

**NORTHGATE  
MIDDLE/HIGH SCHOOL  
COURSE CATALOG  
2020-2021**



**Northgate Middle/Senior High School  
589 Union Ave Pittsburgh, PA 15202  
412-732-3300**

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# **STUDENT RIGHTS**

The Northgate School District does not discriminate on the basis of race, color, age, creed, religion, gender, sexual orientation, ancestry, national origin, marital status, pregnancy or handicap/disability, or limited English proficiency in its educational programs, services, facilities, activities or employment policies as required by Title IX of the 1972 Educational Amendments, Titles VI and VII of the Civil Rights Act of 1964 as amended, Section 504 Regulations of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, Section 204 Regulations of the 1984 Carl D. Perkins Act or any applicable federal statute.

## **COMPLIANCE STATEMENT**

The Board declares it to be the policy of this District to provide an equal opportunity for all students to achieve their maximum potential through the programs offered in the schools regardless of race, color, age, creed, religion, gender, sexual orientation, ancestry, national origin, marital status, pregnancy or handicap/disability.

The district shall provide to all students, without discrimination, course offerings, counseling, assistance, employment, athletics and extracurricular activities. The district shall make reasonable accommodations for identified physical and mental impairments that constitute handicaps and disabilities, consistent with the requirements of federal and state laws and regulations.

The Board encourages students and third parties who have been subject to discrimination to promptly report such incidents to designated employees. The Board directs that complaints of discrimination shall be investigated promptly, and corrective action be taken when allegations are substantiated. Confidentiality of all parties shall be maintained, consistent with the district's legal and investigative obligations. No reprisals nor retaliation shall occur as a result of good faith charges of discrimination.

*For information regarding civil rights or grievance procedures, or information regarding services, activities and facilities that are accessible to and usable by disabled persons, contact Dr. Caroline Johns, 591 Union Avenue, Pittsburgh, PA 15202.*

# OUR SHARED MISSION, VISION, AND VALUES

The mission of the Northgate School District is to provide each student with the opportunities to acquire knowledge and skills to the maximum of his or her potential through a challenging comprehensive program administered in a safe, caring environment so that each person will succeed and contribute as an ethical, responsible citizen in a rapidly changing global society.

The Northgate School District vision statement is to provide exemplary educational opportunities to its students in the pursuit of excellence. All segments of the Northgate School District; the community, the School District, the students and their families, should be mutually supportive. Each member has value as an independent individual as well as a contributor to the success of the District. Every member has a right to, and responsibility for lifelong learning, and the District should support that process to the greatest extent possible.

- Meaningful partnerships should be formed between the school and family because both share the responsibility for providing an environment where effective education can take place.
- The Northgate School District serves as the keystone of the communities Avalon and Bellevue, and as such it is vital to build and sustain the existing partnerships with local business and community leaders.
- All segments of the School District should share the responsibility for ethical and moral leadership and for setting high standards of individual and institutional achievement.
- The School District should provide broad-based and flexible programs of study that prepare the student to accept the responsibility of being a contributing member of society.
- Students should prepare for lifelong learning by developing, within the scope of their abilities, skills in independent thinking, critical thinking, observation, communication, organization, technology and information processing.
- The School District should be proactive in establishing effective and continuous communication among all segments of the District.
- Parents/guardians are the first and primary educators of their children and entrust a portion of this responsibility to the School District.
- School facilities should be available to public organizations to promote positive school and community relationships.

- The School District values the expertise of the School District staff and should provide the opportunity and incentive for continued growth and development.
- Learning is both an individual and cooperative process and students should be active contributors to their own and other students' successes.
- For both students and staff, the School District should establish performance standards, provide effective instruction, develop varied means of assessment, evaluate the process and implement necessary actions for improvement.
- The School District should help individuals develop a positive self-image as well as an appreciation of diversity and differences in others.

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# NORTHGATE MIDDLE/HIGH SCHOOL PERSONNEL

Phone: 412-732-3300

Principal.....	Mr. Bryan J. Kyle bkyle@northgatesd.net X1001
Assistant Principal.....	Mrs. Nicole Smith nsmith@northgatesd.net X1002
Building Secretary.....	Ms. Gail Trust gtrust@northgatesd.net X1001
Athletic Secretary/Attendance Officer.....	Mrs. Eileen Shamonsky eshamonsky@northgatesd.net X1000
Guidance Counselor-grades 7, 8 & 9 .....	Mrs. Stacy Gallagher sgallagher@northgatesd.net X1014
Guidance Counselor-grades 10, 11 & 12.....	Mr. Brian Talbert btalbert@northgatesd.net X1013
Guidance Secretary.....	Mrs. Diane Burns dburns@northgatesd.net X1012
Nurse.....	Mrs. Malla Mizikowski mmizikowski@northgatesd.net X1020

## NORTHGATE MIDDLE/HIGH SCHOOL GRADUATION REQUIREMENTS CLASS OF 2021 TO 2024

<b>Current Grade Level</b>	<b>9<sup>th</sup></b>	<b>10<sup>th</sup></b>	<b>11<sup>th</sup></b>	<b>12<sup>th</sup></b>
<b>Class</b>	<b>2024</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>
English	4.0	4.0	4.0	4.0
Social Studies, including Government	4.0	4.0	4.0	4.0
Mathematics, including Algebra*	3.0	3.0	3.0	3.0
Science	3.0	3.0	3.0	3.0
Computer Science Principles	1.0	1.0	1.0	1.0
Business Communications	0.5	0.5	0.5	0.5
Physical Education	1.0	1.0	1.0	1.0
Health	0.5	0.5	0.5	0.5
<b>Total</b>	<b>17.0</b>	<b>17.0</b>	<b>17.0</b>	<b>17.0</b>
Electives	7.5	7.5	7.5	7.5
<b>TOTAL</b>	<b>24.5</b>	<b>24.5</b>	<b>24.5</b>	<b>24.5</b>

**\*Students may satisfy the Algebra requirement in 8th grade. These students are still required to complete a minimum of 3.0 credits of mathematics coursework during grades 9-12.**

**\*\*Personal Finance may apply to one credit of social studies, mathematics, business education, or family and consumer science.**

# COURSE SELECTION PROCESS

## Required Courses by Grade Level

### 7th Grade

	<b>Required Selections</b>	<b>Semester 1</b>	<b>Semester 2</b>
<b>1</b>	Lunch	Lunch	Lunch
<b>2</b>	Social Studies	Social Studies 7	Social Studies 7
<b>3</b>	Reading	Reading 7	Reading 7
<b>4</b>	Writing	Writing 7	Writing 7
<b>5</b>	Science	Science 7	Science 7
<b>6</b>	Math	Math 7	Math 7
<b>7</b>	Advisory	Advisory 7	Advisory 7
<b>8</b>	Rotation	7th Grade Rotation Art, Health, PE, CS	7th Grade Rotation Art, Health, PE, CS
<b>9</b>	Elective	IA or News or PE or Chorus or Band	IA or News or PE or Chorus or Band

### 8th Grade

	<b>Required Selections</b>	<b>Semester 1</b>	<b>Semester 2</b>
<b>1</b>	Lunch	Lunch	Lunch
<b>2</b>	Social Studies	Social Studies 8	Social Studies 8
<b>3</b>	Reading	Reading 8	Reading 8
<b>4</b>	Writing	Writing 8	Writing 8
<b>5</b>	Science	Science 8	Science 8
<b>6</b>	Math	Math 8	Math 8
<b>7</b>	Advisory	Advisory 8	Advisory 8
<b>8</b>	Rotation	8th Grade Rotation Music, Health, PE, CS	8th Grade Rotation Music, Health, PE, CS
<b>9</b>	Elective	E&D, En, FL, Chorus, or Band	E&D, En, FL, Chorus, or Band



**9th Grade**

	<b>Required Selections</b>	<b>Semester 1</b>	<b>Semester 2</b>
<b>1</b>	Lunch	Lunch	Lunch
<b>2</b>	Social Studies	American Studies 9	American Studies 9
<b>3</b>	English Language Arts	CIHS English 9	CIHS English 9
<b>4</b>	Science	Science 9	Science 9
<b>5</b>	Math	Geometry or Algebra I	Geometry or Algebra I
<b>6</b>	Physical Education	Health and Physical Ed	
<b>7</b>	Elective		
<b>8</b>	Elective		
<b>9</b>	Elective		

**10th Grade**

	<b>Required Selections</b>	<b>Semester 1</b>	<b>Semester 2</b>
<b>1</b>	Lunch	Lunch	Lunch
<b>2</b>	Social Studies	American Studies 10	American Studies 10
<b>3</b>	English Language Arts	CIHS English 10	CIHS English 10
<b>4</b>	Science	CIHS Biology	CIHS Biology
<b>5</b>	Math	CIHS Alg II or Geometry	CIHS Alg II or Geometry
<b>6</b>	CS Principles*	CS Principles	CS Principles
<b>7</b>	Physical Education	Physical Education	
<b>8</b>	Elective		
<b>9</b>	Elective		

## 11th Grade

	Required Selections	Semester 1	Semester 2
1	Lunch	Lunch	Lunch
2	Social Studies	CIHS Human Geography	CIHS Human Geography
3	English Language Arts	CIHS English 11 or AP English	CIHS English 11 or AP English
4	Science	CIHS Physics or CIHS Chemistry	CIHS Physics or CIHS Chemistry
5	Math	CIHS Trig/Pre Calc or CIHS Alg II	CIHS Trig/Pre Calc or CIHS Alg II
6	CIHS Business Comms*	CIHS Business Comms	CIHS Business Comms
7	Elective		
8	Elective		
9	Elective		

## 12th Grade

	Required Selections	Semester 1	Semester 2
1	Lunch	Lunch	Lunch
2	Social Studies	CIHS Government	CIHS Government
3	English Language Arts	CIHS English 12 or AP Lit	CIHS English 12 or AP Lit
4	Science Elective		
5	Math Elective		
6	Elective		
7	Elective		
8	Elective		
9	Elective		

- **CIHS CS Principles and CIHS Business Communications can be taken during a student's sophomore, junior, or senior year.**

## **COLLEGE IN HIGH SCHOOL PROGRAM**

In partnership with the Community College of Allegheny County (CCAC), Northgate High School is excited to offer eligible high school students an opportunity to earn college credits. This remarkable opportunity could not have been possible without the collaborative work of faculty at both Northgate High School and CCAC's North Campus. The Northgate high school courses have been analyzed and re-worked to ensure that Northgate High School students will have the opportunity to engage in content that prepares them for college and career success.

In order to participate, students will take placement exams, ensuring that they are prepared for the rigorous expectations of college-level work. Students needing additional support or remediation may register for developmental coursework. With satisfactory placement test scores or completion of these prerequisite courses, students may enroll in the College in High School (CIHS) program courses.

