- Modern American History and Politics in the Social Studies Department
- Honors Modern American History and Politics in the Social Studies Department
- Introduction to Engineering Design (Honors) in the Technology and Engineering Education Department

The following course names have changed in the following Departments:

Air Force Junior ROTC

- Journey into Aviation History to **Aerospace Science and Leadership 100**
- Basic Survival to **Aerospace Science and Leadership 200**
- Cultural Studies; Introduction to **Global Awareness to Aerospace Science and Leadership 300**

English Language Arts

- Intro to Media Production to **Film and TV Production 1**
- Advanced Media Production: Documentary Filmmaking to **Film and TV Production 2**
- Advanced Media Production — Creative Filmmaking to **Film and TV Production 3**
- Advanced Media Production: Broadcasting to **Broadcasting**
- Journalism 11, 12 to **Honors Journalism 11, 12**

Health and Physical Education

- Health to **Wellness for Life**
- Physical Education to **Health and Physical Education (FY/PT)**

Mathematics

- Introduction to Probability and Statistics to **Probability and Statistics**

An Introduction to the 2019 – 2020 Program of Studies from the Superintendent of Schools

Science

- Academic Concepts of Physics to **Academic Physics**
- Academic Human Biology to **Academic Anatomy & Physiology**

Social Studies

- Fundamentals of Democracy 1 to **Fundamentals of Modern American History**
- Fundamentals of Democracy 2 to **Fundamentals of American Government and Law**

World Language

- French, German, and Spanish 1 to **French, German, and Spanish I**
- Latin 1A to **Latin I**
- Academic French, German, Latin, and Spanish 1B to **Academic French, German, Latin, and Spanish II**
- Honors French, German, Latin, and Spanish 1B to **Honors French, German, Latin, and Spanish II**
- Academic French, German, Latin, and Spanish 2 to **Academic French, German, Latin, and Spanish III**
- Honors French, German, Latin, and Spanish 2 to **Honors French, German, Latin, and Spanish III**
- Essentials French, German, and Spanish 2 to **French, German, and Spanish III**
- Academic French, German, Latin, and Spanish 3 to **Academic French, German, Latin, and Spanish IV**
- Honors French, German, Latin, and Spanish 3 to **Honors French, German, Latin, and Spanish IV**
- Honors Senior French, German, Latin, and Spanish to **Honors French V, German V, Latin V, and Spanish V**

NASD has expanded the number of College in High School courses that are being offered this year. College in High School (CHS) offers 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. Please see pages 7-8 of the *Program of Studies* for a complete list of the courses that are currently eligible for CHS credit.

Within this document, the Graduation Requirements are also identified for each class of students. In particular, 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 2019 – 2020 school year.

Robert J. Scherrer, Ed.D.
Superintendent of Schools

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

2019 – 2020 Program of Studies, Grades 9– 12

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General Information



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.



General Information

2019 – 2020 Scheduling Timeline

February 19-20	NASH School Counselors meet with 11 th grade students to discuss scheduling process
February 21	NAI School Counselors meet with 9 th grade students to discuss scheduling process
February 21-22	Middle School Counselors meet 8 th grade students to discuss scheduling process
February 22	NASH School Counselors meet with 10 th grade students to discuss the scheduling
February 28	NAI holds scheduling meetings with parents of 8 th and 9 th graders: NAI Auditorium – 9:30 AM and 6:00 PM
February 28	Parent informational meetings for NAI IMPACT program: NAI Library – 9:00 AM and 7:00 PM
February 28	8 th – 9 th Grade Transition Fair at NAI 6:00 PM – 7:30 PM
March 1	Deadline for grades 9 – 11 student requests to be completed and submitted
March 4-8	NASH Counselors meet with 11 th grade students individually to finalize scheduling
March 4-15	NAI Counselors meet with 9 th and 10 th grade students to review schedule requests in the NAI Library
March 5	Course Approval Sheets (signed by parents) returned by 8 th grade students
March 22	Waivers due to respective School Counseling Offices for grades 8 – 11
March 26-28	NAI Counselors visit middle schools to discuss scheduling process with individual students: MMS - March 26 • CMS - March 27 • IMS - March 28
March 28	End of Third Nine weeks
August 27	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 project)	
Social Studies	4.0 credits
Mathematics	3.0 credits
Science (includes Biology)	3.0 credits
S.T.E.M.	1.0 credit
Health & Physical Education	(.5) credit/year
	2.0 credits
Wellness for Life	5 credits
Electives	6.5 credits
Total Credits	24.0 credits

Scheduling Requirements for Students

1. At least 2.0 credits of Elective Courses must be acquired in the Arts and Humanities. Arts and Humanities courses include additional courses in English, Social Studies, World Languages, Visual Arts, Family and Consumer Sciences, and Music Arts.
2. 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.
3. 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.
4. Successful completion of a minimum of 12 credits is required to achieve junior standing. Students with deficiencies in English, Social Studies, Math, or Science will require a review in order to be eligible for full-time enrollment at the Senior High School.
5. 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.
6. 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 in order 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 2020, 2021, 2022, and 2023 Course Sequence

North Allegheny Intermediate High School Course Sequences Grade 9 (2023)	North Allegheny Senior High School Course Sequences Grade 11 (2021)
<p>Required</p> <p>English 1.0 credit (specific required courses are on page 28)</p> <p>Social Studies 1.0 credit (specific required courses are on page 66)</p> <p>Math 1.0 credit (see Math course offerings listed on page 44)</p> <p>Science 1.0 credit (specific required courses are on page 59)</p> <p>Health & Physical Education .5 credit</p> <p>Wellness for Life .5 credit</p> <p>Required Courses 5.0 credits</p> <p>Elective Courses up to 3.0 credits (Must schedule at least 2.0 Elective Course credits)</p>	<p>Required</p> <p>English 1.0 credit (specific required courses are on page 29)</p> <p>Social Studies 1.0 credit (specific required courses are on page 66)</p> <p>Math * 1.0 credit</p> <p>Science * 1.0 credit</p> <p>Health & Physical Education .5 credit</p> <p>Required Courses 4.5 credits</p> <p>Elective Courses up to 3.5 credits (Must schedule at least 2.5 Elective Course credits)</p> <p><i>* At least three total credits each of Math and Science are required for graduation.</i></p>
Grade 10 (2022)	Grade 12 (2020)
<p>Required</p> <p>English 1.0 credit (specific required courses are on page 28)</p> <p>Social Studies 1.0 credit (specific required courses are on page 66)</p> <p>Math 1.0 credit (see Math course offerings listed on page 44)</p> <p>Science 1.0 credit (specific required courses are on page 59)</p> <p>Health & Physical Education .5 credit</p> <p>Required Courses 4.5 credits</p> <p>Elective Courses up to 3.5 credits (Must schedule at least 2.5 Elective Course credits)</p>	<p>Required</p> <p>English 1.0 credit (specific required courses are on page 29) *</p> <p>Social Studies ** 1.0 credit</p> <p>Health & Physical Education .5 credit</p> <p>Required Courses 2.5 credits</p> <p>Elective Courses up to 5.5 credits (Must schedule at least 4.5 Elective Course credits)</p> <p><i>*A total of four credits in specific required English courses are required for graduation</i></p> <p><i>** Students who attend A.W. Beattie Career Center are not required to take Grade 12 Social Studies</i></p>

By Graduation for the Classes of 2020, 2021, 2022, and 2023

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 major and/or career opportunities from these tools 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, then they should refer to the Career Clusters document on page 12 and/or contact their School Counselors for further discussion about important required and elective course selections.

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

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

College Testing Terms

Advanced Placement Exams (AP)

There are over 30 examinations offered by The College Board in the Advanced Placement (AP) Program. All AP exams, with the exception of Studio Art, 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, 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 Test (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, Math, 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 math 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 Math Test will focus in depth on the three areas of math 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 Math Test also draws on additional topics in Math, including the geometry and trigonometry most relevant to college and career readiness.

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.

SAT Subject Tests

These tests measure a student's knowledge of a particular subject and one's ability to apply that knowledge. The tests offered are:

World History	Chinese
United States History	German
Mathematics Level 1	Korean
Mathematics Level 2	Latin
Physics	French
Chemistry	Italian
Biology E/M	Japanese
Literature	Spanish
Modern Hebrew	

Some colleges require various combinations of SAT Subject Tests for admission and/or placement purposes. Each test is a one-hour multiple-choice examination in a specific subject area. SAT Subject Tests are given in October, November, January, May, and June of each year at North Allegheny Senior High School. High school students usually take SAT Subject Tests following the completion of their last course in a particular subject. SAT Subject Tests are published by the Educational Testing Service of the College Board in Princeton, New Jersey. Students who choose to take this test must register to do so and assume the related costs. Registration materials are available at www.collegeboard.com.

College Testing Terms (continued)/Scheduling Terms

Scheduling Terms

Acceleration

In the area 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:

Biology	German	Physics C
Calculus AB & BC	History - United States & European	Physics 1
Chemistry	Human Geography	Physics 2
Computer Science Principles	Latin	Physics 1 - 2
Computer Science	Music	Spanish Language and Culture
Economics (Macro-Micro)	Psychology	Statistics
English, Grs. 11 & 12	US Govt & Comp. Pol	Studio Art
French		

Refer to individual course descriptions for additional information.

Auditing a Course

Occasionally, students may wish to learn about a subject area without officially enrolling in the course. It 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

College in High School (CHS) 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 or not 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://web2.uconn.edu/ece/credit_transfer_database/

Business, Computers, and Information Technology (BCIT)

Course	Course Number	University
Business Communications	7905	La Roche College
Computer Security	7919	University of Pittsburgh
Cyber Security and the Law	7909	University of Pittsburgh
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

Scheduling Terms (continued)

Course	Course Number	University
Principles of Accounting 2	7605	Carlow University
Webpage Design	7908	La Roche College

English

Course	Course Number	University
AP English 4: Lit & Comp	1012	La Roche College
Film Studies	1912	La Roche College
Honors Shakespeare	1911	La Roche College
Journalism 11	1803	La Roche College
Speech	1805	La Roche College

Family and Consumer Sciences

Course	Course Number	University
Child Development	8704	La Roche College

Math

Course	Course Number	University
AP Calculus AB	3012	La Roche College (4 credits)
AP Calculus BC	3022	La Roche College (4 credits)
AP Computer Science	3011	La Roche College (4 credits)
AP Statistics	3014	La Roche College
Honors Calculus	3422	University of Pittsburgh
Honors Pre-Calculus with Trigonometry	3421	La Roche College
Probability and Statistics	3812	University of Pittsburgh

Music

Course	Course Number	University
AP Music	6301	La Roche College

Science

Course	Course Number	University
AP Biology	4011	La Roche College
AP Chemistry	4012	La Roche College
AP Physics 1 & 2	4082	La Roche College

Social Studies

Course	Course Number	University
AP European History	2012	La Roche College
AP Psychology	2014	La Roche College
AP United States History	2011	La Roche College (up to 6 credits)

Course	Course Number	University
Honors American Foreign Policy: 1945-present	2611	La Roche College
Honors Modern American History and Politics	2111	La Roche College
Honors History of East Asia: 1945-present	2711	La Roche College
Honors History of Europe and Russia: 1945-present	2712	La Roche College
Multicultural Experience	2610	La Roche College
Sociology	2911	La Roche College

Visual Arts

Course	Course Number	University
AP Art History	6013 (Pending)	La Roche College
AP Studio Art	6011	La Roche College
Honors Art	6010	La Roche College
Photography 2	6605	La Roche College

World Languages

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

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

Scheduling Terms (continued)

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 is an option for students; however, a student interested in graduating early must still achieve 24.0 overall credits (Completion of Core Requirements / keystones) and no externally earned credits will be counted towards this. Students will need to schedule 8.0 credits (maximum allowed) starting in 9th grade.

Students must receive approval from their school counselor for this option prior to their freshman year.

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 Mathematics, World Languages, Business, Computer, and Information Technology.