For some courses, there will be fees for tuition in order to earn credits from CCAC. Costs cover all registration fees and access to CCAC's technology and academic support resources. Discounted pricing for Northgate High School students is available only to students enrolled in the CIHS program and for classes taught onsite at Northgate. These courses earn credits that can be transferred to most colleges and universities across the country.

The relationship between Northgate School District and the Community College of Allegheny County offers exceptional access to top-notch college-level academics, and it is our hope that all eligible Northgate High School students will take advantage of this exciting opportunity!

Sincerely,

Dr. Caroline Johns

## **NORTHGATE/CCAC CIHS DUAL ENROLLMENT PROCEDURES**

The opportunity to take Northgate courses and receive CCAC credits simultaneously is an exciting. This document describes the process to get started. The process should begin between the end of 8th grade and the start of 9th grade unless a student is new to the district.

### **STEP 1: Student Completes CCAC Admissions Application**

The whole dual enrollment process is started with students completing a CCAC Admissions Application. In order to do this, students need to have a valid email address and know their social security #s. Students will also need to complete a Transcript Request form and a Dual Enrollment Supplemental form and have these signed by their parents. Parents can choose to take students to CCAC to complete these forms during the summer, or Northgate will arrange for students to complete these forms in the fall.

### **STEP 2a: STUDY, STUDY, STUDY**

After registration is completed, a CCAC student account is established and students are ready to take the placement tests. Parents can choose to schedule an appointment at CCAC and take students to complete the placement tests over the summer, or Northgate will offer the testing one day in the fall. *See the website link Study Resources*

### **STEP 2b: TAKE PLACEMENT TESTS**

There are three areas students will be tested in for course placement: Reading, Writing, and Math. The results of these three placement areas will be printed and provided to the student upon completion of the exam. Parents can choose to take students to CCAC to complete the Accuplacer Test during the summer, or Northgate will arrange for students to complete the test in the fall. All 9th grade students will be tested unless a parent opts them out in writing.

### **STEP 3: UNDERSTANDING THE RESULTS**

The scores will determine the starting points for a student in each subject. On the next page is a breakdown of the possible results and when Northgate offers these courses. Developmental courses are not credit bearing courses, but if test results indicate a need for Developmental courses, they are required in order to enroll in future dual enrollment offerings. *See the link for CCAC's Placement Test Results Guide*

**After testing, Northgate and CCAC will host a registration day at the high school where students will complete their course registration forms. Students will be provided a copy of the registration form, and parents will be mailed a copy of it as notification. This process is repeated in December for Advanced Placement and Developmental courses that may have a second semester course.**

## Understanding Your Accuplacer Test Results

### Reading Results

**“DVS 60/70”**- This student needs to take three developmental courses in College Reading. Both DVS 60 and DVS 70 are offered by Northgate in the Fall Semester of English 9. This student must also register for the DVS 101/103 course in the Spring Semester of English 9 before he or she is eligible to start ENG 101 in 10th grade.

**“DVS 103”**- This student needs to take a developmental course in College Reading which will be offered by Northgate during the Spring Semester of English 9.

**“DVSExempt”**- This student does not need to take any developmental reading courses and can start the ELA trajectory with ENG101 in 10th grade. *\*This does not exempt a student from taking Northgate’s English 9 course.*

Northgate Teacher	Northgate Course	CCAC Course	Prerequisite
Mrs. Mignella	CIHS English 9	DVS 60/70 “College Academic Strategies” Fall Semester	Placement Test
Mrs. Mignella	CIHS English 9	DVS 101/103 “College Reading 2” Spring Semester	DVS 60/70 (C or better) or Placement Test Score

### Writing Results

**“ENG 89”**- This student needs two developmental courses in College Writing. Unfortunately, Northgate does not offer this developmental level and students would need to take both required developmental courses at CCAC **prior to entering 10th grade.**

**“ENG 100”**- This student needs to take one developmental course in College Writing which will be offered by Northgate in the Spring Semester of English 9.

**“ENG 101”**- This student does not need to take any developmental writing courses and can start the ELA trajectory with ENG 101 in 10th grade.

Northgate Teacher	Northgate Course	CCAC Course	Prerequisite
Mrs. Mignella	CIHS English 9	Eng 100 “Basic Principles of Composition” Spring Semester	ENG 89 (C or better) or Placement Test Score

### **Math Results**

**“MAT 80”** - This student needs to take two developmental courses in Math . Both MAT 80 and MAT 90 are offered by Northgate in 9th grade as part of the Algebra I course. *\*These courses are not offered at Northgate to students who are not taking Algebra I as a Freshman- see below the chart.*

**“MAT 90”** - This student needs to take one developmental course in Math. MAT 90 is offered by Northgate during the Spring Semester of 9th grade Algebra I. *\*This course is not offered at Northgate to students who are **not** taking Algebra I as a Freshman- see below the chart.*

<b>Northgate Teacher</b>	<b>Northgate Course</b>	<b>CCAC Course</b>	<b>Prerequisite</b>
Mr. Somerville	CIHS Algebra I	Math 80 (Freshman) Fall Semester	Placement Test
Mr. Somerville	CIHS Algebra I	Math 90 (Freshman) Spring Semester	MAT 80 (C or better) or Placement Test

\*A small number of students enter the accelerated math sequence when they are in 8th grade. These students take Advanced Algebra I in order to complete the Algebra I curriculum before entering high school. Since these students will likely take Geometry or Algebra II in 9th grade, we are unable to offer them developmental level math courses. A student who does not achieve high enough scores on the CCAC placement test will have 3 options:

1. A student can ‘retake’ Algebra I for high school credit in 9th grade and earn the CCAC developmental courses he or she needs.
2. A student can take the developmental courses at CCAC prior to enrolling in Algebra II. \*Typically, accelerated students take Algebra II in 10th grade.
3. A student can choose to continue in the advanced math sequence at Northgate and not receive dual enrollment credit in courses requiring a math prerequisite.

This only applies to students who take Accelerated Algebra I. Please contact your guidance counselor for more specific information if this applies to you.

***\*\*\*Northgate students must meet the prerequisite requirements for all dual enrollment courses in order to enroll and receive credit. A final grade of C or higher is required in order to successfully earn CCAC credit in **any** dual enrollment course.***

## Northgate/CCAC's Credit-Bearing Dual Enrollment Courses

### ENGLISH:

Northgate Teacher	Northgate Course	CCAC Course	Prerequisite
Mr. Smith	CIHS English 10	Eng 101 "English Composition 1"	ENG 100 (C or better) or Placement Test Score
Mrs. Egger	CIHS English 11	Eng 102 "English Composition 2"	Eng 101
Mrs. Mignella	CIHS English 12	Eng 115 "General Literature"	Eng 102
Mrs. Egger	A.P. English A	Eng 102 & 202 "English Composition 2 and Fiction"	Eng 101
Mrs. Egger	A.P. English B	Eng 102 & 115 "English Composition 2 and General Literature"	Eng 101

### MATH:

Northgate Teacher	Northgate Course	CCAC Course	Prerequisite
Mr. Veshio	CIHS Algebra II	Math 108 "Intermediate Algebra"	MAT 80, 90 (C or better) or Placement Test
Mr. Veshio	CIHS Trig/Pre-Calculus	Math 147 & Math 142 "College Trigonometry and Pre-Calculus"	MAT 108
Mr. Veshio	AP Statistics	Math 161 "Elementary Statistics"	MAT 108
Mr. McKay	AP Calculus	Math 201 "Calculus 1"	MAT142 and MAT147

**HISTORY:**

<b>Northgate Teacher</b>	<b>Northgate Course</b>	<b>CCAC Course</b>	<b>Prerequisite</b>
Mr. Hogle or Mr. Pipak	CIHS Human Geography	GEO 101 "World Geography"	None
Mr. Michalow	AP US History	HIST 104 & 105 "U.S. History from Early Colonization through 1865" and "United States History Since 1865"	None
Mr. Michalow	AP European History	HIST 102 "Western Civilization Since 1500"	None
Mr. Pipak	CIHS Government	POL 103 "American Government"	None
Mr. Michalow	Economics	ECO 102 "Principles of Macroeconomics"	None
Mr. Michalow	Anthropology	ANT 101 "Introduction to Anthropology"	None

**SCIENCE:**

<b>Northgate Teacher</b>	<b>Northgate Course</b>	<b>CCAC Course</b>	<b>Prerequisite</b>
Mrs. Coughenour	CIHS Biology	BIO 110 "Introduction to Biological Science"	Eligibility for ENG-100 (or ESL-100) and DVS-101 or DVS-103 (or ESL101)
Mr. Donini	AP Biology	BIO 151 & BIO 152 "General Biology 1 and General Biology 2"	Eligibility for ENG 101 and MAT 108; and BIO 110 and BIO 151
Mr. Kiritchenko	CIHS Chemistry	CHM 109 "Introduction to Chemistry"	MAT 90 or Placement Score of MAT 108
Mr. Kiritchenko	AP Chemistry	CHM151 "General Chemistry 1"	CHM109 or CHM 110 and 111 and MAT 108 or MAT 111 or higher
Mrs. Rusnak	CIHS Physics	PHY 100 "Basic Physics"	MAT-090 or Placement Score of MAT108
Mrs. Rusnak	AP Physics	PHY141 "Physics 1"	MAT-108



**ELECTIVES:**

<b>Northgate Teacher</b>	<b>Northgate Course</b>	<b>CCAC Course</b>	<b>Prerequisite</b>
Mrs. Tusick	CIHS Business Communications	SPH 106 "Interpersonal Communication Skills for the Workplace"	ENG 100 or Placement Score of ENG 101
Ms. Cromer	French III	FRE 101 "Elementary French 1"	Eligibility for ENG100 and DVS101 or DVS103
Mr. Bichko	Spanish III	SPA 101 "Elementary Spanish 1"	Eligibility for ENG100 and DVS101 or DVS103
Ms. Cromer	French IV	FRE 102 "Elementary French 2"	FRE 101
Mr. Bichko	Spanish IV	SPA 102 "Elementary Spanish 2"	SPA 101

The cost of each course is set annually by CCAC. At times, sponsorship is available through the district. If sponsorship is not available, each family is responsible for paying for the cost of each CCAC course. Families will be billed directly from CCAC. Financial information and a schedule of events for registration, testing, and enrollment will be mailed home during the spring prior to a student's Freshman year.

Please contact the guidance department at Northgate with any questions.

## SUGGESTED CIHS PLAN OF STUDIES

School Year	Northgate Courses	CCAC Courses
<b>Sophomores</b>	<ul style="list-style-type: none"> <li>● CIHS Algebra II</li> <li>● CIHS English 10</li> <li>● CIHS Biology</li> <li>● CIHS Business Communications</li> </ul>	<ul style="list-style-type: none"> <li>● MAT-108 {4cr}</li> <li>● ENG-101 {3cr}</li> <li>● BIO-110 {4cr}</li> <li>● SPH-106 {3cr}</li> </ul>
<b>Juniors</b>	<ul style="list-style-type: none"> <li>● CHIS Trig/Pre-Calculus</li> <li>● CIHS English 11 or AP English A</li> <li>● CIHS Physics or CIHS Chemistry</li> <li>● AP Chem, AP Bio, or AP Physics</li> <li>● CIHS Human Geography</li> </ul>	<ul style="list-style-type: none"> <li>● MAT-147 &amp; 142 {7cr}</li> <li>● ENG-102 {3cr} or 102 &amp; 115 {up to 6 cr}</li> <li>● PHY-100 {4cr} or CHM 109 {4cr}</li> <li>● CHM-151&amp;152 {8cr}, BIO-151 &amp; 152 {8cr}, or PHY-141 {4cr}</li> <li>● GEO-101 {3cr}</li> </ul>
<b>Seniors</b>	<ul style="list-style-type: none"> <li>● AP Statistics or AP Calculus</li> <li>● CIHS English 12 or AP Literature</li> <li>● AP Chem, AP Bio, or AP Physics</li> <li>● CIHS Government</li> <li>● AP US History or AP Euro History</li> </ul>	<ul style="list-style-type: none"> <li>● MAT-161 {3cr} or MAT 201 {4cr}</li> <li>● ENG-115 {3cr} or 102 &amp; 202 {up to 6 cr}</li> <li>● CHM-151 {4cr}, BIO-151 &amp; 152 {8cr}, or PHY-141 {4cr}</li> <li>● POL-103 {3cr}</li> <li>● HIS-104 &amp; 105 {6cr} or HIS-102 {3cr}</li> </ul>
<b>*Electives- can be taken any year</b>	<ul style="list-style-type: none"> <li>● Economics</li> <li>● Anthropology</li> <li>● French III</li> <li>● Spanish III</li> <li>● French IV</li> <li>● Spanish IV</li> </ul>	<ul style="list-style-type: none"> <li>● ECO 102</li> <li>● ANT 101</li> <li>● FRE 101</li> <li>● SPA 101</li> <li>● FRE 102</li> <li>● SPA 102</li> </ul>

\*Course credits and cross-listings are subject to change, pending Northgate/CCAC faculty advisement.

# ENGLISH

**CIHS ENGLISH 1**.....1 Credit / 3 CCAC Credits

CIHS English 12, a survey course of World Literature, challenges students to interpret, analyze and synthesize literature through discussion, creative projects, and critical essays. Students continue to enhance their core communication 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, narrative writing and analytical writing serve as the primary modes where students reinforce grammar, sentence structure, diction, and style. English 12 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. World Literature gives students a chance to increase the depth of their global cultural awareness, and provides an examination of global literary perspectives and traditions which gives students an opportunity for discussion and a deeper understanding of other cultures. In an increasingly global society, this opportunity to explore other cultures is extremely valuable. The primary objective of this course is to give students the opportunity to develop an understanding of the richness of global diversity through a study of some of the world's finest literature.

**AP ENGLISH A**.....1 Credit / up to 6 CCAC Credits

*Prerequisite: Successful completion of English 10 Credits*

*\*Offered every other year*

This course is an accelerated program designed to meet the needs of the college-bound junior or senior. The goal of this course is to teach students to write for mature audiences using proper forms of research, reading, and writing. Students are expected to have and apply an understanding of Standard English grammar. There will be a rigorous reading schedule as well as extensive writing assignments. Students explore the art and craft of writing including poetry, short story, essay, memoir, and drama. The class will be driven by material gathered from imagination, the senses, memory, readings, and the world around us. We will look at the various types of literature that have spawned from current trends such as the graphic novel, song lyrics/poetry, comics, and graphics as word, etc. and debate their value, function, and place in literature as well as speeches, essays, letters, advertisements, documentaries, and other types of nonfiction. All written and spoken word has rhetorical value and recognizing the rhetoric and how it works is what creates better writers in terms of purpose, audience, subject, etc. The student will analyze diction, language structures, and writing techniques in literature and strive to recognize an author's agenda.

**AP ENGLISH B**.....1 Credit / up to 6 CCAC Credits

*Prerequisite: Successful completion of English 10*  
*\*Offered every other year*

This course is an accelerated program designed for students who are passionate about literature. It is an intensive study of literature and composition intended to simulate freshman college English courses and, in doing so, better prepare the student to meet the requirements of college work. The literature segment of the course draws materials from the entire range of world literature and develops the student's critical and analytical skills. The composition segment familiarizes the student with the various modes of discourse and the techniques and disciplines needed to write on a college level.

**CIHS ENGLISH 11**.....1 Credit / 3 CCAC Credits

The 11th grade English CIHS course explores humanity and psychology/sociology through the study of British literature – past and present. Rather than the traditional chronological flow of this course, the concepts of human nature are analyzed in various methods. The literature selections include classic literature to modern literature in various genres: poetry, short stories, dramas, novel excerpts, and nonfiction pieces, all of varying length. Each unit of study has an overarching essential question which the students examine intensely with a formal writing assignment and a creative, competitive project at the conclusion of each unit. The purpose of the course is to prepare students for college and careers. While the students have plenty of class time to complete tasks, the course is demanding in the areas of critical thinking, collaboration, time management, reading skills, writing skills, and speaking and listening skills.

**CIHS ENGLISH 10**.....1 Credit / 3 CCAC Credits

The student will develop the discipline and techniques necessary for effective writing through concentration on the development of ideas, clarity of expression, and correct grammar. Stress will be placed on learning to respond orally and in writing to all genres of American literature, including several novels within the course of the year. A final examination is mandatory for the course.

**CIHS ENGLISH 9**.....1 Credit

English 9 will provide a foundation for skills that will be built upon in the 10<sup>th</sup> grade, 11<sup>th</sup> grade and 12<sup>th</sup> grade English courses. The students will experience and work with various genres of

literature (fiction, non-fiction, and poetry), literary elements, and media related to the literature. The students will also be responsible for reading at least nine novels through the Accelerated Reader Program during the school year, which will count as part of the students' class grades. Approximately three to four research-based projects and presentations, including a formal research paper, are required. These projects are done in coordination with the American Studies 9 class. Students will be assessed through quizzes/tests, assignments, projects, writings, class participation, and final exam.

## **READING 8**

Students in 8th grade Reading will demonstrate thorough comprehension of literary and informational texts by using key textual evidence to effectively summarize and/or analyze texts. They will thoroughly analyze how elements of literature or informational text develop and influence the text. Eighth graders will determine and thoroughly analyze how the author uses organization, structure, and/or word choice to achieve a purpose. They will thoroughly analyze the effect of points of view in texts, and they will thoroughly analyze how the author responds to conflicting evidence or viewpoints in informational text. The students will analyze the influence that patterns of events and character types found in traditional literature have on modern text, including describing how the material is rendered new. Additionally, students will clearly delineate and effectively evaluate an argument, recognizing relevant and irrelevant evidence and sound reasoning and identifying where texts disagree. The students will use context and word structure to determine the meanings of words, interpret figurative language, and understand nuances in word meanings. Finally, students are required to read multiple novels during the school year to increase reading stamina in longer texts.

## **WRITING 8**

Students in 8th grade Writing will use logical reasoning and effective evidence to develop a cohesive argumentative/informational essay on a topic in a formal style for an intended audience. In an argumentative essay, the students will acknowledge and address counterclaims. They will also thoroughly organize a narrative that engages the reader with a controlling point, using precise words, phrases, and narrative techniques. The students will write a text-dependent analysis essay that responds to a text or texts and demonstrates an organized and thorough analysis that cites substantial and relevant evidence to support its intended purpose. They will use a variety of appropriate transitional words, phrases, and clauses. Finally, students will recognize and demonstrate a thorough command of the conventions of Standard English grammar, usage, and mechanics to convey ideas precisely and for effect.

## READING 7

Students in 7th grade Reading will demonstrate thorough comprehension of literary and informational texts by using key textual evidence to effectively summarize and/or analyze a text. They will thoroughly analyze how elements of literature or informational text develop and influence the text. Seventh graders will determine two or more central ideas in an informational text, and they will determine and thoroughly analyze how the author uses organization, structure, form, text features, figurative language, and/or word choice to achieve a purpose. The students will thoroughly analyze the effect of points of view in texts and determine how the author's position is distinguished from others. They will also compare and contrast a fictional portrayal and a historical account of the same period to understand how authors of fiction use or alter history. Reading students will evaluate arguments and claims, assess reasoning and evidence, and thoroughly analyze the differences in how two or more authors present key information on the same topic. Additionally, they will use context and word structure to determine the meanings of words, interpret figurative language, and understand nuances in word meanings. Finally, students are required to read multiple novels during the school year to increase reading stamina and to show the ability to engage in longer texts.

## WRITING 7

Students in 7th grade Writing will use logical reasoning and effective evidence to develop a cohesive argumentative/informational essay on a topic in a formal style for an intended audience. In an argumentative essay, students will acknowledge an opposing viewpoint. Additionally, students will thoroughly organize a narrative with a controlling point, using precise words, phrases, and narrative techniques. The students will write multiple text-dependent analysis essays that respond to a text or texts and demonstrate organized and thorough analysis that cite substantial and relevant evidence to support the intended purposes. They will use a variety of appropriate transitional words, phrases, and clauses. Finally, writing students will recognize and demonstrate a thorough command of the conventions of standard English grammar, usage, and mechanics to convey ideas precisely and for effect.

## YEARBOOK.....1 Credit

Primarily, students will explore the many facets of digital print production in the class including writing, photography, layout and design, desktop publishing, business and advertising. Producing the *Torch*, Northgate Middle/High School's yearbook, is an extensive project. Students in this class learn valuable, real world experiences such as meeting deadlines, working as members of a team, and dealing with the public.

The course is designed for any student looking to improve his or her editing skills, and for any

student interested in digital media production. The class will evaluate the local and national media (including yearbooks) and discuss the role of the media in society today. Students will learn journalism basics such as interviewing and news writing before working on pieces for the *Torch*. Students will learn to write various types of articles and captions, both of which are crucial to a successful yearbook. The students will also learn layout principles in designing the printed page.

## **MS NEWS (S1 OR S2)**

This semester elective course for 7<sup>th</sup> and 8<sup>th</sup> graders will expose students to the history of media, including audio, video broadcasting, and social media. Students will work on basic aspects of journalism such as typing skills as well as interviewing and information gathering techniques. They will be responsible for composing their own stories from start to finish and will prepare their stories for publication with editing techniques taught in class. They will learn to use publishing software to personalize the layout and design of their story. Students will have the opportunity to submit all of their creations the Northgate News, the school's student run newspaper, for publication. Throughout the class, there will be an emphasis on teamwork and interpersonal skills.