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 22, 2019**. **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 40 days of school. After day 40, 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 in order 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 22, 2019**. This submission implies the acknowledgment of the conditions identified on the form. Any appeal to waiver into a class past the **March 22, 2019** 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**

Scheduling Terms (continued)

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, 2019**. Students will need to meet new academic rules in order to receive athletics aid (scholarships), practice, or compete during their first year. Students may be considered either a Full Qualifier, Academic Redshirt, or a Nonqualifier. Please visit www.eligabilitycenter.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, Math, 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;
- 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*
- 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 Academica 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, 2019. Students may be considered a Qualifier, Partial Qualifier, or a Nonqualifier. Please visit www.eligabilitycenter.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

Scheduling Terms (continued)/Academics

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.

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.

Academics

- Honors level courses must have appropriate prerequisites for admission.
- 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.
- Honors level courses are taught at an accelerated pace. Students are expected to function and to be evaluated at higher cognitive levels.
- Honors level courses require students to demonstrate advanced communication skills.
- 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.
- Honors level courses are primarily designed for and geared to address the abilities and needs of Phase IV and/or advanced students.
- Honors level courses are part of an accelerated/advanced program.
- Honors level course content is designed to enable students to perform better on achievement or placement tests, but not specifically on Advanced Placement examinations.
- 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

Honor 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, Math, 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 Career Standards for Career Exploration 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 in order 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
 Communications & 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
 Yearbook

Intro to Television
 Creative Writing
 Intro to Theater
 Forensics

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 the 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

Technology & Engineering Education:

9-12

Beginners Computer Applications
 Intro to Television Production
 Advanced Computer Applications

Game Development
 Advanced Game Development
 App Development

Visual Arts:

9-10

Drawing & 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 Studio Art

World Languages:

4 year sequence of at least one language

10-12

A.W. Beattie Career Center

Career Clusters

Technical Careers

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

College Majors

Engineering – 4 Year:

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

Engineering – 2 Year:

Agriculture & Agricultural Operations
Automotive Technology

Drafting/Design Technologies

Electrical Engineering Technology

Mechanical Engineering Technology

Medicine & Allied Health – 2 Year:

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

Computer Science – 4 Year:

Computer & Information Sciences
Management Information Systems

Computer Science – 2 Year:

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
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
Sewing & Design

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

Mathematics:

Personal Finance
AP Statistics
Probability & Statistics
AP Computer Science

Computer Math A&B
AP Computer Science Principles
Please refer to District Mathematics Phase Sequence Chart

Music:

9-12
Electronic Music
Advanced Electronic Music
Computer Multimedia Arts

Science:

9-10
Honors Chemistry

11-12
Academic Physics
Honors Physics
AP Physics 1
AP Physics 1 & 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
CADD 1 & 2
Manufacturing 1 & 2
Engineering & Design
Electricity 1 & 2
Robotics 1 & 2
Intro to Engineering Design

11-12
CADD 1, 2, 3 & 4
Tech Design & Application Materials
Robotics 3
Materials
Stage Technology & Production

(For Computer & Information Specialties)

9-10
Game Development
Advanced Game Development
Inside Your Computer
Electricity 1 & 2
Intro to Media Production
Advanced Media Production: Broadcasting

11-12
Game Development
Advanced Game Development
App Development

Visual Arts:

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

11-12
Photography 1 & 2
Computer Multimedia Arts

World Languages:
4 year sequence of at least one language

10-12
A.W. Beattie Career Center

Career Clusters

Science & Technology Careers

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



College Majors

Engineering – 4 Year:

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

Engineering – 2 Year:

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

Mechanical Engineering
Technology

Medicine & Allied Health – 4 Year:

Communication Disorders
Medicine
Nursing

Medicine & Allied Health – 2 Year:

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

Science & Math – 4 Year:

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

Science & Math – 2 Year:

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

11-12

Foods for You
Foods Americana
Sports Nutrition
Interior Design

Mathematics:

AP Computer Science Principles
AP Statistics
Probability & Statistics
AP Computer Science
Computer Math A & B
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

Physical Education:

9-10
Advanced Physical Education

11-12

Focus on Fitness

Science:

9-10
Honors Chemistry

11-12
Academic Physics
Honors Physics
AP Physics 1
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 Math and Science)

9-10

Honors Biology
Honors Chemistry

11-12

Academic Concepts of Physics
Honors Physics
AP Physics 1
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
Multicultural Experience

Technology & Engineering Education:

9-10

CADD 1 & 2
Manufacturing 1 & 2
Engineering & Design
Electricity 1 & 2
Robotics 1 & 2

11-12

CADD 1, 2, 3 & 4
Tech Design & Application Materials
Robotics 3
Intro to Engineering Design

Technology & Engineering Education: (For Math and Science)

9-10
Engineering & Design
Game Development
Advanced Game Development
Electricity 1 & 2

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

11-12
Senior High Drawing & Design Concepts

Senior High Painting & Color Concepts
Photography 1 & 2
Computer Multimedia Arts

World Languages:

4 year sequence of at least one language

10-12
A.W. Beattie Career Center

Career Clusters

Arts Careers

Persons with such interest may like to express thoughts or feelings through painting, writing, designing, 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 – 2 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

English:
9-10

Introduction to Journalism
Yearbook
Leadership 1 & 2
Intro to Television Production
Intro to Theater
Intro to Film
Forensics
Creative Writing

11-12

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

Creative Writing, 1 & 2 (Fiction)
Film and TV Production 1
Film and TV Production 2
Film and TV Production 3
Film Studies
Broadcasting

Family & Consumer Sciences:
9-10

Sewing & Design

11-12

Fashion Arts
Fashion Merchandising
Interior Design

Mathematics:

Please refer to the District Mathematics Phase Sequence Chart

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

Television Production
Game Development
Advanced Game Development

11-12

App Development
Game Development
Advanced Game Development
Materials
Stage Technology & Production
Intro to Engineering Design

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 Studio Art
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

10-12

A.W. Beattie Career Center

Career Clusters

Social Services Careers

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



College Majors

Social Sciences – 4 Year:

Criminology
Economics
History
Political Science/Government
Psychology
Sociology

Social Sciences – 2 Year:

Psychology
Social Sciences, General

Education – 4 Year:

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

Education – 2 Year:

Teacher Education: Elementary/
Secondary

Community Services – 4 Year:

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

Community Services – 4 Year:

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
Forensics

11-12

Speech
Honors Argument

Family & Consumer Sciences:

9-10

Child Development
Independent Living
International Foods

11-12

Child Development
The Real World
Foods for You
Preschool Practicum

Mathematics:

AP Statistics
Probability & Statistics
Please refer to the District Mathematics Phase Sequence Chart

Music:

11-10

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

Physical Education:

9-10

Advanced Physical Education.

11-12

Focus on Fitness
Lifetime Activities

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

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 Studio Art

World Languages:

4 year sequence of at least one language

10-12

A.W. Beattie Career Center

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 400 Gr.12.....# 9417

AEROSPACE SCIENCE AND LEADERSHIP

AFJROTC ASL 100: No. 9414

*Full Year/Full Time
Grade 9*

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 text book tells a story of why we are so proud of our Air Force heritage—laying the foundation for future aerospace science courses. Throughout the course, 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 practiced through preparing for the Presidents Physical Fitness Examination at the beginning and end of the academic year.

AFJROTC ASL 200 Gr. 10 # 9415

AEROSPACE SCIENCE AND LEADERSHIP

AFJROTC ASL 200: No. 9415

*Full Year/Full Time
Grade 10*

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 practiced through preparing for the Presidents Physical Fitness Examination at the beginning and end of the academic year.



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 practiced through preparing for the Presidents Physical Fitness Examination 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 practiced through preparing for the Presidents Physical Fitness Examination 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

Grade 10 – Electives

Principles of Accounting 1 ¹	# 7505**
Principles of Accounting 2 ¹	# 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	# 7908**
Intro to Information Science ¹	# 7906**
Cybersecurity and the Law ¹	# 7909**
Business Communications	# 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	# 7505
Principles of Accounting 2 ¹	# 7605
Honors Advanced Accounting 1 ¹	# 7705**
Honors Advanced Accounting 2 ¹	# 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).

** Indicates College in High School Course

Course Descriptions

Business, Computer, and Information Technology

INTRODUCTION TO BUSINESS

No. 7403

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

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

No. 7908

*Semester/Full Time
Grades 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, 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 obtain three college credits through La Roche College. To obtain this credit, the student must successfully complete the course as specified by the College, and pay tuition charged by the college.

Criteria for Selection – None.

INTRO TO INFORMATION SCIENCE

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 FBI and 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.

This course will be completed in partnership with the FBI and 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.

Course Descriptions

Business, Computer, and Information Technology

BUSINESS COMMUNICATIONS

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 College. To obtain this credit, the student must successfully complete the course as specified by the College, and pay the tuition charged by the college.

Criteria for Selection – None.

SPORTS AND ENTERTAINMENT MANAGEMENT

No. 7506

*Semester/Full Time
Grades 11, 12*

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

No. 7907

*Semester/Full Time
Grades 11, 12*

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

No. 7606

*Semester/Full Time
Grades 11, 12*

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 in order 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

No. 7919

*Full Year/Full Time
Grades 11, 12*

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.

This course will be completed in partnership with the FBI and 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

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

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.

Course Descriptions

Business, Computer, and Information Technology

PRINCIPLES OF ACCOUNTING 1

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

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

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.

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

No. 7805

*Second Semester/Full Time
Grades 11, 12*

*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

No. 7508

*Semester/Full Time
Grades 11, 12*

*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

No. 7509

*Semester/Full Time
Grades 11, 12*

*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.

Course Descriptions

Business, Computer, and Information Technology

MARKETING

No. 0403

*Full Year/Full Time
Grades 11, 12*

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.

ADVANCED MARKETING

No. 0404

*Full Year/Full Time
Grade 12*

Credit 1.0

This course is designed for students interested 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

No. 0405

*Semester/Full Time
Grades 11, 12*

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

No. 0438

*Full Year/Full Time
Grade 12*

Credit 1.0

Developing life skills in a changing world is very important, yet often overlooked. The more prepared students are to handle the everyday 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. Communications 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 in order for students to take the class. Students with a full schedule are able to 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 in order to fulfill the requirements of co-op. Students must work an average of 15 hours per week at an approved work 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 12 - 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 11 Full Time

No. 0433

Co-op

Semester 1 Periods 10-11 Full Time

No. 0431

Co-op

Semester 1 Periods 9-11 Full Time

No. 0429

Co-op

Semester 1 Periods 7-11 Full Time

No. 0427

Co-op

Semester 1 Periods 5-11 Full Time

No. 0425

Co-op

Semester 2 Period 11 Full Time

No. 0434

Co-op

Semester 2 Periods 10-11 Full Time

No. 0432

Co-op

Semester 2 Periods 9-11 Full Time

No. 0435

Co-op

Semester 2 Periods 7-11 Full Time

No. 0428

Co-op

Semester 2 Periods 5-11 Full Time

No. 0426

Co-op

Semester 1 Period 12 Full Time

No. 0436

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

Co-op

Semester 2 Period 12 Full Time

No. 0437

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)
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)
CADD 1 ¹ (Computer-Aided Design 1) (FY/FT)	# 9706 (See Tech & Engineering Ed Section)
CADD 1 ¹ (Computer-Aided Design 1) (Semester/FT).	# 9806 (See Tech & Engineering Ed Section)
CADD 2 ¹ (Computer-Aided Design 2) (FY/FT).	# 9906 (See Tech & Engineering Ed Section)
CADD 2 ¹ (Computer-Aided Design 2) (Semester/FT).	# 9410 (See Tech & Engineering Ed Section)
Inside Your Computer ¹	# 9508 (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	# 7908 (See Business, Computer and IT Section)
Intro to Information Science ¹	# 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)
CADD 1 ¹ (Computer-Aided Design 1).	# 9806 (See Tech & Engineering Ed Section)
CADD 2 ¹ (Computer-Aided Design 2).	# 9410 (See Tech & Engineering Ed Section)
CADD 3 ¹ (Computer-Aided Design 3).	# 9411 (See Tech & Engineering Ed Section)
CADD 4 ¹ (Advanced Computer-Aided Design 4)	# 9412 (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 No. 0289

Semester/Full Time

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

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

Criteria for Selection - None.