## **MATHEMATICS**

### **MATH 7**

We will explore the algebraic topics of integer, exponential, and rational expressions, functions and inequalities, and how to solve them. Combinatory topics include proportionality, probability, and percentages. Visual display topics include graphing functions and inequalities, polygons, statistical displays, two and three- dimensional figures, such as triangles circles, quadrilaterals, spheres, prisms, pyramids, conic and cylindrical solids.

### **MATH 8**

This course is designed to align with the current PA Core expectations for 8<sup>th</sup> grade mathematics. The focus of the course will be: formulating and reasoning about expressions, equations and functions, solving equations and systems of equations. Geometrically we will analyze two and three dimensional space figures utilizing concepts of distance, angle, similarity, congruence and understanding and applying the Pythagorean Theorem.

Homework is an integral and necessary component for successful completion of this course. Total points may be based upon any of the following: homework, quizzes, exams, projects, and

class activities. Students will begin to become proficient with a graphing calculator and its use throughout this course.

### **ACCELERATED ALGEBRA I**

*Prerequisite: Successful completion of Math 7 and qualifying scores*

This course is designed to align with the current PA Core expectations for 8<sup>th</sup> grade mathematics and the PA Core Algebra 1 expectations. The focus of the course will be: formulating and reasoning about expressions, equations and functions, solving equations and systems of equations, operations with real numbers and expressions, linear equations, linear inequalities, functions, factoring algebraic expressions, coordinate geometry, and data analysis. Should students successfully complete Accelerated Math 8 *and* earn a passing score on the Algebra Keystone Exam, they will be encouraged to enroll in Geometry in 9<sup>th</sup> grade.

### **ALGEBRA I.....1 Credit**

Algebra I is a standards-based algebra course including the following topics: Operations with Real Numbers and Expressions, Linear Equations, Linear Inequalities, Functions, Factoring Algebraic Expressions, Coordinate Geometry, and Data Analysis. Students will also learn to model real-world situations using functions in order to solve problems arising from those situations. Students will begin to become proficient with a graphing calculator and its use throughout this course. The course is structured to prepare students for the Keystone Algebra I Exam.

### **GEOMETRY.....1 Credit**

*Prerequisite: Successful completion of Algebra 1*

In geometry, students will develop reasoning and problem solving skills as they study topics such as congruence and similarity, and apply properties of lines, triangles, quadrilaterals, and circles. You will also develop problem solving skills by using length, perimeter, area, circumference, surface area, and volume to solve real- world problems. Technology support for both learning geometry and preparing for standardized tests will be available in the form of online and multimedia content.

### **ALGEBRA II .....1 Credit**

The main focus in this course is on mathematical functions. Linear functions, linear systems, and matrices will be covered in the first quarter. Quadratic, polynomial, exponential, and radical functions are covered in the second quarter. Conic sections, probability, and statistics are the



topics covered in the third quarter. Sequences, series, and trigonometric functions are covered in the fourth quarter.

**CIHS ALGEBRA II**.....1 Credit / 4 CCAC Credits

*Prerequisite: Successful completion of Algebra 1*

Algebra II will begin with an introduction to functions. This will be followed by an in-depth study of eight different types of functions including linear, quadratic, polynomial, exponential, logarithmic, rational, radical and piecewise functions. The next topic to be explored will be solutions of systems of equations in two and three variables. The course will conclude with a study of probability and statistics and an exploration of sequences and series. Students must be able to apply what they have learned in class to various types of word problems.

**CIHS TRIGONOMETRY/PRE-CALCULUS**.....1 Credit / 7 CCAC

Credits

*Prerequisite: Successful completion of Algebra II*

This course is designed for students that seek to take a calculus course in the future. Pre-calculus topics include the real number line, absolute value equations and inequalities, rational functions, exponential and logarithmic functions, polynomial functions, inverse functions, and binomial expansion. Trigonometry topics include trigonometric functions, identities, equations, multiple and half-angle formulas, graphs, oblique triangles, inverse trigonometric functions and complex numbers.

The purpose of the course is to draw together all previous disciplines of algebra, geometry, and interpreting graphs in order to prepare the students for the complexities of college mathematics. Extensive use of the TI-84 graphing calculator is necessary along with manual graphing of translations of periodic functions.

The course requires the student to complete homework outside of class nightly to practice the skills presented in class. Oral and written reports, research and other projects may be components of this course. A final examination is required for this course.

**AP STATISTICS**.....1 Credit / 3 CCAC Credits

*Prerequisite: Successful completion of Algebra II*

In this course, students will examine statistical data from a number of different sources- their textbooks, newspapers, magazines, the Internet and even data that they will collect on their own. Students will then learn to apply different statistical models to the data and analyze the

results. Thus, this course combines both mathematical skills and analytical skills. Technology will be a major part of the course, with graphing calculators and MiniTab statistical computer software being used. Students will gain proficiency in accuracy and communication of four broad statistical themes:

1. Exploring Data: Describing patterns and departures from patterns
2. Sampling and Experimentation: Planning and conducting a study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

The class will be structured to allow students greater independence in class work and homework. Projects and activities that illustrate the statistical concepts and that stress collaboration and analysis will be a major part of the class. Students that are thinking of taking this course should be prepared to:

- work more independently than usual,
- think through large-scale problems and make appropriate decisions and
- share their questions and conclusions with other students in a variety of different forms

**AP CALCULUS**.....1 Credit / 4 CCAC Credits  
*Prerequisite: Successful completion of Trig and Pre-Calculus*

The Advanced Placement Calculus course consists of a full high school academic year of work that is comparable to Calculus courses in colleges and universities. The primary concern is with developing the students' understanding of the concepts of Calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to Calculus. Students will learn to work with functions, represented in a variety of ways: graphical, numerical, analytical and verbal. The derivative will be presented in terms of a rate of change and a local linear approximation. The definite integral will be approached both as a limit of Riemann sums and as the net accumulation of a rate of change. The relationship between the derivative and the definite integral, as expressed in both parts of the Fundamental Theorem of Calculus will be explored. Students will learn to use technology to help solve problems, experiment, interpret results and verify conclusions. Students enrolling in this course must be committed and motivated to study and learn at the college level. In May of the senior year students will be expected to take the nationally administered Advanced Placement Test.

# SCIENCE

## SCIENCE 7

For scientists and nonscientists alike, discovering the scientific principles underlying everyday things makes science fun. Science 7 is an integrated study of physical science using the universal laws of science as a basis for an understanding of our surroundings. Qualitative as well as quantitative aspects of the laws will be discussed as they relate to the human body and our surroundings. Thus, the students will be able to make connections between the natural sciences and their everyday experiences. The physics strand of the course includes topics such as energy, motion, force, electricity, magnetism, sound, and light. The chemistry strand of the course includes topics such as atoms, elements, chemical bonding, and chemical reactions.

## SCIENCE 8

Science 8 is an integrated study of life science using the universal laws of science as a basis for an understanding of our surroundings. Qualitative as well as quantitative aspects of content from cells to ecosystems will be explored. Thus, the students will be able to make connections between the natural sciences and their everyday experiences.

## SCIENCE 9.....1 Credit

This course will be taken by all incoming 9th grade students. The course will examine physical, chemical, and life sciences through connected themes and concepts. All students will study for twelve weeks in each content area with a focus on laboratory skills, inquiry, and scientific writing. Students will rotate through a sequence of Physics, Chemistry, and Biology in a trimester system to be introduced to a variety of interconnected content, and to prepare for future opportunities and courses.

## CIHS BIOLOGY.....1 Credit / 4 CCAC Credits

*Prerequisite: Successful completion of Science 9*

Biology is designed for students who plan to accelerate their science skills and are interested in college in some field of biological sciences. Areas of study will include Cell Biology, Molecular Biology, Biochemistry, Evolution, Genetics, and the Diversity of Life among Kingdoms. Lab investigations will be used to reinforce key topics. Group and individual projects that stress critical thinking will be required. Every quarter a project will be assigned. Scientific writings and readings are required. Class periods are devoted to labs, inquiry observations, and scientific

methodology. Final examination is required.

**CIHS PHYSICS**.....1 Credit / 4 CCAC Credits

*Prerequisite: Successful completion of Science 9*

This course is an introduction to basic physics. Topics include methods of measurement, problem-solving techniques and the physical concepts of motion, forces, work and energy, electricity, waves and optics. Students will be assessed based on their ability to conceptually problem solve, use algebra to solve basic physics problems, complete project work, and applying theoretical concepts and mathematical interpretation in the conduction of laboratory experiments. This course requires a final examination.

**CIHS CHEMISTRY**.....1 Credit / 4 CCAC Credits

*Prerequisite: Successful completion of Science 9*

This is an introductory Chemistry course, incorporating the concepts of chemical periodicity, reactivity, and structure. Using a combination of lecture, laboratory, and discussion sections, students will be exposed to the following fundamental concepts in Chemistry: dimensional analysis, the classification of matter, the periodic table, molar and stoichiometric relationships, nuclear chemistry, aqueous chemistry, and organic chemistry. This course is highly recommended for students who are interested in taking AP Chemistry.

**AP CHEMISTRY**.....1 Credit / 4 CCAC Credits

*Prerequisite: Successful completion of CIHS Chemistry*

This course meets the requirements set by the College Board for their Advanced Placement Program. Students completing this course are encouraged to take the Advanced Placement test given by the College Board which, if the student scores high enough, will give him/her college credit at many universities/colleges.

The course will include topics in the structure of matter, kinetic theory of gases, chemical kinetics, chemical equilibrium, oxidation and reduction, acids and bases, molecular geometry, solutions, basic thermodynamics, nuclear and electrochemistry. Laboratory work is an important part of the course and students will work individually rather than in pairs. This course will include a final examination.

**AP BIOLOGY**.....1 Credit / 8 CCAC Credits

*Prerequisite: Successful completion of CIHS Biology*

The course is taught in a lecture/discussion format. Students are encouraged and expected to discuss the material being presented. The discussion most frequently takes the form of questions of clarification and contributions the students have to the subject being discussed.

This year we will meet for a double session once or twice a week. The other days will have single sessions. Typically, the double sessions will involve the introduction of new material. While the single sessions provide the opportunity to develop more deeply into the material introduced the previous day. During these discussion sessions the student can and should expect a short quiz on the previous day’s material.

Laboratory sessions will be scheduled at the appropriate times, allowing a double period for completion. Please note that the occurrence of double class sessions is not always strictly adhered to, they provide a flexible framework that can and will be changed occasionally. This also provides a time to make up missed quizzes, finish labs, etc.

**AP PHYSICS** .....1 Credit / 4 CCAC Credits

*Prerequisites: Successful completion of Trigonometry and Pre-Calculus and CIHS Physics*

This course is designed to meet the demands of the algebra-based AP Physics I syllabus as published by the College Board. The goal of this class is to provide students with an experience equivalent to an introductory university-level algebra-based physics course. Students taking AP Physics I are expected to have a firm understanding of algebra and a working knowledge of trigonometry. Class discussions will be integrated to support concepts covered during lab investigations. Advanced Placement Physics requires a serious commitment from students. The course content includes Kinematics, Newtonian Mechanics, Circular Motion and Gravitation, Torque and Rotational Motion, Work – Energy Theorem, Simple Harmonic Motion, Mechanical Waves and Sound, Electrostatics, and Simple Circuits. Students should be prepared to devote a significant amount of time to working on laboratory reports and problem sets outside of class.

This class will meet for a double period everyday of the week. This course requires a final examination and end of year project.

**FORENSICS.....0.50 Credit**

Semester Course (Fall Only)

*Prerequisite: Successful completion of Science 9*

Forensic Science is an upper level science semester course which is designed to be hands-on, and lab activity driven. It will provide an introduction to the analysis of crime scenes by collecting and analyzing physical evidence. The course integrates multiple scientific disciplines (biology, chemistry, and physics) and gives students the theory and hands-on experience to develop the skills and knowledge that would be required as a forensic scientist. Additionally, this course will prepare the student for many possible avenues for career paths in the fields of law, criminal justice, anthropology, pathology, biology, chemistry, toxicology, and more. Throughout the course, topics that will be highlighted include, but are not limited to observation skills, crime scene analysis, fingerprinting, hair and fiber analysis, blood and DNA analysis, ballistics, and forensic anthropology.

**PENNSYLVANIA BIOLOGY I.....0.50**

Credit

Semester Course (Fall Only)

*Prerequisite: Successful completion of CIHS Biology*

This course introduces the student to Pennsylvania wildlife biology, ecology, and management. It includes the study of basic structure and function, as well as life histories and classification. Students will also study the basic morphology and population dynamics. Game laws and the Endangered Species Act will give the students a perspective on the local and global ramifications of wildlife biology. An emphasis will be placed on the identification and classification of Pennsylvania wildlife species and their habitats. Classroom studies are combined with labs and field studies. Classes will be conducted outside at different times throughout the year. Proper clothing is required on those days. The following topics will be covered, Wildlife and Man, Pennsylvania Trees, Selected Wildlife Species and their Biology (Deer, Elk, Bears, Insects), Wildlife Management and Game Laws.

**PENNSYLVANIA BIOLOGY II.....0.50 Credit**

Semester Course (Spring Only)

*Prerequisite: Successful completion of CIHS Biology*

This course introduces the student to Pennsylvania wildlife biology, ecology, and management. It includes the study of basic structure and function, as well as life histories and classification. Students will also study the basic morphology and population dynamics. Game laws and the Endangered Species Act will give the students a perspective on the local and global ramifications of wildlife biology. An emphasis will be placed on the identification and classification of Pennsylvania

wildlife species and their habitats. Classroom studies are combined with labs and field studies. Classes will be conducted outside at different times throughout the year. Proper clothing is required on those days. The following topics will be covered, Wildlife Research Techniques, Survivorship, Wetlands, Marshes and Swamps, Freshwater Streams and Lakes, Selected Wildlife Species and their Biology (Turkey, Birds of Prey, Reptiles and Amphibians, Freshwater Fish).

**ASTRONOMY**.....0.50 Credit  
Semester Course (Spring Only)

*Prerequisite: Successful completion of Science 9*

This course is an upper level semester long science that introduces the student to the field of Astronomy. It will integrate multiple disciplines (biology, chemistry, and physics) and show how all three together begin to shape our universe. The topics in this class will cover both theoretical and observational astronomy allowing students to have a better understanding of the cosmos. The content covered in this class will include but not limited to stellar astronomy, galactic astronomy, planetary science, and astrobiology,

**MARINE BIOLOGY**.....0.50 Credit  
Semester Course (Fall Only)

*Prerequisite: Successful completion of Science 9*

Marine Biology is a semester long, introductory course offered to seniors to gain a greater understanding of ocean science. This course will provide students an opportunity to explore an environment that is not in our backyard but accounts for 80% of the biodiversity on the planet. Through and integrated study of chemistry, biogeography, biology, ecology and other areas of science, students will learn to appreciate and understand the diverse and intricate science of the oceans and their inhabitants. Students will be expected to develop connections between the sciences as well as develop critical thinking skills and appropriate academic language.

**GENETICS**.....0.50 Credit  
Semester Course (Spring Only)

*Prerequisite: Successful completion of Science 9*

Genetics is a semester long, introductory course offered to seniors. This course will provide seniors with a review of basic genetic principles from Mendelian Genetics to the impact on human health and society. Students will gain a greater understanding of the structure and function of DNA and its role in heredity. In addition to learning basic genetics students will also learn to think critically concerning science’s impact on our society through connections to current events in the world of genetics

**ANATOMY/PHYSIOLOGY** .....1 Credit

*Prerequisite: Successful completion of CIHS Biology*

Anatomy and Physiology is a course designed to better familiarize the student with bodily functions and the cause and effect of these functions. The content includes the body as a whole; skeletal, connective tissue, muscular, nervous, digestive, excretory, circulatory, endocrine, reproductive, immune and sensory systems; plus growth and development. The material at times becomes very detailed and technical. Students who have in mind future plans that relate to the medical field should consider this course. Others who have a keen interest in learning about themselves and how the basic processes of life proceed are encouraged to consider this demanding program.

Scientific inquiry studies are incorporated into dissection labs including sheep’s eye, bovine heart, sheep’s nervous system and various other investigative studies are undertaken in the laboratory including, but not limited to, blood pressure, blood typing, detailed microscope activities and many others. The computer lab will also be utilized for research projects and to access information on an as-need basis.

**SPECIAL TOPICS** .....1 Credit

*Prerequisite: Successful completion of Science 9*

This course is an upper level (year/semester) long science course that will introduce students to a multitude of different science topics. It will integrate multiple science disciplines including but not limited to biology, chemistry, and physics and will show how all three can be integrated into life. The topics class will cover will include but not limited to Microbiology, Renewable Energy, and other advanced science topics.

**SOCIAL STUDIES**

**SOCIAL STUDIES 7**

World history is a chronological-topical history of the world from the Renaissance period to modern times. It focuses on past political, social, economic and cultural developments. This is a required social studies course. Current event topics are discussed weekly and homework is assigned periodically.



## **SOCIAL STUDIES 8**

**Pennsylvania History** is a chronological-topical history of the state of Pennsylvania from the settlement period to the current time. Topics to be covered include: William Penn and the founding of PA constitution, the Quakers, the national constitutional convention, industrial and ethnic history, and the geography and topography of the state. Current events and study skills to be discussed bi-weekly.

**U.S. Geography** is a comprehensive study of the subject of geography of our country. Topics to be covered include: the “five” themes of Geography. The “five” distinct regions of the United States, these are: The Northeast, The Southeast, The Midwest, The Mountain West and The Pacific West Coast. The following topics will be covered in each of these geographic regions: maps, climate, history, industry and culture. The students will be assigned a cumulative project in this course requiring research, writing and creative design combining the English 8 and Social Studies 8 curriculum.

## **AMERICAN STUDIES 9**.....1 Credit

This course serves as a foundation to the entire Social Studies program. Beginning with the age of exploration, the student will be expected to reflect a suitable degree of understanding of the early settlement of North America by Europeans; the development of the thirteen colonies; the era of the American Revolution; the political, social and cultural development in early 19<sup>th</sup> century America and the Civil War. A variety of media will be used and the development of reading, writing and interpretive skills will be emphasized. Special attention will be given to the study of the Constitution of the United States. A final examination will be administered.

## **AMERICAN STUDIES 10**.....1 Credit

American Studies 10 is a study of the development of the United States from 1865 to the present. By studying our nation’s past, the course will impart an understanding of our democratic ideals and develop an appreciation of the uniqueness of the political, economic, social and cultural-intellectual institutions as they evolved in the United States. The course will afford students an opportunity to prepare themselves for active citizen participation in our nation’s democratic processes. This is a required course, and a final examination will be administered.

**CIHS HUMAN GEOGRAPHY** ..... 1 Credit / 3 CCAC Credits

This course is to be taken during a student’s eleventh grade year. This class will explore the meaning of culture, different cultures around the world (both in historical and present times), and the effects of different cultures within themselves and with other cultures. Areas of study include Asia with a focus on China, Africa, Latin America and The Middle East. Geography, history, government, economics, and religions will be examined for each area. There will be many different ways this class will operate. You will be asked to take notes, draw maps, identify countries, capitals, give presentations, create projects, participate in class discussions, take quizzes and tests, read articles and texts, answer and ask questions, write journals, short papers, research papers, find and share current events. The grading system for this class will be completely point and percentage based. A final cumulative exam will be administered.

**CIHS GOVERNMENT** ..... 1 Credit / 3 CCAC Credits

This class will include the basics of government, formation of government, branches of government, the Constitution, Articles, and Amendments of the Constitution. In addition, Government will include the ideas of Federalism, the different types of government throughout the world, conflict in the government and how the government is able to adjust to current times. In addition, Government will also do an in depth study of the election process concentrating on the different types of elections and political parties.

**AP EUROPEAN HISTORY** ..... 1 Credit / 3 CCAC Credits

*Prerequisite: Successful completion of American Studies 10*  
*\*Offered every other year*

The course consists of an ambitious survey of European History from the Fourteenth Century to the present. Due to the volume of material to be covered, student success requires disciplined reading habits and excellent study skills. In addition to the standard methods of evaluation, such as exams, identifications, and essays, students are required to complete two book evaluations and a term paper. Class time will be divided between lecture, discussion, formal debates, oral presentations, and examinations. All students are expected to participate in the College Board Advanced Placement European History examination in May.

**AP U. S. HISTORY**..... 1 Credit / 6 CCAC Credits

*Prerequisite: Successful completion of American Studies 10*

*\*Offered every other year*

AP US History is an accelerated course with a format similar to those offered to college freshmen, consisting of a survey of the history of the United States from the time of the discovery of the western hemisphere to the present. The major forces, events, and personalities that affected the evolution of our nation’s unique political, economic, social, and cultural character are examined. In depth supplemental readings and lectures provide students with opportunities to enhance their knowledge and refine their critical thinking skills of analysis, synthesis and evaluation. In May, students will be expected to take the nationally administered Advanced Placement Test

**PSYCHOLOGY**.....0.50 Credit

Semester Course (Fall only)

Psychology is an introductory elective course in the social studies program offered to students in the upper grades. An above-average reading ability or a special interest in psychology is suggested. A variety of topics will be presented to meet the needs and aspirations of students. Some outside reading is required.

**SOCIOLOGY**.....0.50 Credit

Semester Course (Spring Only)

Sociology is an elective course in the social studies program offered to students in the upper grades. Students are expected to develop the ability to think like a sociologist, to develop a sociological imagination and to appreciate the wide diversity in social life as found in our nation and its many cultural influences.