BEGINNING COMPUTER APPLICATIONS/PT No. 0288

Full-year/Part Time

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

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 No. 0291

Semester/Full Time

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

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

No. 0290

Full-year/Part Time

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

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
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Grades 9, 10 – Electives

Introduction to Journalism	
Grade 9	# 1403
Grade 10	# 1603
Yearbook	
Grade 9	# 1503
Grade 10	# 1506
Leadership 1	# 1905
Leadership 2	# 1906
Introduction to Film	# 1206
Forensics	# 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.

** 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	# 1012**

Grades 11, 12 – Special Options

Literature Practicum	# 1001
English as a Second Language	# 1009

Grades 11, 12 – Electives

Honors Journalism 11,12	
Grade 11	# 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	# 1805**
Acting 1: Taking the Stage	# 1405
Acting 2: Drama in Motion.	# 1505
Honors Shakespeare	# 1911**
Honors Argument	# 1908
Film and TV Production 1	# 1111
Film and TV Production 2	# 1113
Film and TV Production 3	# 1114
Broadcasting.	# 1112
Film Studies	# 1912**

** Indicates College in High School Course

Course Descriptions

English Language Arts

ESSENTIAL ENGLISH 1 (IMPACT)

Full Year/Full Time
Grade 9 Phase 1

No. 1209

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

Full Year/Full Time
Grade 9 Phase II, III

No. 1409

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

Full Year/Full Time
Grade 9 Phase III
NCAA

No. 1509

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 in this course include *Of Mice and Men*, *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

Full Year/Full Time
Grade 9 Phase IV
NCAA

No. 1109

Honors Wt.
Credit 1.0

This is the first of an advanced two-year course of World Literature. Students in Honors English I will read, analyze, and compose essays about translated World Literature, focusing on older texts. The class is structured with an emphasis on writing, group work, and inquiry-based discussions, in which active 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 higher level thinking.

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

1. 8th grade English grade of 'A' or high 'B'.
2. Overall QPA of 3.4 or higher.
3. Successful completion of a writing sample.

ESSENTIAL ENGLISH 2 (IMPACT)

Full Year/Full Time
Grade 10 Phase I

No. 1210

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

Full Year/Full Time
Grade 10 Phase II, III

No. 1410

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.

Course Descriptions

English Language Arts

ACADEMIC ENGLISH 2

*Full Year/Full Time
Grade 10 Phase III
NCAA*

No. 1510

Credit 1.0

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

*Full Year/Full Time
Grade 10 Phase IV
NCAA*

No. 1110

*Honors Wt.
Credit 1.0*

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 II 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.

ENGLISH AS A SECOND LANGUAGE

*Full Year/Full Time
Grades 9, 10*

No. 1009

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

*Grade 9
Grade 10
Full Year/Full Time*

No. 1403

No. 1603
Credit 1.0

Students in this course are placed at the controls of the NAI student media newspaper, *NA EYE*. 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 com-

ponents 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
Grade 10
Full Year/Full Time*

No. 1503

No. 1506
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

*Semester/Full Time
Grades 9, 10*

No. 1905

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

*Semester/Full Time
Grade 10*

No. 1906

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 – None.

INTRODUCTION TO FILM

*Semester/Full Time
Grades 9, 10*

No. 1206

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.

Course Descriptions

English Language Arts

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
Grade 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 – Application and interview due to limited class size.

FORENSICS

No. 1907

*Semester/Full Time
Grades 9, 10
NCAA*

Credit .5

Forensics 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. Student participation in competitive tournaments is encouraged, but not required. **This course is highly recommended for all levels.**

Criteria for Selection – None.

ENGLISH 3

No. 1611

*Full Year/Full Time
Grade 11 Phase II, III*

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 and requires students to read and respond to essays, short stories, poetry, novels, and dramatic selections. Students complete journal response entries to assist in the development of their literary analysis abilities. Additionally, students refine skills for speaking and listening, for vocabulary development and also for refinement of their writing. A key component of the course is the integration and reinforcement of fundamental writing techniques. Students continue to use the building blocks of the writing process for topic generation, organization of ideas, drafting, revising, and proofreading. In many cases, school computer labs are available for all aspects of essay completion, including publication. Essays of persuasion, compare-contrast, description, cause-effect and analysis that originate from the literature are the focus of the writing, which heavily emphasizes peer-review sessions. Students who take this course will find it instrumental for writing well-developed, multi-paragraph compositions utilized at the college level. 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. Through literary study, writing, grammar, vocabulary development, and usage, students will become proficient readers and writers, fully prepared for senior level English 4. A component of the course is the College/Career Project.

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

ESSENTIAL ENGLISH 3

No. 1211

*Full Year/Full Time
Grade 11 Phase I*

Credit 1.0

Students in this course 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

No. 1711

*Full Year/Full Time
Grade 11 Phase III
NCAA*

Credit 1.0

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

Course Descriptions

English Language Arts

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
NCAA*

No. 1015

*Honors Wt.
Credit 1.0*

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 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
NCAA*

No. 1011

*AP Wt.
Credit 1.0*

This year-long, college-level course, intended for top-performing juniors, develops the skills of argumentation, rhetorical analysis, and critical reading. The pace is aggressive, and a majority of each semester's assessments are in-class, timed essays. 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 literature of the course reflects a diverse sampling of genres and historical eras. Featured authors in the first semester include, but are not limited to, Plato, Sophocles, Shakespeare, Swift, Voltaire, Kafka, and Orwell. The second semester features classic authors of American litera-

ture – Emerson, Thoreau, Dickinson, Twain, Fitzgerald, Steinbeck, Hemingway, Frost, Salinger – and culminates in the College/Career Project. The course also features a persuasive speaking unit, an ongoing study of SAT-level vocabulary, and a mandatory summer assignment in preparation for the first week 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. A component of the course is the College/Career Project.

Criteria for Selection –

1. Successful completion of Honors English 2.
2. Approval by 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 IV*

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, a survey course of English and World Literature, challenges Phase II/III students to interpret, analyze, and synthesize literature through discussion, creative projects, and critical essays. They continue to enhance their core communication arts skills as developed throughout their academic careers. Students in this course will practice their composition skills in response to selected works of literature. Expository writing, persuasive writing, and analytical writing serve as the primary modes where students reinforce grammar, sentence structure, diction, and style. 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. 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 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

*Full Year/Full Time
Grade 12 Phase III
NCAA*

No. 1712

Credit 1.0

In this challenging, college-preparatory course, seniors will study British works from the Anglo-Saxon period to the present. 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

Course Descriptions

English Language Arts

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

Full Year/Full Time
Grade 12, Phase IV
NCAA

No. 1017

Honors Wt.
Credit 1.0

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. In the literature segment, British writers from the Anglo-Saxon to the Modern Contemporary 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

Full Year/Full Time
Grade 12, Phase IV
NCAA

No. 1012

AP Wt.
Credit 1.0

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.

LITERATURE PRACTICUM

Full Year/Part Time
Grades 11, 12

No. 1001

Credit .5

This course is designed to remediate and prepare students to achieve at the Proficient or Advanced level on the reading portion of Pennsylvania's standardized tests. Students will utilize a variety of resources, such as Study Island, state-level resources, and the North Allegheny English curriculum to review concepts covered on standardized state tests. The topics covered will reinforce and supplement what the students are learning in their core English courses by aligning these concepts with the eligible content that is assessed on the state exams. Students will be given the opportunity to gauge their progress and predict their success on the state exams by using the Study Island assessments and other comparable assessment tools. For students who are required to take the course, they may test out of the course if they achieve a proficient score on equivalency tests administered at the end of each semester.

Criteria for Selection – Scoring at the Basic or Below Basic level on the most recent Keystone Exam.

ENGLISH AS A SECOND LANGUAGE

Full Year/Full Time
Grades 11, 12

No. 1009

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
Grade 12
Full Year/Full Time

No. 1903
No. 1504
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.

Course Descriptions

English Language Arts

Students must complete an application form and submit it to the Yearbook Advisor during an interview process before they may 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
NCAA

Credit .5

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

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, lead student workshops in class, and participate in the development of *Variations*, the Senior High School Literary Magazine. While discussions of art and art making persist, Creative Writing 2: Poetry students will be much more engaged in submitting their work for publication and actively working with poetry organizations outside of the District. 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
NCAA

Credit .5

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, peer-to-peer

discussion, and online posting offers students an environment to develop their writing skills and confidence. Writing short stories, scripts, 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 read and write on a daily basis.

Criteria for Selection – None.

CREATIVE WRITING 2: FICTION **No. 1714**

Semester/Full Time
Grades 11, 12; Phase III-IV

Credit .5

This course builds upon the interests and skills developed through Creative Writing 1: Fiction. This course is open to juniors and seniors and requires completion of Creative Writing 1: Fiction as a prerequisite. This course focuses heavily on the individual pursuit of publishing works of fiction and exploring the genre of fiction writing. Writers enrolled in this course are expected to be more actively involved in the process of peer review and develop more skill and focus in the art of storytelling and fictional writing. A highly collaborative course design complete with individual submissions and publication attempts encourages the writer to become a strong voice and more confident author. Writers that are primarily interested in expressing creativity through the art of storytelling are encouraged to take this course. Students enrolled in this course will be encouraged to read and write on a daily basis.

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 **No. 1805**

Semester/Full Time
Grades 11, 12; Phase II-III-IV
NCAA

Credit .5

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 ranging from informative and persuasive to impromptu and issues-oriented topics. Students will also explore how modern technology can shape and assist their presentations. Additionally, students will learn how to tailor

Course Descriptions

English Language Arts

their speeches to meet the needs of a specific audience. 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 **No. 1911**

Semester/Full Time
Grades 11, 12 **Honors Wt.**
NCAA **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 Shake-

spere’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.**

HONORS ARGUMENT **No. 1908**

Semester/Full Time
Grades 11, 12 **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 **No. 1111**

Semester/Full Time
Grades 11, 12 **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: **No. 1112**

Semester/Full Time
Grades 11, 12 **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.

Course Descriptions

English Language Arts

FILM AND TV PRODUCTION 2:

No. 1113

Semester/Full Time

Grades 11, 12

Credit .5

Situated in the NATV Studio, this course expands upon the principles and techniques taught in Film and TV 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 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 1 may see the teacher to request placement in Film and TV 2.

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

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 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

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

No. 1912

Semester/Full Time

Grades 11, 12

Credit .5

Film Studies will introduce students to the vocabulary of film analysis and to the body of scholarly criticism that elevates landmark films to the status of literary art. As a complement to Introduction to Film Studies at NAI, the NASH Film Studies course will focus on the narrative structure and filmic techniques that contribute to unity of meaning in whole films. The course will explore a representative film from each of the following categories/genres: Silent Films, 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 open with an introduction to the basic principles of film composition, thus establishing a common language for the close analysis of film technique as the course progresses.

Criteria for Selection – None.

Course Descriptions

Family and Consumer Sciences

Grades 9, 10 – Electives

Adventures in Food	# 8403
Child Development	# 8704
Sewing 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	# 8704**

Grade 12 only

Preschool Practicum	# 8804
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** Indicates College in High School Course

Course Descriptions

Family and Consumer Sciences

ADVENTURES IN FOOD

Semester/Full Time
Grades 9, 10

No. 8403

Credit .5

If you are not excited about what is in front of you, then cook up something completely new and exciting. Adventures in Food is a course designed to explore the basic food groups while teaching safety and sanitation skills needed in food preparation. It provides a well-rounded education in the field of basic meal planning that could launch an exciting career in the culinary field. The course defines the need for students to understand their role in healthy eating to ensure good health in the future. While working in teams, students will gain the necessary work skills to ensure success in future careers. Communication, organization, conservation, and money management skills are incorporated in the weekly foods labs.

Criteria for Selection – None.

CHILD DEVELOPMENT

Semester/Full Time
Grades 9, 10

No. 8704

Credit .5

Kids say and do the cutest things; they are fun and still a mystery. Are you curious about children and how they become such unique individuals? Learn how to become a more confident and attentive caregiver who encourages healthy, happy babies and healthy, loving families that contribute to productive communities. This course offers insight into infant and child-care topics with opportunities for hands-on experiences, including the use of Reality Care baby simulators. Concepts and theories of child development are explored. Factors that influence the physical, social, emotional, moral, and intellectual development are studied. Career opportunities will be presented.

Criteria for Selection – None.