**INTRODUCTION TO ANTHROPOLOGY**.....0.50 Credit

Semester Course (Spring Only)

Anthropology is the study of humans. This class will introduce the student to the biological, political, social, and cultural aspects of human development. There will also be a short section

of Archeology, a branch of anthropology. Students are expected to dedicate time outside of class for reading and projects. Participation in class discussion is part of the class.

**INTRODUCTION TO ECONOMICS**.....0.50 Credit  
Semester Course (Fall Only)

Economics is the study of production, consumption, and transfer of material goods and services. Topics include micro-economics, macro-economics, classic capitalism, Keynesian Capitalism, comparative economics, and modern concerns such as fiscal policy and taxes. Students are expected to dedicate time outside of class for reading and projects. Participation in class discussion is part of the class.

**FOREIGN LANGUAGE**

**FRENCH I**.....1 Credit

The purpose of the beginning course in French is to learn the language as a means of communication. The students will be introduced to all five language-learning skills: reading, writing, listening, speaking and culture. The emphasis will be on how to use these skills in everyday communication. To achieve this, the main language of instruction will be French and the students will be evaluated through both written and oral exams. Students should expect to devote at least 1 1/2 to 2 hours of out-of-class time per week.

**FRENCH II**.....1 Credit  
*Prerequisite: Successful completion of French I*

To bridge the gap between the elementary and intermediate levels, the introductory lessons are devoted to a review of structures previously studied. The procedures used in the elementary courses have been continued with additional techniques suitable to the more advanced stage. Attention is given to the development of grammar for acquiring greater facility in reading, writing and speaking. There will be both oral and written grades throughout the year and the course will be taught primarily in French.

**CIHS FRENCH III**.....1 Credit  
*Prerequisites: Successful completion of French II*

This course is designed for the students to increase their general knowledge of French. They

will strengthen their reading skills and will improve their comprehension of spoken French. A segment of the course is also designed to present to the students a picture of the French, their humor, basic values and civilization. The emphasis of this course will be on student output, i.e., using and putting into practice what they have learned previously, in both oral and written fashion. This course will be conducted in the target language.

**CIHS FRENCH IV**.....1 Credit  
*Prerequisite: Successful completion of CIHS French III*

The students at this level will be able to express themselves in both practical, everyday language and on a more abstract level. This will be accomplished by a review of previously studied material and by learning and applying more complex grammatical functions. Students will be evaluated weekly on oral output, aural comprehension and written expression. A segment of this course will also focus on the history and civilization of French culture.

**SPANISH I**.....1  
 Credit

Initial contact with the language and the acquisition of basic language skills is provided. This course consists of an introduction to the basics of the foreign language, vocabulary study and present and preterite verb conjugations. There is an emphasis on oral practice and language usage, complemented by grammatical explanation. In general, the basic concepts of listening, speaking, reading and writing are developed. Students are expected to memorize vocabulary, poems and songs.

**SPANISH II**.....1  
 Credit  
*Prerequisite: Successful completion of Spanish I*

This course builds upon the learning and techniques of introductory Spanish and encompasses the preterit, imperfect, progressive and present subjunctive tenses. Emphasis is placed on building a useful vocabulary, learning more difficult grammatical constructions and increasing facility in listening, speaking, reading and writing. Each year students read a Spanish novel in a simplified version. Students are expected to memorize vocabulary and verb endings.

**CIHS SPANISH III**.....1 Credit  
*Prerequisites: Successful completion of Spanish II*

This course is designed to strengthen the students' writing and reading skills. Activities include studying selection of Hispanic literature chosen for style theme. Students will then use the

author's style for their own original essays. Also included is a survey of the civilization of the Hispanic world through its history, geography, traditions, customs, music and art, which provide an exposure to and appreciation of the Spanish-speaking countries. Each year students read one or more novels in Spanish. The background of the author is discussed as well as the plot, theme and literary style.

**CIHS SPANISH IV/V**.....1 Credit  
*Prerequisite: Successful completion of CP Spanish III*

This is a year course that consists of three segments. The course is designed to firmly set the pattern of speech. Activities will center around dialogues, impromptu conversations, questions and answers and individual speeches, as well as frequent conversations on a one-to-one basis. Included in this course will be the study of the subjunctive mood. Also included is a survey of the civilization of the Hispanic world through its history, geography, traditions, customs and music and art providing an exposure to and appreciation of the Spanish-speaking countries.

Each year students read one or more novels in Spanish. Background of the author is discussed, as also are plot, theme and literary style.

## **HEALTH AND PHYSICAL EDUCATION**

### **HEALTH /PHYSICAL EDUCATION 7**

Semester course

The semester-long 7<sup>th</sup> grade Health and Physical Education class is an introductory class designed to expose students to a variety of sports activities and health concepts. The courses are each 9 weeks long and are intended to help the 7<sup>th</sup> grade students develop basic skills in the following essential areas: \*Act in a safe and efficient manner during physical activity \*Integrate personal safety skills into recreational and competitive sports play \*Learn to work in groups cooperatively \*Learn warm up activities to use before physical exertion \*Increase cardiovascular efficiency, strength and endurance \*Show respect for the care and safety of themselves and others \*Develop an interest in their fitness level and a desire to improve it \*Learn basic sport strategies and game related rules

### **PERSONAL FITNESS 7**

Semester Course

This course is designed to give students the opportunity to learn fitness concepts and

conditioning techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the basic fundamentals of strength training, aerobic training, and overall fitness training and conditioning. Course includes both lecture and activity sessions. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime.

**HEALTH /PHYSICAL EDUCATION 8**

Semester Course

The quarter-long 8th grade health physical education class is a continuation of the 7<sup>th</sup> grade class. This class is 9 weeks long and will help the students gain a greater understanding of physical movement and sports activities. The 8<sup>th</sup> grade students will develop basic skills in the following essentials skills areas: \*Learn to work at their own skill level \*Learn how to prevent injury during sport and recreational activity \*Improve performance capacity in sport and recreational activities \*Maintain a standard level of fitness \*Learn safety skills when performing sport activities \*Practice and perform basic sport skills \*Be proficient at sport strategies and game rules \*Continue to learn to work in groups cooperatively \*Continue to learn exercises for strength and endurance and warm-up

**HEALTH.....0.50**

Credit

Semester Course

*9<sup>th</sup> Grade Required Course*

Health is the state of total physical, mental and social well-being, not just freedom from sickness of ailments. Health education provides health information in such a way that it influences people to take positive action about their health. Health education is a high school graduation requirement. The content is covered by lectures, in-class worksheets, Current Health magazines, movies, homework, group projects and library research.

**PHYSICAL EDUCATION 9, 10, 11 & 12.....0.50 Credit**

Semester Course

Physical Education classes are designed to develop sound conditioning and fitness and to enhance skills in a plethora of activities ranging from individual athletic pursuits to team sports. Students are expected to dress and participate actively. Failure to meet this requirement will result in removal from class without credit. Mandatory dress guidelines are as follows: white or gray T-shirt, red shorts or sweatpants, or Northgate team apparel, appropriate athletic shoes

and socks.

After warm-up drills, students participate in a variety of individual or team activities, which include flag football, soccer, basketball, volleyball, hockey, badminton, racquetball, speed ball, swimming, aerobics, weight training, physical fitness testing, softball, high organization games, lifetime sports and other endeavors.

**PERSONAL FITNESS**.....0.50 Credit  
Semester Course

This course is designed to give students the opportunity to learn fitness concepts and conditioning techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the basic fundamentals of strength training, aerobic training, and overall fitness training and conditioning. Course includes both lecture and activity sessions. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in fitness, wellness, and movement activity for a lifetime.

## **BUSINESS/TECHNOLOGY EDUCATION**

### **COMPUTER SCIENCE 7**

The Computer Science 7 course is designed to be a great introduction to Computer Science for students of all ages. The course blends online, self-guided and self-paced tutorials with “unplugged” activities that require no computer at all. Some of the topics that will be covered are: digital citizenship, current educational apps, problem-solving skills and basic programming.

### **COMPUTER SCIENCE 8**

Using Scratch and Hummingbird robotics toolkits, students will build their own arcade games. Students will be introduced to the fundamentals of game design and coding along with using LEDs, motors, and sensors to create a hands-on game that lights up and moves. The core focus of this course is applying the Scratch programming technology to program a complex set of instructions to send to the Hummingbird robotic set.

**PERSONAL FINANCE**.....1 Credit  
**(Grades 10, 11, and 12 only)**

This course is designed to develop a class of financially literate students. They will have the knowledge, skills, and confidence to begin taking charge of their financial future with the expectation to prosper in today’s ever-changing economy. Students will increase their



understanding of personal finance concepts, develop critical thinking skills with respect to financial planning, learn to appreciate the awesome power of compound interest, apply the knowledge gained to their personal financial situations, and become financially responsible adults who will hopefully save regularly and use credit wisely. Budgeting, saving, making investments, and handling credit are financial skills that all individuals need to know. Reinforcement of financial awareness helps to provide students with the opportunity to live within their means, improve their savings strategies, grow capital through investments and promote a positive social change as they develop better financial skills.

**COMPUTER SCIENCE PRINCIPLES**.....1 Credit

Prerequisite: Successful completion of Algebra I or enrollment in Algebra I

This is a general computer literacy course that will engage students in multiple introductory coding and production applications. Students learn computer fundamentals, applications, online research skills, and the impact of computing and the Internet on society. Students develop skills with common applications to use a computer as a tool, make informed decisions concerning computer generated information, and obtain basic information systems concepts and terminology. The course is aligned with the College Board’s AP CS Principles course syllabus.

**CIHS BUSINESS COMMUNICATIONS**.....0.50 Credit / 3 CCAC Credits  
**(Grades 10, 11, 12 only)**

Semester Course

This course examines communication knowledge and skills with an emphasis on identification and application of the skills needed to successfully communicate on a personal level, in the workplace, and among different cultures. Throughout the course, students will cover a variety of topics that expose them to college and career readiness standards, in addition to the elements of financial literacy.

**HS ENTREPRENEURSHIP**.....0.50 Credit

Semester Course

Students will explore the world of business through idea generation, marketing, management, risk assessment, legal structure, financial projections, customer service, business etiquette, economic principles, marketing, problem solving and leadership skills.

**MS ENTREPRENEURSHIP**

Semester Course

Students design products and operate a class business, designing, creating, and producing products that meet identified school or community needs. Emphasis is placed on the

introduction and application of business terminology, basic entrepreneurship concepts, and fundamental business principles.

## **LAW & JUSTICE**

### Semester Course

The purpose of this course is to produce well-informed citizens with a strong awareness of their legal rights and duties and, in everyday life, to develop their respect for those laws that influence daily living in our society. The students will learn about the criminal, civil and juvenile law and how they pertain to the court system.