SEWING AND DESIGN

Semester/Full Time
Grades 9, 10

No. 8703

Credit .5

Stylish? Creative? Independent? If we all dressed and looked at fashion and design the same, whether it is that of clothing or accessories, the word "boring" comes to mind. Sewing and Design gives the student the opportunity to take individual ideas and express them in fabric, color, and texture. Students will understand management practices related to human, economic, and environmental resources by examining wardrobe needs for multiple societal roles, demonstrate safe and proper use of all technological and textile equipment, and finally develop and demonstrate skills in constructing textile projects. Individual projects are included in this course and requires students to purchase supplies. Careers in the fashion industry will be explored.

Criteria for Selection – None.

INTERNATIONAL FOODS

Semester/Full Time
Grades 9, 10

No. 8503

Credit .5

Uncover the exciting opportunity of preparing foods from around the world. Students explore selected international cuisines and customs while preparing various ethnic foods in weekly labs. Build your skills in bread-making, baking, and pastries as you travel from country to country. Students experience a career in food journalism as they plan and complete a food magazine. Students will understand the principles of food and Science and its relationship to healthy individuals, families, and communi-

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

Criteria for Selection – None.

INDEPENDENT LIVING

Semester/Full Time
Grades 9, 10

No. 8803

Credit .5

Get Ready, Get Set, Go! Independent Living is a comprehensive Family and Consumer Sciences course which explores what it takes to live independently while getting equipped to learn to balance family, community, and work activities. Students acquire skills in planning nutritious meals for various ages and health conditions. They will develop skills to plan and carry out financial goals for now and the future. Students study the development and care of children from birth to five years of age.

Criteria for Selection – None.

INTRODUCTION TO SPORTS NUTRITION

Semester/Full Time
Grades 9, 10

No. 8507

Credit .5

Like most young adults, you've probably heard that physical activity and good nutrition are good for you. It is great if you are already including this in your daily routine, but maybe you need to step it up and push yourself a little harder. Regular exercise and physical activity along with balancing good nutrition are important to the physical and mental health of everyone. Introduction to Sports Nutrition provides the student with the opportunity to design a personal plan to fit one's own lifestyle. Students will participate in preparing healthy foods, modify recipes, analyze personal eating habits, and identify the importance of required specialty diets.

Criteria for selection – None.

FASHION MERCHANDISING

Semester/Full Time
Grades 11, 12

No. 8302

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

Semester/Full Time
Grades 11, 12

No. 8505

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.

Course Descriptions

Family and Consumer Sciences

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.

FOODS FOR YOU

No. 8604

Semester/Full Time

Grades 11, 12

Credit .5

Time to evaluate and take control of your eating habits in order 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

No. 8607

Semester/Full Time

Grades 11, 12

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

No. 8904

Semester/Full Time

Grades 11, 12

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

No. 8704

Semester/Full Time

Grades 11, 12

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.

PRESCHOOL PRACTICUM

No. 8804

Semester/Full Time

Grade 12

Credit .5

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 the majority 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 math. 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	# 8409
Health and Physical Education (FY/PT)	# 7401

Grade 10 – .5 Credit Required

Health and Physical Education (FY/PT)	# 7401
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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
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Grade 12 – .5 Credit Required

Health and Physical Education (FY/PT)	# 7401
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Grades 11, 12 – Electives

Adaptive Physical Education.	# 7209
Health and Physical Education (Semester/FT).	# 7501
Focus on Fitness.	# 7601
Recreational Leadership.	# 7504

Course Descriptions

Health and Physical Education

WELLNESS FOR LIFE

No. 8409

*Semester/Full Time/Required
Grade 9*

Credit .5

- This is the preferred Health course of 9th grade students
- OR

WELLNESS FOR LIFE

No. 8410

*Full Year/Part Time/Required
Grade 9*

Credit .5

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

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

No. 7401

*Full Year/Part Time
Grades 9, 10*

Credit .5

The ultimate goal of Physical Education is to facilitate students in improving their quality of life through promotion of life-long, health-enhancing physical activity. In today's society, "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

No. 7409

*Full Year/Full Time
Grades 9, 10*

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 cardio respiratory 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

No. 7209

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

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.

HEALTH AND PHYSICAL EDUCATION

No. 7401

*Full Year/Part Time
Grades 11, 12*

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 life-style. A healthy active life-style will improve the quality of life and lower the risk for disease associated with a sedentary life-style. Students will also understand the best and safest practices recommended for participation in recreational and fitness activities.

Course Descriptions

Health and Physical Education

HEALTH AND PHYSICAL EDUCATION

No. 7501

Semester/Full Time

Grades 10, 11, 12

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, School Counselor approval.

FOCUS ON FITNESS

No. 7601

Full Year/Part Time

Grades 11, 12

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 amount of skill taught and practiced in a given 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.

RECREATIONAL LEADERSHIP

No. 7504

Semester/Full Time

Grade 12

Credit .5

Recreational Leadership is designed for students planning on entering the field of education or wanting to work with children in recreation and sports settings. Students should possess a willingness to learn and lead a variety of outdoor activities and sports.

Activities will center on the idea of directing team and group activities.

Students will learn to design activities, identify risks, and modify for special needs to ensure a safe successful experience. Students will also examine the world of youth sports.

Students will work with the regular as well as the adaptive Phys. Ed. classes or be expected to log volunteer hours within a recreational setting. This is an elective course and cannot replace required course #7401, 7409, 7209 or 7501.

Units include:

- Working with children
- Facility planning/Equipment design
- Directing adventure activities
- Coaching / Officiating youth sports
- Understanding physical challenges
- Employment opportunities
- Modifying activities
- Legal requirements for working with children
- CPR /First Aid
- Aquatic safety

Criteria for Selection - Child Development (8407) or Recommendation of teacher.

Elective - This class must be selected in addition to 7401, 7409, 7501 or 7209.

Course Descriptions

Mathematics

Grade 9, 10, 11, 12 – Special Option

Algebra 1 Practicum # 3001

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 # 3421
Honors Calculus # 3422
AP Calculus AB # 3012**
AP Calculus BC # 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.

** Indicates College in High School Course

Course Descriptions

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	# 3421
Honors Calculus	# 3422
AP Calculus AB	# 3012
AP Calculus BC	# 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	# 3421**
Foundations of Calculus (Academic)	# 3105
Honors Calculus	# 3422**
AP Calculus AB	# 3012
AP Calculus BC	# 3022

Grade 11, 12 – Elective

Personal Finance (Semester)	# 3411
Probability & Statistics	# 3812**
AP Statistics	# 3014**
Computer Science A (Semester)	# 3523
Computer Science B (Semester)	# 3524
AP Computer Science	# 3011**

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).

** Indicates College in High School Course



Course Descriptions

Mathematics

GRADES 9, 10, 11, 12 COURSE SELECTION

ALGEBRA 1 PRACTICUM

No. 3001

Full Year/Part Time

Grades 9, 10, 11, 12

Credit .5

This course is designed to prepare students to achieve at the Proficient or Advanced level on the Algebra 1 Keystone Exam. Students will utilize a variety of resources to provide supplemental instruction for items tested on the Algebra 1 Keystone Exam. Instruction will be inquiry-based and designed around topics from the core Mathematics curriculum that are aligned with the eligible content that is assessed on the Keystone. Students may exit the course when they achieve a minimal score of Proficient on the Exam or complete a project-based assessment approved by the Pennsylvania Department of Education.

Criteria for Selection –

Scoring at the Basic or Below Basic level on the most recent Algebra 1 Keystone exam

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 program 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 in order 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 program 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 in order 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)

HONORS GEOMETRY

No. 3201

Full Year/Full Time

Grades 9, 10

NCAA

Honors Wt.

Credit 1.0

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.)**

Course Descriptions

Mathematics

ACADEMIC GEOMETRY

No. 3102

Full Year/Full Time
Grades 9, 10
NCAA

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

No. 3421

Grade 9 (listed in Grade 11 section)

COMPUTER SCIENCE A

No. 3523

Grade 9, 10 (listed at end of Math section)

COMPUTER SCIENCE B

No. 3524

Grade 9, 10 (listed at end of Math section)

AP COMPUTER SCIENCE PRINCIPLES

No. 3010

Grade 9, 10 (listed at end of Math section)

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 program 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 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 program 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 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
NCAA

Honors Wt.
Credit 1.0

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.**

ACADEMIC ALGEBRA 2

No. 3103

Course Descriptions

Mathematics

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

Credit 1.0

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 **No. 3421**
WITH TRIGONOMETRY

Grade 10 (listed under Grade 11 section)

HONORS CALCULUS **No. 3422**

Grade 10 (listed under Grade 12)

AP CALCULUS AB **No. 3012**

Grade 10 (listed under Grade 12)

AP CALCULUS BC **No. 3022**

Grade 10 (listed under Grade 12)

ACADEMIC PRE-CALCULUS **No. 3104**
WITH TRIGONOMETRY

Grade 10 (listed under Grade 11)

COMPUTER SCIENCE A **No. 3523**

Grades 9, 10 (listed at end of Math section)

COMPUTER SCIENCE B **No. 3524**

Grades 9, 10 (listed at end of Math section)

AP COMPUTER SCIENCE PRINCIPLES **No. 3010**

Grades 9, 10 (listed at end of Math section)

GRADE 11 COURSE SELECTIONS

ESSENTIALS OF ALGEBRA 2 (PART 1) **No. 3303**

Full Year/Full Time
Grades 11, 12

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 in order to solve problems arising from those situations.

Criteria for Selection-

60% or better in Essentials of Geometry (3302).

ACADEMIC ALGEBRA 2 **No. 3103**

Grade 11 (listed under Grade 10)

ACADEMIC ALGEBRA 3 **No. 3623**

Full Year/Full Time

Grade 11

NCAA

Credit 1.0

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 **No. 3104**
WITH TRIGONOMETRY

Full Year/Full Time

Grades 10, 11, 12

NCAA

Credit 1.0

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. ‘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 **No. 3421**
WITH TRIGONOMETRY

Full Year/Full Time

Grades 9, 10, 11, 12

NCAA

Honors Wt.
Credit 1.0

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

Course Descriptions

Mathematics

analysis of conic sections and other geometric curves from a coordinate point of view is 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 experience difficulty 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).

HONORS CALCULUS

No. 3422

Full Year/Full Time
Grade 11 (listed under Grade 12)
NCAA

Honors Wt.
Credit 1.0

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.

AP CALCULUS AB

No. 3012

Grade 11 (listed under Grade 12)

AP CALCULUS BC

No. 3022

Grade 11 (listed under Grade 12)

PERSONAL FINANCE

No. 3411

Semester/Full Time
Grades 11, 12

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

No. 3812

Full Year/Full Time
Grades 11, 12
NCAA

Credit 1.0

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. The possibility for college credit may be available for this course. Details related to this option and registration procedures will be discussed in class.

Criteria for Selection –

Successful completion of Honors Algebra 2 (3202), or Academic Algebra 2 (3103).

AP STATISTICS

No. 3014

Full Year/Full Time
Grades 11, 12
NCAA

AP Wt.
Credit 1.0

This course is devoted to developing the student's ability to interpret and investigate statistical data. The activities of decision-making and justifying hypotheses are of the highest importance. 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.

Criteria for Selection –

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

COMPUTER SCIENCE A

No. 3523

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

COMPUTER SCIENCE B

No. 3524

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

AP COMPUTER SCIENCE

No. 3011

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

Course Descriptions

Mathematics

GRADE 12 COURSE SELECTIONS

ESSENTIALS OF ALGEBRA 2 (PART 1) **No. 3303**
Grade 12 (listed under Grade 11)

ESSENTIALS OF ALGEBRA 2 (PART 2) **No. 3304**
Full Year/Full Time
Grade 12 *Credit 1.0*

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 in order 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 **No. 3103**
Grade 12 (listed under Grade 10)

TRIGONOMETRY WITH FUNCTIONS **No. 3624**
Full Year/Full Time
Grade 12 *Credit 1.0*
NCAA

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.**

ACADEMIC PRE-CALCULUS WITH TRIGONOMETRY **No. 3104**
Grade 12 (listed under Grade 11)

HONORS PRE-CALCULUS WITH TRIGONOMETRY **No. 3421**
Grade 12 (listed under Grade 11)

FOUNDATIONS OF CALCULUS (ACADEMIC) **No. 3105**
Full Year/Full Time
Grades 11, 12 *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 **No. 3422**
Full Year/Full Time
Grade 12 *Credit 1.0*
NCAA

This is the fifth year of the Honors Mathematics sequence. If students have completed four years of Honors Math 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 math 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 possibility for college credit is available for this course, which follows the curriculum set by the University of Pittsburgh's Analytic Geometry & Calculus 1 (Math 0220) course. If students elect to register for the College in High School course (4 credits) they must pass an online placement exam and pay the registration fee. However, all students will learn the same content and take the same tests throughout the

Course Descriptions

Mathematics

course, whether they are taking the course for college credit or not. The only exception is the final exam – only CHS students will take the University of Pittsburgh Final exam. 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.