# FINE and PERFORMING ARTS

## MIDDLE SCHOOL STUDIO ARTS

Semester Course

This course will provide a strong foundation in both two and three-dimensional forms of art making. Students will focus on skill building through the exploration of various art media. Two-dimensional art media will include; painting, color theory, printmaking, collage and a variety of drawing media such as graphite, charcoal, pastel and pen and ink. Three-dimensional art mediums and techniques will include a variety of hand building and sculpture techniques with the use of clay, plaster, wire, wood, paper mache and found objects. This class will provide students with a thorough understanding of the elements of art and principles of design.

**STUDIO ARTS I**.....0.50 Credit  
Semester Course

This course will provide a strong foundation in both two and three-dimensional forms of art making. Students will focus on skill building through the exploration of various art media. Two-dimensional art media will include; painting, color theory, printmaking, collage and a variety of drawing media such as graphite, charcoal, pastel and pen and ink. Three-dimensional art mediums and techniques will include a variety of hand building and sculpture techniques with the use of clay, plaster, wire, wood, paper mache and found objects. This class will provide students with a thorough understanding of the elements of art and principles of design.

**STUDIO ARTS II**.....1 Credit  
*Prerequisite: Successful completion of Studio Arts I*

Skills learned in Studio Arts I are essential for success in Studio Arts II. Students will explore advanced art techniques in both two and three-dimensional art making. Students will be encouraged to explore conceptually as well as technically through teacher guided assignments. Mediums used in this course will include, but are not limited to; clay, plaster, wire, metal, wood, paper mache, fabric, watercolor, acrylic, oils, charcoal, pastels, graphite, pen and ink, printmaking, photography, computer art, and collage. Studio Arts II students will learn to critique their own work and the work of others in an objective manner using terms related to the elements of art and principles of design. The use of a sketchbook is required from all students to complete homework and research assignments given at the beginning of every lesson to aid in their personal and artistic development.

**STUDIO ARTS III.....1 Credit**

*Prerequisite: Successful completion of Studio Arts II*

Skills learned in Studio Arts II will be essential for success in Studio Arts III. Students will continue to build on advanced art techniques learned in previous course and begin to form an area of concentration. The first semester will focus on advanced art techniques in both two and three-dimensions. The use of a sketchbook is required to complete homework and research assignments given at the beginning of every lesson to aid in their personal and artistic development. The use of the Internet will also be required in this course as students develop and post an online portfolio. Semester two will focus on the student’s academic goals and areas of concentration. The students will be required to choose two areas of concentration to work through independently throughout the remainder of the year. The instructor will assign students an individualized course of study to reflect the students’ level of artistic talent in accordance with their chosen areas of concentration. The ability to work independently is a privilege given to those students with advanced art skills and will be taken away at teacher discretion.

**STUDIO ARTS IV.....1 Credit**

*Prerequisite: Successful completion of Studio Arts III*

Students will be expected to work independently as they explore 4 areas of concentration. After a reevaluation of the students’ academic goals, as well as progress in Studio Arts III, the instructor will design an individualized course of study to reflect the student’s ability. The use of a sketchbook is required from all students to complete homework and research assignments given at the beginning of every lesson to aid in their personal and artistic development. The use of the Internet will also be required in this course as students develop and post an online portfolio. The students will have a large body of work created throughout the advanced courses and will be required to post an online portfolio as well as participate in final portfolio review.

**MIDDLE SCHOOL CHOIR**

Northgate Middle School Choir is a group of mixed voices singing a wide variety of musical styles. Most rehearsals are held during the school day. The choir presents evening concerts in December and May, participates in Music in Our Schools Night in March, and sings for Baccalaureate in June. Additional performances will be added. *Attendance is mandatory for all performances.* These groups rehearse in school and after school. Additionally, students are chosen by audition to represent Northgate at district, regional and state choral festivals held at various high schools throughout Western Pennsylvania.

**CONCERT CHOIR.....1 Credit**

The Northgate Concert Choir is a group of mixed voices singing a wide variety of musical styles. Most rehearsals are held during the school day. The choir presents evening concerts in December and May, participates in Music in Our Schools Night in March and sings for Baccalaureate in June. Additional performances will be added. Attendance is mandatory for all performances.

Related activities: Members of the Concert Choir and Chamber Singers are eligible to audition for smaller singing groups, such as Girls' Triple Trio, Boys' and Girls' Barbershop Quartets, and Mixed Octet.

These groups rehearse in school and after school. Additionally, students are chosen by audition to represent Northgate at district, regional and state choral festivals held at various high schools throughout Western Pennsylvania.

**MIDDLE SCHOOL BAND**

Middle School Band will focus on concert band repertoire and performances. All students must understand that *participation at all band and band-related events is mandatory*. Additional rehearsals may periodically be required. Progress is monitored through playing tests and performances.

Related activities: Members of the Middle School Band are eligible to participate in smaller ensembles, such as jazz band. These groups rehearse after school. Additionally, students may be chosen to represent Northgate at various district and regional band events and festivals held in the area.

**MARCHING BAND Q1.....0.25 Credit**

This course will focus mainly on marching band during the first nine weeks of the school year which coincides with the varsity football schedule as well as other scheduled events, such as parades and band festivals. All students in Marching Band must recognize the fact that participation in all band and band-related events is mandatory. These will include all varsity football games, band festivals, parades, and community events scheduled during the first semester. Marching Band has one evening practice per week as well as a football game each Friday. Saturday events will be announced prior to the start of the season. Attendance at summer band rehearsals and band camp are required in order to participate in the marching band.

**CONCERT BAND Q2.....0.25 Credit**

Concert Band will focus on concert band repertoire and performances. All students must understand that participation at all band and band-related events is mandatory except when prior administrative excusal is granted for extenuating circumstances. Concert Band Q2 a nine week long course. Additional rehearsals may periodically be required as needed. Progress is monitored through playing tests and performances.

Related activities: Members of the Concerts Band are eligible to participate in smaller ensembles, such as jazz band. These groups rehearse after school. Additionally, students may be chosen to represent Northgate at various district and regional band events and festivals held in the area.

**CONCERT BAND Q3 & Q4.....0.50 Credit**

This course is a continuation of the Concert Band that took place during the second nine weeks. All students must understand that participation at all band and band-related events is mandatory except when prior administrative excusal is granted for extenuating circumstances. Additional rehearsals may periodically be required as needed. Progress is monitored through playing tests and performances.

Related activities: Members of the Concerts Band are eligible to participate in smaller ensembles, such as jazz band. These groups rehearse after school. Additionally, students may be chosen to represent Northgate at various district and regional band events and festivals held in the area.

**ORCHESTRA.....1 Credit**

*Prerequisite: Successful completion of earlier strings instruction*

This course is designed to continue the strings education from the elementary program to the middle school and high school levels. This course gives the students the opportunity to enhance and build upon the fundamentals by providing a daily ensemble rehearsal. All students must understand that participation at all Orchestra and Orchestra related events is mandatory. Additional rehearsals may periodically be required as needed. Progress is monitored through playing tests and performances.

**PIANO.....1 Credit**

Students will begin to develop beginning, intermediate, and advanced piano skills by enrolling in this exciting new elective course. You will read music, have a comprehension of music theory, improve discipline, focus, concentration, coordination, and several additional skills will be learned. Students will perform in various recitals which will give them a great sense of accomplishment of their hard work throughout the school year.

**MIDDLE SCHOOL MUSIC**

This course will develop comprehensive musicianship with a focus of musical literacy. While research shows that music helps students develop higher-order skills and increase desire to learn, our driving goal is to help students become more enlightened and truly alive through a balanced, comprehensive, and sequential program of study. This nine-week course allows students to transfer prior knowledge and skills and to explore and develop their musicianship through various courses of study.

**INDUSTRIAL and ALLIED ARTS**

**MIDDLE SCHOOL INDUSTRIAL ARTS**

Semester Course

This course is designed to introduce students to the design process through the experience and working knowledge of different materials processing applications. Students will be introduced to various types of wood, how timber is processed and the purposes of wood in the manufacturing and construction fields. This course is designed to show students how to properly select and use hand tools, power tools and machinery. The students will be made aware of various assembly processes through the use of various adhesives and mechanical fasteners. The students will be taught how to make project sketches, develop a set of working plans, create a bill of materials and actively use measurement throughout the course. Safety will be heavily emphasized. There is a nominal fee for lumber associated with this course.

**WOODWORKING I.....1 Credit**

This course is designed to introduce students to the design process through the experience and working knowledge of different materials processing applications. Students will be introduced to various types of wood, how timber is processed and the purposes of wood in the manufacturing and construction fields. This course is designed to show students how to properly select and

use hand tools, power tools and machinery. The students will be made aware of various assembly processes through the use of various adhesives and mechanical fasteners. The students will be taught how to make project sketches, develop a set of working plans, create a bill of materials and actively use measurement throughout the course. Safety will be heavily emphasized. There is a nominal fee for lumber associated with this course.

**WOODWORKING II.....1 Credit**

*Prerequisite: Successful completion of Woodworking I*

This course builds upon the skills and material covered in Wood and is for students who wish to develop a better understanding of the tools and techniques used in a materials processing shop. Various and more detailed types of wood joints will be covered as well as different finishing techniques. The students must utilize the design process to select the appropriate processing techniques needed to complete various student designed, instructor approved projects. These students must be capable of operating all power tools properly and safely with the proper instruction. Safety will be heavily emphasized. There is a nominal fee for lumber associated with this course.

**WOODWORKING III.....1 Credit**

*Prerequisite: Successful completion of Woodworking II*

This course is intended for those students who have successfully completed Wood II. Students will be given the opportunity to design, construct and produce their own projects with instructor approval. This course will cover more advanced methods of fine woodworking including: precision measurement and cutting, shaping processes, wood and metal inlays and solid joint construction. These students must be able to properly operate all of the tools and machinery in the production area safely and efficiently. There is a nominal fee for lumber associated with this course.

**WOODWORKING IV.....1 Credit**

*Prerequisite: Successful completion of Woodworking III*

Wood IV is designed for the students who have successfully completed Wood III and wish to expand upon the material covered in the previous wood courses. The students will extensively utilize the design process in order to create, develop and produce highly advanced detailed plans and projects of their own choice. The students will utilize tools, materials and fixtures in order to manufacture their projects. These students must be able to properly operate all of the tools and machinery in the production area safely and efficiently. There is a nominal fee for lumber associated with this course.



**HOME MAINTENANCE AND REPAIR.....1 Credit**

This course is designed for the future homeowner. The students will become familiar with methods associated with modern residential construction. They will learn about the various mechanical systems involved in building a home and how to trouble-shoot and problem-solve routine maintenance tasks. All students will learn about measurement scales to read and utilize a working set of blueprints. Activities may include: conventional framing, basic electrical wiring, miscellaneous plumbing repairs, drywall, flooring and trim and casing work. Proper hand and power tool selection function and operation will be applied. Workplace safety will be greatly emphasized.