AP CALCULUS AB

Full Year/Full Time
Grade 12
NCAA

No. 3012

AP Wt.
Credit 1.0

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 math courses and the approval of the Honors Pre-Calculus Math 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 course AP Calculus BC (3022) 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

Full Year/Full Time
Grades 11, 12
NCAA

No. 3022

AP Wt.
Credit 1.5

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 math courses and the approval of their Honors Pre-

Calculus Math 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 course AP Calculus AB (3012) 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, 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

Grades 11, 12 (listed under Grade 11)

No. 3812

AP STATISTICS

Grades 11, 12 (listed under Grade 11)

No. 3014

COMPUTER SCIENCE A

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

No. 3523

COMPUTER SCIENCE B

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

No. 3524

AP COMPUTER SCIENCE

Grades 11, 12 (listed at end of Math 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 step-wise 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 math courses. The programming language used in this course is C++.

Criteria for Selection –

**Successful completion of Algebra 1 (prior to Grade 9)
OR co-requisite of Algebra 1 (3101).**

Mathematics

COMPUTER SCIENCE B

No. 3524

Semester/Full Time

Grades 9, 10, 11, 12

Credit .5

The major emphasis in this course is on extending the student's proficiency in programming 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 C++.

Criteria for Selection –

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

AP COMPUTER SCIENCE PRINCIPLES

No. 3010

Full Year/Full Time

Grades 9, 10

AP Wt.

Credit 1.0

Advanced Placement Computer Science Principles is an introductory computing course focusing on computational thinking practices. The major area of study in this course are organized around seven big ideas: creativity, abstraction, data and information, algorithms, programming, the Internet, and global impact of technology.

Criteria for Selection –

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

AP COMPUTER SCIENCE

No. 3011

Full Year/Full Time

Grades 11, 12

AP Wt.

Credit 1.0

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

Criteria for Selection –

1. A 'B' (80%) or better in Computer Science A (3523). Completion of Computer Science B (3524) is strongly recommended.
2. Successful completion of AP Calculus provided that the student has adequate programming knowledge.
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

MATH ELECTIVES INCLUDE: Personal Finance, Computer Science A, Computer Science B, AP Computer Science, AP Computer Science Principles, AP Statistics, and Probability and Statistics

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 MATH 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
Music Theory and Composition 3 ¹	# 3010

Grades 11, 12 – Electives

String Orchestra	# 6908
Honors Chamber Orchestra	# 6909
Honors Wind Ensemble	# 6406
Concert Band	# 6914
Symphonic Band	# 6915
Song Writing ¹	# 6608
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
Electronic Music ¹	# 6707
Advanced Electronic Music ¹	# 6808
Honors Music Theory ¹	# 6300
Advanced Placement Music ¹	# 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 Math) requirement (details on pages 3 and 4).

** 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 **No. 6508** **AND JAZZ STUDIES**

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 in order 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 art-

ists 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).

GRADES 9, 10 COURSE SELECTIONS

STRING ORCHESTRA **No. 6906**

Full Year/Full Time
Grades 9, 10

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 – Approval from the Orchestra Director.

HONORS CHAMBER ORCHESTRA **No. 6907**

Full Year/Full Time
Grades 9, 10

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 **No. 6910**

Full Year/Full Time
Grades 9, 10

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 **No. 6407**

Full Year/Full Time
Grades 9, 10

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

Course Descriptions

Music

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 **No. 6805**
Full Year/Full Time
Grade 9 **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 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
Grade 10 **Credit 1.0**

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
Grade 9 **Credit 1.0**

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
Grade 9 **Credit .5**

Same as above on a part-time basis for .5 credits. 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
Grade 10 **Credit 1.0**

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
Grade 10 **Credit .5**

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.

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. 3010**
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 in order 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.

Course Descriptions

Music

GRADES 11, 12 COURSE SELECTIONS

SONG WRITING

No. 6608

*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. 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).

STRING ORCHESTRA

No. 6908

*Full Year/Full Time
Grades 11, 12*

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

No. 6909

*Full Year/Full Time
Grades 11, 12*

**Honors Wt.
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.

HONORS WIND ENSEMBLE

No. 6406

*Full Year/Full Time
Grades 11, 12*

**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

No. 6914

*Full Year/Full Time
Grades 11, 12*

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 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.

SYMPHONIC BAND

No. 6915

*Full Year/Full Time
Grades 11, 12*

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.

Course Descriptions

Music

CONCERT CHOIR – FEMALE

No. 6611

Full Year/Full Time

Grades 11, 12

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 choir department.

CONCERT CHOIR – MALE

No. 6612

Full Year/Full Time

Grades 11, 12

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 choir department.

MIXED CHOIR

No. 6613

Full Year/Full Time

Grades 11, 12

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 choir department.

HONORS MUSIC THEORY

No. 6300

Full Year/Full Time

Grades 11, 12

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 twentieth-century music including non-traditional instruments and technologies.

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

No. 6301

Full Year/Full Time

Grades 11, 12 Phase III and IV

AP Wt.

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 technol-

ogy 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

Grades 11, 12

Credit .5

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, web site 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

Grades 11, 12

Credit .5

Advanced Multi-Media Arts allows students to continue to design and create original media rich presentations, videos, animations, web-sites, 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

Biology *	# 4210
Biology	# 4410
Academic Biology	# 4510
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.

Grades 11, 12 – Special Options

Biology Practicum	# 4001
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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	# 4012**
Honors Meteorology	# 4111
Academic Physics	# 4412
Honors Physics	# 4512
AP Physics 1	# 4062
AP Physics 2	# 4072
AP Physics 1 & 2	# 4082**
AP Physics C	# 4092
Academic Anatomy & Physiology	# 4711
Honors Anatomy & Physiology	# 4721
AP Biology	# 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).

**** 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
NCAA*

Credit 1.0

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
NCAA*

Credit 1.0

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 Math 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
NCAA*

**Honors Wt.
Credit 1.5**

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 work load commensurate with the level of the class.

Criteria for Selection –

1. **92% or higher in 8th grade Science.**
2. **7th grade IOWA test score (Math Total) at or above the 85th National Percentile Rank.**
3. **85% or above in Advanced Algebra 1 (or a higher level Math course) or 95% or above in Academic Algebra 1.**

BIOLOGY (IMPACT)

No. 4210

*Full Year/Full Time
Grades 9 & 10 Phase I*

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

No. 4410

*Full Year/Full Time
Grades 9 & 10 Phases I, II*

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

No. 4510

*Full Year/Full Time
Grades 9, 10 Phases III, IV
NCAA*

Credit 1.5

This course is a traditional approach to life science with labs and demonstrations, supplementing text, lecture, and technology. It provides a dual microscopic/macroscopic 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. **82% or higher in 8th grade Science.**
2. **7th grade IOWA test score (Math Total) at or above the 65th National Percentile Rank.**
3. **70% or above in Advanced Algebra 1 (or a higher level Math course) or 80% or above in Academic Algebra 1.**

Course Descriptions

Science

Criteria for Selection in grade 10 –

1. 90% or higher in Introduction to Physics & Chemistry.
2. Successful completion of Academic Geometry (3102) or Academic Algebra 1 (3101)
3. Approval by a Science teacher.

BIOLOGY PRACTICUM

No. 4001

Full Year/Full Time

Grades 11, 12

Credit .5

This course is designed to prepare students to achieve at the Proficient or Advanced level on the Biology Keystone Exam. Students will utilize a variety of resources to provide supplemental instruction for items tested on the Biology Keystone Exam. Instruction will be based on topics from the core biology curriculum that are aligned with the eligible content that is assessed on the Keystone. Students will be given the opportunity to gauge their progress and predict their success on the Biology Keystone Exam by using benchmark assessments along with other measures. Students may exit the course when they achieve a minimal score of Proficient on the Exam or complete a project-based assessment approved by the Pennsylvania Department of Education.

**Criteria for Selection –
Scoring at the Basic or Below Basic level on the most recent
Biology Keystone Exam.**

HONORS CHEMISTRY

No. 4610

Full Year/Full Time

Grades 10, 11, 12 Phases III, IV

NCAA

Honors Wt.

Credit 1.5

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 math/science oriented. It is recommended that students are enrolled concurrently in Honors Algebra II or a higher level math 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 math 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 Math 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 Math course, or 95% or higher in Academic Geometry (3102)

3. Approval by current Science teacher.

APPLIED SCIENCE 1

No. 4411

Full Year/Full Time

Grades 11, 12 Phase I

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 every day 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 every day 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

No. 4414

Full Year/Full Time

Grades 11, 12 Phase I

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 every day 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 every day 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

No. 4451

Full Year/Full Time

Grades 11, 12 Phases II, III

NCAA

Credit 1.0

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

No. 4115

Full Year/Full Time

Grades 11, 12 Phases III, IV

NCAA

Honors Wt.

Credit 1.0

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

Course Descriptions

Science

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 math 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.**

EARTH SCIENCE AND ASTRONOMY

No. 4461

Full Year/Full Time
Grades 11, 12 Phases II, III
NCAA

Credit 1.0

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 –

1. **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
NCAA

Honors Wt.
Credit 1.0

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 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
NCAA

Credit 1.5

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 higher level math 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
NCAA

Honors Wt.
Credit 1.0

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.**

AP CHEMISTRY

No. 4012

Full Year /Full Time
Grades 11, 12 Phase IV
NCAA

AP Wt.
Credit 1.5

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 complexion), 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 Math course.**
3. **Approval by teacher.**

Course Descriptions

Science

HONORS METEOROLOGY

*Full Year/Full Time
Grades 11, 12 Phases III, IV
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
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 Math course or teacher approval.**

HONORS PHYSICS

*Full Year/Full Time
Grades 11, 12 Phases III, IV
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 Math course.**

No. 4111

*Honors Wt.
Credit 1.0*

AP PHYSICS 1&2

*Full Year/Full Time
Grades 11, 12 Phase IV
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 Math 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
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.

Please note that the science department will be offering AP Physics 2 as a stand-alone course beginning with the 2015-2016 school year.

Criteria for Selection –

1. **80% or higher in Honors Algebra 2 (3202); or higher level Math course; or 90% or higher in Academic Algebra 2 (3103).**
2. **80% or higher in Honors Chemistry (4610) or 90% or higher in**

Course Descriptions

Science

Academic Chemistry (4911).

3. Approval by prior year's Science Teacher.

AP Physics 2

Full Year/ Full Time
Grade 12 Phase IV
NCAA

No. 4072

AP Wt.
Credit 1.0

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.**

AP Physics C

Full Year/Full Time
Grade 12, Phase IV
NCAA

No. 4092

AP Wt.
Credit 1.5

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 or not the student takes the AP exams (most do), the experience of taking this academically demanding, yet highly interesting class, is valuable as a stepping stone 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

No. 4711

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

Credit 1.0

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

No. 4721

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

Honors Wt.
Credit 1.0

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).**

AP BIOLOGY

No. 4011

Full Year/Full Time
Grades 11, 12 Phase IV
NCAA

AP Wt.
Credit 1.5

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	10.....Intro. to Physics & Chemistry (IMPACT) (4209) 9 or 10.....Biology (IMPACT) (4210) 11 or 12Applied Science 1 (4411) or Applied Science 2 (4414)	Intro. to Physics & Chemistry (4409) Biology (4410)
II	10.....Intro. to Physics & Chemistry (4409) 9 or 10.....Biology (4410) 11 or 12Environmental Science (4451) 11 or 12Earth Science and Astronomy (4461)	
III	10.....Intro. to Physics & Chemistry (4409) 9 or 10.....Academic Biology (4510) 11.....Academic Chemistry (4911) 12.....Academic Physics (4412) OR 10.....Academic Intro. to Physics & Chemistry (4509) 9 or 10.....Academic Biology (4510) 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	10.....Academic Intro. to Physics & Chemistry (4509) 9 or 10.....Academic Biology (4510) 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	# 2211
Modern American History and Politics	# 2411
Honors Modern American History and Politics	# 2111**
AP United States History	# 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	# 2011**
AP European History	# 2012**
AP Economics	# 2013
AP Psychology	# 2014**
AP United States Government and Comparative Politics	# 2016
Honors American Foreign Policy: 1945-Present	# 2611**
Honors History of Europe and Russia: 1945-Present	# 2712**
Honors History of East Asia: 1945-Present	# 2711**
Honors Introduction to Philosophy	# 2713
Law and Justice	# 2412
Multicultural Experience	# 2610**
Sociology	# 2911**
Fundamentals of American Government and Law	# 2212

** Indicates College in High School Course

Course Descriptions

Social Studies

AMERICAN HISTORY 1 (IMPACT)

No. 2209

Semester/Full Time
Grade 9 – Phase I
NCAA

Credit .5

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

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
NCAA

Credit .5

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

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
NCAA

Credit .5

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 in order to demonstrate this connection.

Criteria for Selection – None.

EUROPEAN HISTORY

No. 2509

Semester/Full Time
Grade 9 – Phases II, III, IV
NCAA

Credit .5

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
NCAA

Honors Wt.
Credit .5

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.

HONORS EUROPEAN HISTORY

No. 2414

Semester/Full Time
Grade 9 – Phases III, IV
NCAA

Honors Wt.
Credit .5

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 8th grade Social Studies teacher.

WORLD CULTURES (IMPACT)

No. 2210

Full Year/Full Time
Grade 10 – Phase I
NCAA

Credit 1.0

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

No. 2410

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

Credit 1.0

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, South-east 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.

Course Descriptions

Social Studies

HONORS WORLD CULTURES

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

Full Year/Full Time
Grade 11 – Phase I
NCAA

This course is designed to support the needs of 11th grade students with reading and writing difficulties. 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

No. 2415

Honors Wt.
Credit 1.0

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

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

No.2411

Credit 1.0

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.

HONORS MODERN AMERICAN HISTORY AND POLITICS

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

No. 2111

Honors Wt.
Credit 1.0

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.

Course Descriptions

Social Studies

AP UNITED STATES HISTORY

Full Year/Full Time
Grades 11, 12 – Phase IV
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. **3.5 or higher academic average**
2. **'A' grades in all 9th and 10th grade Social Studies courses, or an 'A' or 'B' in AP Human Geography, and**
3. **Approval by 10th and/or 11th grade Social Studies teacher(s).**

AP EUROPEAN HISTORY

Full Year/Full Time
Grades 11, 12 – Phase IV
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. **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
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 as a whole. It places particular emphasis on the study of national income and price determination, and also 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 in this Advanced Placement elective course is limited to 11th and 12th grade students only.**

No. 2011

AP Wt.
Credit 1.0

AP PSYCHOLOGY

Full Year/Full Time
Grades 11, 12 – Phase IV
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. **3.5 or higher academic average.**
2. **Approval by 10th or 11th grade Social Studies teacher(s).**
3. **Enrollment in this Advanced 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
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. **3.5 or higher academic average.**
2. **Approval by 10th or 11th grade Social Studies teacher(s).**
3. **Enrollment in this Advanced 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
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.

No. 2014

AP Wt.
Credit 1.0

No. 2016

AP Wt.
Credit 1.0

No. 2511

Credit .5

Course Descriptions

Social Studies

Criteria for Selection – None.

HONORS AMERICAN FOREIGN POLICY: 1945 – PRESENT **No. 2611**
Semester/Full Time Honors Wt.
Grades 11, 12 – Phases III, IV 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 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 **No. 2712**
Semester/Full Time Honors Wt.
Grades 11, 12 – Phases III, IV 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 **No. 2711**
Semester/Full Time Honors Wt.
Grades 11, 12 – Phases III, IV 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: 1945 – PRESENT **No. 2713**
Semester/Full Time Honors Wt.
Grades 11, 12 – Phases III, IV 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.

LAW AND JUSTICE **No. 2412**
Semester/Full Time Honors Wt.
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 criminal court and a juvenile detention center.

Criteria for Selection – None.

Course Descriptions

Social Studies

MULTICULTURAL EXPERIENCE

No. 2610

Semester/Full Time

Grades 11, 12 – Phases II, III, IV

NCAA

Credit .5

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

No. 2911

Semester/Full Time

Grades 11, 12 – Phases II, III, IV

NCAA

Credit .5

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.

FUNDAMENTALS OF AMERICAN GOVERNMENT AND LAW

No. 2212

Full Year/Full Time

Grade 12 – Phase I

NCAA

Credit 1.0

This course is designed to support the needs of 12th grade students with reading and writing difficulties. 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.

PSYCHOLOGY

No. 2612

Semester/Full Time

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

NCAA

Credit .5

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 (Semester/FT)	# 9505
Advanced Game Development ¹ (Semester/FT)	# 9605
CADD 1 ¹ (Computer-Aided Drawing & Design 1) – (Semester/FT)	# 9806
CADD 1 ¹ (Computer-Aided Drawing & Design 1) – (FY/FT)	# 9706
CADD 2 ¹ (Computer-Aided Drawing & Design 2) – (Semester/FT)	# 9410
CADD 2 ¹ (Computer-Aided Drawing & Design 2) – (FY/FT)	# 9906
Manufacturing 1 (Semester/FT)	# 9503
Manufacturing 1 (FY/FT)	# 9403
Manufacturing 2 (Semester/FT)	# 9604
Manufacturing 2 (FY/FT)	# 9603
Electricity and Electronics 1 ¹ (Semester/FT)	# 9805
Electricity and Electronics 2 ¹ (Second Semester Only/FT)	# 9905
Engineering and Design ¹ (FY/FT)	# 9704
Robotics 1 ¹ (Semester/FT)	# 9506
Robotics 2 ¹ (Semester/FT)	# 9507
Inside Your Computer ¹ (FY/FT)	# 9508
Television Production (Semester/FT)	# 1910
Introduction to Engineering Design (Honors) (FY/FT)	# 9703

Grades 11, 12 – Electives

Robotics 3 ¹ (Semester/FT)	# 9502
App Development ¹ (Semester/FT)	# 9501
Game Development ¹ (Semester/FT)	# 9505
Advanced Game Development ¹ (Semester/FT)	# 9605
Materials – Wood, Metal, and Plastic (Semester/FT)	# 9504
Materials – Wood, Metal, and Plastic (FY/FT)	# 9404
CADD 1 ¹ (Computer-Aided Drawing & Design 1) – (Semester/FT)	# 9806
CADD 2 ¹ (Computer-Aided Drawing & Design 2) – (Semester/FT)	# 9410
Construction Systems (Semester/FT)	# 9608
CADD 3 ¹ (Computer-Aided Drawing & Design 3) – (FY/FT)	# 9411
Tech Design & Application ¹ (FY/FT)	# 9408
Stage Technology and Production (FY/FT)	# 9908
Introduction to Engineering Design (Honors) (FY/FT)	# 9703

Grade 12 Only – Elective

CADD 4 ¹ (Computer-Aided Drawing & Design 4) – (FY/FT)	# 9412
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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

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 math 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 3d editor, and many of the concepts that are used in successful game design. They 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.

CADD 1 (COMPUTER-AIDED DRAWING & DESIGN 1) No. 9706

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

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, and REVIT. Students will learn techniques of drawing, dimensioning, modeling, and symbol use. Areas of engineering addressed will include mechanical, architectural and structural. Both 2D and 3D 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.

CADD 1 (COMPUTER-AIDED DRAWING & DESIGN 1) No. 9806

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

Credit .5

This course is a semester version of Course #9706.

Criteria for Selection – None.

MANUFACTURING 1

No. 9403

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

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.

MANUFACTURING 1

No. 9503

*Semester/Full Time
Grades 9, 10*

Credit .5

This course is the semester version of Course #9403.

Criteria for Selection – None.

ELECTRICITY & ELECTRONICS 1

No. 9805

*Semester/Full Time
Grades 9, 10*

Credit .5

This course is an introduction to electricity/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 light and sound controlled circuits. Students will then construct a continuity tester, color organ, and alien attack game which will enhance students understanding of electronic design. Soldering wires, solid state components, using digital 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 digital home. S.T.E.M.* (science, technology, engineering & math) concepts will be addressed throughout the course.

Criteria for Selection – None.

ELECTRICITY & ELECTRONICS 2

No. 9905

*Second Semester Only/Full Time
Grades 9, 10*

Credit .5

This level two course is the next step toward providing a solid foundation for students interested in more areas of electronics. This is a hands-on project based course. Classroom and lab experiences will include the designing, building and troubleshooting of digital components, printed circuits, digital and electronic games, radio control, computer, and communications systems.

Criteria for Selection – Successful completion of Electricity & Electronics 1 (#9805).

Course Descriptions

Technology and Engineering Education

ENGINEERING & DESIGN

No. 9704

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

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. 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 through spirited competition. Activities will include, but are not limited to: Designing, creating and analyzing solid fuel rockets, balsa wood gliders, structural crane analysis, Rube Goldberg contraptions and many more as well as Technology Student Association (TSA) and GOAL based events.

Criteria for Selection – None.

INSIDE YOUR COMPUTER

No. 9508

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

Student will be exposed to the computer hardware and software skills needed to help meet the growing demand for entry-level information and communication technology (ICT) professionals. This course covers the fundamentals of PC technology, networking, and security, and also provides an introduction to advanced concepts. Concepts covered include; internal components of a computer, assembly of a computer system, installation of an operating system, and troubleshooting using system tools and diagnostic software. Hands-on labs involve the use of desktop computers, lap tops, hand held devices and peripheral items. The course helps students prepare for the CompTIA A+ certification.

Criteria for Selection – None.

ROBOTICS 1

No. 9506

*Semester/Full Time
Grades 9, 10*

Credit .5

Students will acquire a basic understanding of types of robots, how they operate, and their application in manufacturing and entertainment. This hands-on project based course introduces the student to generations of robots through a unique curriculum collaboration with Carnegie Mellon University. Classroom and lab activities will include assembling and operating pneumatic (air) components and programming electric jointed arm robots and building robots using LEGO NXT Mindstorm® and Vex Robotics® systems. Models of robots and assembly lines will be designed using a LEGO Digital Designer® program. Furthermore, students will design and build various robots to complete many challenges including walled maze, obstacle course, sumo battle and mech battle. Students will design and produce a marble maze utilizing a CNC router and etching a design using a laser engraver. Students are also encouraged to design custom components for their robots utilizing the CNC router and laser engraver. S.T.E.M.* concepts will be addressed throughout the course.

Criteria for Selection – Electricity & Electronics 1 and 2 are recommended, but not required.

ROBOTICS 2

No. 9507

*Semester/Full Time
Grades 9, 10*

Credit .5

The level II Robotics course will provide students the opportunity to continue the study of robots and automated control systems gained through work in the level one course. Classroom and lab activities will include, using computers and programmable logic controllers to control pneumatic (air) mechanical systems used in manufacturing, product testing, and amusement, building mobile robots using LEGO NXT Mindstorm® and Vex Robotics® systems with vision and radio control will also be experienced in this course. Students are also encouraged to design custom components for their robots utilizing the CNC router and laser engraver. S.T.E.M.* concepts will be addressed throughout the course.

Criteria for Selection – Robotics 1 required and Electricity & Electronics 1 recommended, but not required.

CADD 2

No. 9906

(COMPUTER-AIDED DRAWING & DESIGN 2)

*Full Year/Full Time
Grade 10*

Credit 1.0

This advanced study of CADD will focus on drawing with advanced tools, to create more complex designs, advanced solid modeling, and assembly drawings. Portfolio development will be a focus, with the following Autodesk software being used: AutoCAD, Inventor, and REVIT. Areas of engineering addressed will include mechanical, architecture and structural.

Criteria for Selection – Successful completion of CADD 1 (#9706 or #9806).