**CNC DESIGN AND MATERIAL PROCESSING.....1 Credit**

*Prerequisite: Successful completion of Woodworking I or Home Maintenance and Repair*

This course is designed for students are interested in developing technical skills. The class will develop knowledge and skills in the areas of engineering, 2D and 3D modeling, and computer-aided machining. Students will utilize software to design several projects that will then be created using the computer numeric control (CNC) router. Students will sand, paint, and assemble their final machined project into a completely finished product. There will be a nominal fee for lumber and materials used in this course.

**MIDDLE SCHOOL ENGINEERING AND DESIGN**  
Semester Course

Students are introduced to the world of creative engineering product design. Through six activities, teams work through the steps of the engineering design process (or loop) by completing an actual design challenges. The project challenge is left up to the teacher or class to determine; it might be one decided by the teacher or brainstormed with the class.

**INTRO TO ENGINEERING AND DESIGN.....1 Credit**

This course is co-taught by a Science teacher and a STEM teacher, and it is designed to provide students with knowledge and hands-on experience exploring the development, use and impacts of technology in the areas of manufacturing, construction, transportation, and 42 communication. Students, working alone and in groups, will problem solve, design, develop, construct, and test projects.

**INNOVATIVE DESIGN I.....1**

Credit

**(Grades 10, 11, 12)**

*Prerequisite: Successful completion of Intro to Engineering and Design*

*\*Waived for the 20-21 School Year*

Students will develop solutions to real world problems requiring a wide range of skills and creative thinking using design thinking curriculum in cooperation with local businesses and organizations. This course will provide an interdisciplinary approach to integrating disciplines within real world applications. The course will require students to participate in problem-based and project-based learning activities, inquiry learning tasks, and technology will be used to share and display information.

**INNOVATIVE DESIGN II.....1 Credit**

**(Grades 10, 11, 12)**

*Prerequisite: Successful completion of Innovative Design I*

Students will develop solutions to real world problems requiring a wide range of skills and creative thinking using design thinking curriculum in cooperation with local businesses and organizations. This course will provide an interdisciplinary approach to integrating disciplines within real world applications. The course will require students to participate in problem-based and project-based learning activities, inquiry learning tasks, and technology will be used to share and display information.

**INNOVATIVE DESIGN III.....1**

Credit

**(Gr. 10, 11, 12)**

*Prerequisite: Successful completion of Innovative Design II*

Students will develop solutions to real world problems requiring a wide range of skills and creative thinking using design thinking curriculum in cooperation with local businesses and organizations. This course will provide an interdisciplinary approach to integrating disciplines within real world applications. The course will require students to participate in problem-based and project-based learning activities, inquiry learning tasks, and technology will be used to share and display information.

# Beattie Career Center

## A.M. Morning Session

**3 Credits**

### Grades 10, 11, 12

#### General Information-

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

Students attending A.W. Beattie Career Center are enrolled in the morning session and then spend the remainder of the day at Northgate. 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 of the A.W. Beattie Career Center Programs offer advance college credit upon successful completion. Potential college credits range from three to twenty-two 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 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 Education 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](http://www.beattietech.com) for additional information.

Students who attend 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 9<sup>th</sup> or 10<sup>th</sup> grade and will be carefully reviewed. Further information concerning the A.W. Beattie Career Center's program is available in the School Counseling Office.

### Course Offerings-

- |                                     |  |
|-------------------------------------|--|
| *Advertising Design                 | *Health Science Technology   |
| *Agile Robotics/Intelligent Systems | *Heating, Ventilating and<br>Air-Conditioning Technology           |
| *Auto Body Repair                   | *Introduction to Pharmacy  |
| *Automotive Technology              | *Networking Engineering Technology                                 |
| *Carpentry/Building Construction    | *Pastry Arts   |
| *Computer System Technology         | *Sports Medicine-Rehab Therapy and<br>Exercise Science (SMART-EST) |
| *Cosmetology                        | *Surgical Sciences   |
| *Culinary Arts                      | *Veterinary Sciences Technology<br>(VET-TECH)                      |
| *Dental Careers                     |  |
| *Early Childhood Education          |  |
| *Emergency Response Technology      |  |

**Certifications:** Through strategic planning and partnerships with local employers, A.W. Beattie Career Center offers several nationally recognized validated skills certifications (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 need of students to help them reach their full potential. Facilitators provide support services through tutoring, study guides, test assistance, and curriculum modification. Facilitators and Instruction Assistants offer support in the classroom and labs.

## **Beattie Course Descriptions:**

**Advertising Design**-The Advertising Design program at A.W. Beattie Career Center focuses on a wide variety of professional art-related fields, including: Digital Graphic Design, Multimedia, Digital Photography, and Web Design. Students will train in a dual-platform (Mac and PC) environment using the latest in professional graphic design software and equipment, such as: Adobe Photoshop CS5.5, Adobe Illustrator CS5.5, Adobe Premiere Pro, Adobe Dreamweaver CS5.5, and many others. Students can 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.

**Agile Robotics/Intelligent Systems**-Students interested in the most recent, innovative technology have a unique opportunity for training in the cutting-edge Robotics 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 using curriculum developed through the Nation Robotics Education Center. They 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 can earn up to 17 credits at A.W. Beattie Career Center for use in continuing their education at California University. 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 also participate in FIRST Robotics Team Competition.

**Automotive Collision Technology**-Auto Body Repair trains 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. Cooperative education experiences in local area dealerships provide authentic educational experiences.

**Automotive Technology**-The NATEF(National Automotive Technicians Education Foundation) certified Automotive Technology program at 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. Students learn all aspects of the

trade, as well as participating Automotive Technology is an AYES (Automotive Youth Education Systems) training facility, providing students during their senior year, with work experience in local area dealerships, allowing for those important career

connections. NATEF and AYES certification 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.

**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 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 have the opportunity to earn their OSHA-10 Safety Certification and PA Builder's Certificate.

**Computer System Technology**-In Computer System Technology, students maintain and operate the Beattie Broadcasting System, an in-house television network. Building, maintaining and troubleshooting computers and peripherals is part of the curriculum. Students will learn the basics of networking and will build Linux and Windows 200 servers. They will also set up and maintain Internet services as well. Students participate in the Cisco approved IT Essentials course created by Hewlett Packard for the Cisco Networking Academy.

**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, 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, give 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**-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 experience the opportunity to apply their child development and teaching skills daily, working with children in the on-site Kiddie Tech Day Care Center. In addition to a variety of classroom activities, students learn the industry hands-on with infants, toddlers, and preschool age children. Students present a series of learning and development activities in the day care facility, practicing and refining their creative teaching skills, as well as learning the basics of caring for and managing children. Students will participate in the Childhood Development Association (CDA) Ready/Certification.

**Emergency Response Technology**- This 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 material, 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**-This course will show students that today's medical field 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 and Nurse Assisting. For those students that have an interest in becoming a Nurse, Radiology Technician, or Physical Therapy Assistant, this program will prepare them for post-secondary education. During the course of study, students will gain valuable hands- on clinical experience in hospitals, nursing homes, physical therapy clinics, and private offices where they will practice and perfect their skills, preparing them for an exciting and rewarding career in healthcare. Pennsylvania Nurse Aide Certification is available to students who successfully complete their clinical rotation and state exam.

**Heating, Ventilating, and Air-Conditioning**-This is a course that trains students with the necessary skills to become qualified technicians and mechanics. Students learn heating installation and service, air-conditioning installation and service, plumbing, electrical wiring, refrigeration, and sheet metal fabrication. Students will put 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 Career Center, helping to ensure immediate employment opportunities along with post secondary opportunities.

**Introduction to Pharmacy**-The Introduction to Pharmacy Program will provide twelfth grade students the opportunity to jump start their post-secondary training and work towards a career with increased employment opportunities over the next ten years. Students will learn compounding formulas and ratios, laws and regulations of the industry, participate in module lab work, practice sterilization skills with industry equipment, and demonstrate proficiency as required by industry standards. Students will participate in mock simulations and gain hands on experience within the community. Students will be required to pass a physical, TB test and criminal background check. The program is limited to twelfth grade students.

**Networking Engineering Technology**-Are you interested in knowing how the Internet works, building things, and working with computers? Are you familiar with the components and software aspects of a computer and interested in pursuing a career in computers? Then you may be a potential candidate for the Networking Engineering Technology course at the A.W. Beattie Career Center. Students will construct various



types of network cables, install network cards and drivers, set up peer-to-peer networks, and create network neighborhoods for several host computers. Lab exercises include setting up and troubleshooting Netscape and Internet Explorer, as well as participating in online curriculum. Each semester, students completing the two- year program will be

eligible to test for the Cisco Certified Networking Associates Certification. Students with CCNA certification received preference when seeking employment.

**Pastry Arts**-This course provides students with an opportunity to learn all the 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 cases, cookies, pies, brownies, breakfast pasties, 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.

### **Sports Medicine-Rehab Therapy and Exercise Sciences Technology**

**(SMART-EST)**-The SMART-EST program is designed for students that are looking towards the fields of: physical therapy, occupational therapy, physical rehabilitation, exercise physiology, and sports medicine. Students will develop valuable skills in diagnosis, differential diagnosis, assessment and prevention, along with prognosis and the rehabilitation of bodily injuries and related health conditions. Students will learn the therapy and application principles of a patient care plan including: assessment, evaluation, interventions of exercise, manual therapy, modalities and neuro re-education. Students will also develop goal setting and discharge plans for patients. Students will participate in nutrition understanding, as they learn how to develop proper diet plans for healthy individuals and they will learn how to tailor diet plans for special populations. Students participating in the SMART-EST program would have the following potential career pathways directly out of the program upon successful completion: Personal Trainer/Coach, and Physical Therapy Aid. In addition, the program provides a core base that a student may build a post-secondary degree of advanced certification upon. Careers available with additional post-secondary studies include: Personal and Athletic Trainer, Physical Therapist or Assistant, Occupational Therapist or Certified Occupational Therapist Assistant, Strength and Conditioning Coach, Medical and Exercise Physiology Researcher, Sports Psychologist, Dietitian, and Exercise Physiologist.

**Surgical Sciences**-This program will provide the opportunity for students to explore a variety of duties related to the procedures, tools, and equipment required within a

hospital operating room setting. Students will learn the skills needed for infection control and central sterile processing of equipment. Students will gain a solid foundation for their college and career pathway.

**Veterinary Sciences Technology (VET-TECH)**-Students enrolled in the Vet-Tech 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 Vet-Tech program on which to build a post-secondary degree. The Vet-Tech Program may lead to additional career pathways such as Animal Trainer, Animal Breeder, Non-Farm and Laboratory Animal Caretaker, Groomer, Animal Control Officer, Veterinary Technician or Technologist, and Veterinarian. Students will have the opportunity to earn the following recognized industry certification: Purina Certified Weight Coach, Pet Tech First Aid and CPR.

**Contact A.W. Beattie Career Center for more information:**

**A.W. Beattie Career Center**

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