CADD 2

No. 9410

(COMPUTER-AIDED DRAWING & DESIGN)

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

Credit .5

This course is the semester version of Course #9906.

Criteria for Selection – Successful completion of CADD 1 (#9706 or #9806).

MANUFACTURING 2

No. 9603

*Full Year/Full Time
Grades 9, 10*

Credit 1.0

Advanced use of CADD (Computer Aided Drawing and Design) software, the CNC (Computer Numerical Controlled) Router and the Laser Engraver and 3D printer will be used to aid in the design and develop individual products. This course continues the study of wood, woodworking machines, and hand tools, but at an advanced level. Students will become more independent in the development, design and engineering of class products.

Criteria for Selection – Successful completion of Manufacturing 1 (#9403 or #9503).

MANUFACTURING 2

No. 9604

*Semester/Full Time
Grades 9, 10*

Credit .5

This course is the semester version of Course #9603.

Criteria for Selection – Successful completion of Manufacturing 1 (#9403 or #9503).

Course Descriptions

Technology and Engineering Education

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.

ROBOTICS III

No. 9502

Semester/Full Time
Grades 11, 12

Credits .5

Students will capstone a S.T.E.M.* journey with robotics at this level. Continued exposure to robotics and coding through use of the VEX Cortex system and RobotC software. Students will develop student driven, job specific (i.e., programmer, fabricators, and marketing) robotic projects based off real problems presented by industry using custom mechatronics components and Andriano boards. Concepts such as material processes, machining, welding, plasma cutting, CNC, and Rapid Prototyping will be involved in designing and building custom robots.

Criteria for Selection – Successful completion of Robotics 1 and Robotics 2.

APP DEVELOPMENT

No. 9501

Semester/Full Time
Grades 11, 12

Credits .5

This course is an introductory mobile application design and programming course using Java and Eclipse for Android devices. In the beginning, students will take a journey through the history of mobile applications. Then they will move on to learning about the current industry standards, languages, and platforms used in mobile apps development with a special focus on career opportunities within the industry and the entrepreneurial potential that exists. The focus of the course is spent learning some basic Java programming and then working with Android Studio in order to start developing real working apps. Those lessons and skills are then applied toward programming for Android devices. By the end of the course students are able to successfully download real working mobile applications for Android devices. This course will have you thinking like a programmer, using the engineering design cycle to solve problems, and applying science and math concepts.

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 student 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 Math 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.

CONSTRUCTION SYSTEMS

No. 9608

Semester/Full Time
Grades 11, 12

Credit .5

This course is designed to acquaint the student with the characteristics of constructed structures. Architectural plans, site layout/preparation, building codes, permits, specifications, and materials estimating are included. Instruction will be given in masonry, mechanical aspects (electrical, plumbing, heating), roofing, and interior/exterior finishing. Building (framing) a scale model of part of a house is part of the hands-on experience provided by taking this course. Along with residential construction, the student will develop, produce, use, and assess structures while studying architectural design, structural engineering, and community planning concepts. This course will provide a good background for students interested in pursuing careers in architecture, construction, and building trades. It will also allow the students to become a more knowledgeable homeowner.

Criteria for Selection – None.

TECH DESIGN & APPLICATION

No. 9408

Full Year/Full Time
Grades 11, 12

Credit 1.0

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 engineers are faced with. This course is designed to be the hands-on application of many academic disciplines such as math, science, physics, history, and language arts. Units of study will include, but are not limited to the following areas: aerospace, flight, automotive, transportation, hydrodynamics, catapults, power transfer, industrial design, structural, and prototyping.

Criteria for Selection – None.

CADD 3

No. 9411

(COMPUTER-AIDED DRAWING & DESIGN 3)

Full Year/Full Time
Grades 11, 12

Credit 1.0

The course involves the development of advanced drafting techniques. Areas of study include surface development, auxiliary views, modeling, working drawings, assembly drawings, architectural design, and architectural structures. Advanced 3D model techniques will be used, and animations will be generated from the CADD files. The Internet will also be used extensively for reference work and component application. Portfolio development will be a focus. Autodesk products will be used on the PC including AUTOCAD, Inventor, REVIT.

Criteria for Selection – CADD 2 (#9906 or #9410).

Technology and Engineering Education

CADD 4 **No. 9412** **(COMPUTER-AIDED DRAWING & DESIGN 4)**

Full Year/Full Time
Grade 12

Credit 1.0

The majority of course work will be made up of independent projects tailored to the student's area of interest, i.e. architecture, mechanical engineering, and structural engineering. Portfolio development will be a major focus of this course.

Criteria for Selection – Successful completion of CADD 3 (#9411).

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.

INTRODUCTION TO ENGINEERING DESIGN **No. 9703** **(HONORS)**

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

Credit 1.0

In Introduction to Engineering Design 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 skill 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 I

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	# 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	# 6605
Jewelry and Metalsmithing	# 6912
Computer Multi-Media Arts ¹	# 6201
Honors Art	# 6010**
AP Studio Art	# 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 Math) requirement (details on pages 3 and 4).

** 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

Year/Full Time
Grade 10

Credit 1.0

Drawing and Painting 3 is a full-year 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. Projects 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.

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, mishima, 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

No. 6013

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 con-

Course Descriptions

Visual Arts

tact the specific colleges or universities in which they are interested in for their policies on accepting AP credit.

This course enables the student to meet all State Academic Standards for Arts and Humanities. In addition, this is a college-level course designed to meet or exceed the standards set by The College Board.

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. 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 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. 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.

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.

Course Descriptions

Visual Arts

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

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 College. 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 College. The Photography 2 course is approved as an equivalent to La Roche College's course titled *Digital Photography*. 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.

HONORS ART

No. 6010

Full Year/Full Time

Grades 11, 12

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 sketchbooks, 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 and painting 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 connect to the AP Studio Art course. In Honors Art students can choose to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche College. 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 College. The Honors Art course is approved as an equivalent to La Roche College's course titled, Drawing I. 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 STUDIO ART

No. 6011

Full Year/Full Time

Grade 12

AP Wt.

Credit 1.0

Advanced Placement (AP) Studio Art is designed to meet the demands of the AP Studio Art Syllabus published by The College Board. Some work developed during the previous year may also bridge into the AP portfolio. Near the end of the course, students will be prepared with a completed portfolio of work that meets the criteria of AP Studio Art for the Drawing Portfolio (<https://apstudent.collegeboard.org/apcourse/ap-studio-art-drawing>) and/or 2D Design Portfolio (<https://apstudent.collegeboard.org/apcourse/ap-studio-art-2-d-design>.) Students will work with a variety of media, as well as personally selected media while preparing to complete a sequential portfolio of artwork. Typically, the work developed of AP Studio Art portfolios will also double as college-entry portfolio application requirements. Students express their ideas and understanding of their artwork in a written commentary that accompanies their body of work. Scheduled critique sessions provide guidance and an opportunity to clarify and express ideas. Art journals or sketchbooks will be used on a regular basis for the development of a personal artistic vision. Students will be challenged to use independent thinking skills in the development of concepts in which they have a compelling interest.

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 Studio Art 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 Studio Art, students also have the option to register for the Scholar Program (<http://www.laroche.edu/scholar/>) in partnership with La Roche College. As a Scholar Program participant, students can earn three college credits, but it is not required. The AP Studio Art course is approved as an equivalent to La Roche College's course titled, *Drawing 1*. 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. **To be accepted, you must have a 'B' in a previous full year art course of Honors Art, or Drawing and Painting 3, or a minimum of four sections of a semester art course in previous years.**
2. **OR, approval from a High School Art teacher and submission to the AP Teacher of 4-6 recent works and a Journal/Sketchbook.**
3. **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 web site development, online exhibits, learning games, multimedia 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 Multi-Media Arts allows students to continue to design and create original media rich presentations, videos, animations, web-sites, 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

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	# 5409**
Honors German IV	# 5509**
Honors Latin IV	# 5609**
Honors Spanish IV	# 5709**
Honors French V	# 5410**
Honors German V	# 5510**
Honors Latin V	# 5610**
Honors Spanish V	# 5710**
AP French	# 5411**
AP German	# 5511**
AP Latin	# 5611**
AP Spanish	# 5711**

** Indicates College in High School Course

Course Descriptions

World Language Philosophy Statement

We, at North Allegheny, 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

2018-2019 Grade	Essentials	Academic	Honors	2019-2020 Grade	Essentials	Academic	Honors
9		Acad. Level 1 Acad. Level 1B	Hn. Level 1B	9		Acad. Level II	Hn. Level II
10	Ess. Level 2	Acad. Level 2	Hn. Level 2	10	Ess. Level III	Acad. Level III.	Hn. Level III
11	Level 2	Acad. Level 3	Hn. Level 3	11	Acad. Level III	Acad. Level IV	Hn. Level IV
12	Level 3	Hn. Senior	AP	12	Acad. Level IV	Hn. 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 –

1. No prerequisites.
2. 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
NCAA*

Credit 1.0

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

HONORS LATIN II

No. 5603

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

*Honors Wt.
Credit 1.0*

Students 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% in 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
NCAA*

Credit 1.0

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. 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
NCAA*

*Honors Wt.
Credit 1.0*

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

No. 5608

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

Credit 1.0

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

HONORS LATIN IV

No. 5609

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

*Honors Wt.
Credit 1.0*

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.)

Course Descriptions

World Languages

HONORS LATIN V

Full Year/Full Time
Grade 12
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.

AP LATIN

Full Year/Full Time
Grade 12
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.)

No. 5610

Honors Wt.
Credit 1.0

No. 5611

AP Wt.
Credit 1.0

ACADEMIC FRENCH II ACADEMIC GERMAN II ACADEMIC SPANISH II

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

These courses expand and intensify the skills introduced in Level 1A, 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. 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
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.

ACADEMIC FRENCH III ACADEMIC GERMAN III ACADEMIC SPANISH III

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

No. 5402

No. 5502

No. 5702

Credit 1.0

No. 5403

No. 5503

No. 5703

Honors Wt.
Credit 1.0

No. 5405

No. 5505

No. 5705

Credit 1.0

No. 5406

No. 5506

No. 5706

Honors Wt.
Credit 1.0

THE MODERN LANGUAGES: FRENCH, GERMAN, SPANISH

FRENCH I

GERMAN I

SPANISH I

Full Year/Full Time
Grades 9, 10, 11, 12
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 1A course at the middle schools, unless recommended by their middle school teacher.

No. 5401

No. 5501

No. 5701

Credit 1.0

Course Descriptions

World Languages

The majority 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

No. 5407
No. 5507
No. 5707

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

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

No. 5408
No. 5508
No. 5708

Full Year/Full Time
Grades 11, 12
NCAA

Credit 1.0

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. **75% or higher in Level III.**
2. **Teacher approval.**

HONORS FRENCH IV
HONORS GERMAN IV
HONORS SPANISH IV

No. 5409
No. 5509
No. 5709

Full Year/Full Time
Grades 11, 12
NCAA

Honors Wt.
Credit 1.0

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
HONORS GERMAN V
HONORS SPANISH V

No. 5410
No. 5510
No. 5710

Full Year/Full Time
Grades 11, 12
NCAA

Honors Wt.
Credit 1.0

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. **75% or higher in Level IV.**
2. **Teacher approval.**

AP FRENCH
AP GERMAN
AP SPANISH

No. 5411
No. 5511
No. 5711

Full Year/Full Time
Grade 12
NCAA

AP Wt.
Credit 1.0

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. Cumulative test grade of 80% or higher.**
2. **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 math and/or science credits toward graduation requirements. Please see your Counselor for additional information.

A number 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 —

- Advanced Computer Programming
- 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
- EDAM / Robotics
- Emergency Response Technology
- Health and Nursing Sciences
- Heating, Ventilating and Air-Conditioning Technology
- Pastry Arts
- Pharmacy Operations (12th Grade Only)
- Sports Medicine – Rehab Therapy and Exercise Sciences Technology
- Veterinary Sciences Technology

A.W. Beattie Career Center

Course Offerings:

Advanced Computer Programming - A.W. Beattie Career Center is proud to be one of the few schools nationwide authorized to offer **Advanced Computer Programming** through the Oracle Corporation. Students learn the latest database and Internet technologies utilized by industry leaders to create a dynamic presence on the World Wide Web. Advanced Computer Programming students learn how to design and create Internet databases; develop programs in JAVA, and C#, along with integrating databases into WebPages using SQL. Students also develop data modeling, project management, problem-solving, and communication skills. This direct partnership provides students with the necessary skills to jumpstart their career in the high paced world of computer Programming and design. Students pursuing post-secondary education will have acquired hands-on experience with the latest technologies, providing an expanded foundation for their continued educational success.

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 be 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

A.W. Beattie Career Center

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 a number of 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.

Engineering Design & Advanced Manufacturing/ Robotics – EDAM /Robotics students interested in the most recent, innovative technology have a unique opportunity for training in the cutting-edge **Advanced Manufacturing Industry**. Through a partnership with The Technology Collaborative and California University of Pennsylvania, along with guidance and support from Carnegie Mellon University, students will study Robotics and Manufacturing using curriculum developed through the National Robotics Education Center and related industries. Students will move through a series of introductory activities into more advanced design and control challenges, using the same state-of-the-art equipment as California University. Students will study robotics technology case studies and participate in hands-on lab experiences. Students will be using the FANUC Robotic Arm and the Denford CNC Milling Machine in conjunction with conveyor systems, motion control, 3-D modeling and printing for product production. Students may earn up to 20 credits at A. W. Beattie Career Center for use in continuing their education at California University of Pennsylvania. Because the application of robotics systems is beneficial to many industries, there are numerous employment opportunities for Robotics Technicians in the Pittsburgh area, as well as nationally. Students may also participate on the FIRST Robotics Competition Team.

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 health-care. Certification as a Patient Care Technician is available to students who successfully 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.

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.

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.

A.W. Beattie Career Center

Certifications:

Through strategic planning and partnerships with local employers, A.W. Beattie Career Center offers a variety of nationally recognized validated industry skills certifications. Senior students will participate in the annual National Occupational Competency Testing Institute exams (NOCTI.)

Training related externships are required for all students wishing to earn a Performance Certificate with honors during their enrollment at A. W. Beattie Career Center. These related externship experiences can be paid or unpaid and fall into one of the following categories: Cooperative Education, Job Shadowing, Clinical Experiences or Internships and Volunteer opportunities.

Learning 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

E-mail: kim.zylinski@beattietech.com

Special Opportunities

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

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 Hist– IMPACT	No. 2309
Amer Hist 1– 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 this book 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.

- **Cooperative Work Experience**
- **Library**

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 many award-winning databases offering leveled text, school and remote access, read-aloud functionality, font size change, videos, audio clips, primary sources and recommended websites. These databases include EBSCOhost, GALE, ABC-CLIO, Congressional Quarterly, Teen Health and Wellness, Britannica and WorldBook. Additionally, Noodle-Tools, an online citation resource, is available to students to assist with standardized citations. The collections of all the North Allegheny Libraries are accessible from the North Allegheny District homepage under Academics, Library.

Students have frequent opportunities, through the use of study hall and research passes, to use the library to pursue individual academic needs and personal interests. The libraries are open both before and after school.

Programs for Individual Student Needs

- **Gifted Opportunities for Advanced 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**

For additional information, students and/or parents should contact the
Special Education and Pupil 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 | creativity |
| problem solving | 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" web page.

EMOTIONAL SUPPORT PROGRAM (ES)

- | | | |
|-------------|--|-----------------|
| NAI | Interpersonal Communication 9/10 | No. 0374 |
| NASH | Interpersonal Communication 11/12 | No. 0379 |

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 all necessary supports to access the curriculum successfully.

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

- | | | |
|-------------|-----------------------|-----------------|
| NAI | Resource | No. 0204 |
| NASH | Resource Sem 1 | No. 0302 |
| | Resource Sem 2 | No. 0303 |
| | Resource FY/PT | No. 0301 |

The North Allegheny School District offers assistance to any student with deafness or hearing impairment. Deaf and Hard of Hearing Support service provides students with a mild to profound hearing impairment with an education to develop optimum communication skills through sequential language acquisition and academic support.

A multidisciplinary evaluation is conducted when students are being considered for this program. Once the evaluation is completed and services are recommended, an Individualized Education Program (IEP) and Communication Plan are cooperatively designed by the general education teacher, Local Education Agency (LEA) Representative, and District personnel. Students may receive full-time, supplemental or itinerant support services, depending on need. They will be provided with all 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 serve 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 all necessary supports to access the curriculum successfully.

English

NAI	Grade 9	English 9	No. 0206 (NCAA)
	Grade 9	Lang Prog/Eng	No. 0209
	Grade 9	English C	No. 0213
	Grade 10	English 10	No. 0207 (NCAA)
	Grade 10	Lang Prog/Eng	No. 0210
	Grade 10	English C	No. 0213
NASH	Grade 11	English 11A	No. 0359 (NCAA)
	Grade 12	English 12A	No. 0367 (NCAA)
(May enter in the Co-taught Essentials of English I & II)			
	Grade 11	English 11B	No. 0362
	Grade 12	English 12B	No. 0331
	Grades 11, 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.

Programs for Individual Student Needs

Mathematics

NAI	Grade 9	Math 9A	No. 0211
	Grade 9	Math 9B	No. 0219
	Grade 9	Math C	No. 0250
	Grade 10	Math 10A	No. 0212
	Grade 10	Math 10B	No. 0214
NASH	Grade 10	Math C	No. 0250
	Grade 11	Math 11A	No. 0328

(May enter into Co-taught Ess. of Algebra II Part 1)

Grade 11	Consumer Math 11A	No. 0337
Grade 11	Math 11B	No. 0325
Grade 12	Math 12A	No. 0329

(May enter into Co-taught Ess. of Algebra II Part 2)

Grade 12	Consumer Math 12A	No. 0326
Grades 11, 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, 10	FY/PT	No. 0201
		Sem 1	No. 0202
		Sem 2	No. 0203
NASH	Grades 11, 12	FY/PT	No. 0301
		Sem 1	No. 0302
		Sem 2	No. 0303

Resource is a directed study period for students with an IEP. Students are assisted with application of study strategies, organizational skills, test preparation, and review of academic materials.

Reading

NAI	Grade 9	Reading 9	No. 0109
	Grade 9	Lang Prog/Read	No. 0217
	Grade 9	Reading C	No. 0111
	Grade 10	Reading 10	No. 0112
	Grade 10	Lang Prog/Read	No. 0218
NASH	Grade 10	Reading C	No. 0111
	Grade 11	Reading 11A	No. 0382
	Grade 11	Reading 11B	No. 0383
	Grade 12	Reading 12A	No. 0385
	Grade 12	Reading 12B	No. 0386
Grades 11, 12	Reading 11/12 C	No. 0384	

This course is designed for students who require direct instruction in the area of reading comprehension, phonetic elements, and structural analysis as determined by the IEP.

Social Studies/Science/Health/Government

NAI	Grade 9	SS/Sci/Health 9	No. 0118
	Grade 10	SS/Sci/Health 10	No. 0119
NASH	Grades 11, 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, 10	Voc Ed	No. 0503
NASH	Grades 11, 12	Daily Living Skills	No. 0391
NASH	Grades 11, 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 all necessary supports to access the curriculum successfully.

English

NAI	Grades 9, 10	English 9/10	No. 0108
NASH	Grades 11, 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, 10	Math 9/10	No. 0107
NASH	Grades 11, 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, 10	Reading 9/10	No. 0106
NASH	Grades 11, 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 all necessary supports to access the curriculum successfully.

English

NAI	Grades 9, 10	English 9/10	No. 0108
NASH	Grades 11, 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, 10	Math 9/10	No. 0107
NASH	Grades 11, 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, 10	Reading 9/10	No. 0106
NASH	Grades 11, 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

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 & 10

Actors Society
 American Sign Lang
 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
 German Club
 Global Leadership Student Club
 Guitar Club
 HOSA (Health Occupations Students of America)
 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
 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
 TSA (Technology Student Association)
 Weightlifting
 Wind Ensemble
 Yearbook

Grades 11 & 12

Actor's Society Club
 Amnesty International
 Art Club
 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
 FBLA (Future Business Leaders of America)
 French Club
 Future Filmmakers Club
 German Club
 Golden Strolling Strings
 GSA (Gay Straight Alliance)
 Health Occupations Students of America
 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
 Key Club
 Korean Club
 Majorettes
 Marching Band
 Math Team
 Mock Trial Team
 Model UN
 Multicultural Student Union
 NA Fashion Club/FCCLA
 NASH Library Book Club
 NASH Photography Club
 NASH Ski & 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
 STEMInism
 Student Council
 Symphonic Band
 Teaching Peace Initiative
 Technology Student Association
 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
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) – Junior Varsity, Varsity
Ice Hockey * (Boys) – Junior Varsity, Varsity
Indoor Track (Girls/Boys) – Varsity
Wrestling (Boys) – Junior High, Junior Varsity, Varsity
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	Direct Extension
telephone: 724-934-7200	724-934-
Dr. John Kreider, Principal.....	7218
Ms. Angela McEwen, Assistant Principal.....	7215
Mr. William McGahee, Assistant Principal.....	7217
Mr. Robert Bozzuto, Athletic Director.....	7238
Ms. Jennifer Rosato, Counselor (A - Ew).....	7226
Ms. Rhonda Bielawski, Counselor (Ex-Kt).....	7225
Mr. Jerad Smith, Counselor (Ku - Rd).....	7275
Mr. Kevin Thompson, Counselor (Re-S).....	7229
and Special Education Students – Juniors	
Ms. Michelle Buettner, Counselor (T-Z).....	7223
and Special Education Students – Seniors	
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. Jason Harding, Assistant Principal.....	5460
Mr. Bryan Kiggins, Counselor (A-C).....	5467
Ms. Diane Feliciani, Counselor (D-Ko).....	5843
Ms. Meghan Mayhew, Counselor (Kr-Ro).....	5485
Mr. Matthew Butler, Counselor (Ru-S).....	5480
and Special Education Students – Sophomores	
Ms. Rianna Liebenguth, Counselor (T-Z).....	5465
and Special Education Students – Freshmen	
Mr. Douglas Brinkley, IMPACT/Student Assistance.....	5466
 Carson Middle School	
telephone: 412-369-5520	412-369-
Ms. Katherine Jenkins, Principal.....	5425
Dr. Erin Crimone, Assistant Principal.....	5427
Mr. Chance Petro, Counselor.....	5421
Ms. Courtney Vadnais, Counselor.....	5421
 Ingomar Middle School	
telephone: 412-348-1470	412-369-
Mr. David Deramo, Principal.....	1471
Mr. John Morey, Assistant Principal.....	1472
Ms. Darla Allerton, Counselor.....	1475
Ms. Lynne Earley, Counselor.....	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.....	6038
Mr. Jeff Smalley, Counselor.....	6038
 District Administration	
telephone: 412-366-2100	412-369-
Dr. Robert Scherrer, Superintendent.....	5406
Dr. David Christopher, Assistant Superintendent of Secondary Education/Deputy Superintendent.....	5896
Dr. Jillian Bichsel, Director of Curriculum, Assessment, and Professional Development.....	412-630-5826
Dr. Joseph Sciuillo, Director of Student Services.....	412-635-4110
Mr. Roger Sechler, Director of Operations.....	5406

Department Chairs

Business, Computer, and Information Technology — Jordan Langué, NASH	724-934-7265
English — Antonio Caruso, NASH	724-934-7461
Family & Consumer Sciences — Teri Manway, MMS	724-934-6060
Health & Physical Education — David Schmidt, NAI	724-369-5807
Library — Tamara Turner, IMS	412-348-1498
Mathematics — Robert Bell, NASH	412-934-7301
Music — Robert Tozier, NASH	724-934-7230
ROTC — Scott Kolar, NAI	412-369-5455
School Counseling — Bryan Kiggins, NAI	412-369-5467
Science — Chris Omasits, NASH	724-934-7207
Social Studies — Joelle Keats, NASH	724-934-7211
Special Education — Shawn Connors, NASH	724-934-7200
Technology and Engineering Education — Ellen Green, NASH	724-934-7200
Visual Arts — Michael Bockoven, NAI	724-934-7294
World Language — Marcie Good, NASH	724-934-7273



North Allegheny School District

200 Hillvue Lane

Pittsburgh, PA 15237-5391

412-366-2100

