NORTHGATE

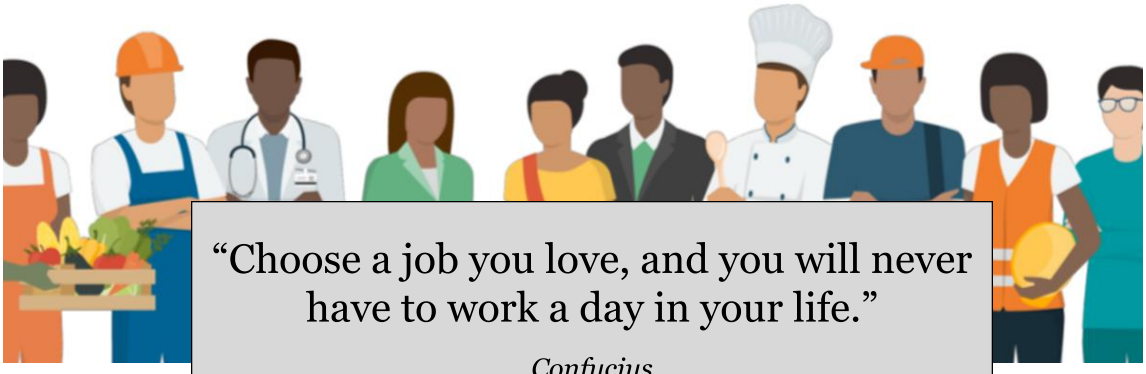
Middle/High School

Course Catalog & Career Pathways Guide

2022-2023

pennsylvania
DEPARTMENT OF EDUCATION

#CareerReadyPA



"Choose a job you love, and you will never have to work a day in your life."

Confucius

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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.

SECONDARY BUILDING PERSONNEL

A FULL STAFF DIRECTORY CAN BE FOUND AT NORTHGATESD.NET

Northgate Middle/Senior High School | 589 Union Avenue, Pittsburgh, PA 15202
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CAREER PATHWAYS

Northgate Middle/High School is implementing a rigorous and viable Career Pathways Program to help students in the following ways:

- Exploring current areas of interest & strength for each student
- Identifying specific courses offered at Northgate correspond to specific interests and careers
- Creating an academic pathway at Northgate determined by student interest and desire
- Achieving success on a desired career pathway that will lead to some type of post-high school education, training, or employment

Our students will develop a career plan beginning in 7th grade by utilizing an online career planning & investigation tool, called Smart Futures. The program is a career exploration tool utilized by students during mentoring time to identify and explore career opportunities and course offerings based on the results of the interest inventories and activities that Smart Futures offers. Below is a description of how students will utilize Smart Futures throughout their journey to support their career plans.

How Northgate Students Use the Pathways

Starting in 7th & 8th grade...

- Complete multiple interest surveys to help identify your interests and skills and the career cluster area in which they are located.
- Find the career pathway in your preferred cluster that most closely matches your career interests and skills.
- Look up course descriptions in the Northgate Program of Studies.
- Develop a Northgate Educational Plan to best plan your high school courses of study.

NORTHGATE MIDDLE SCHOOL COURSES

ENGLISH

ELA 7

Students in 7th grade ELA 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. Students will also 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.

ELA 8

Students in 8th grade ELA 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. Students are required to read multiple novels during the school year to increase reading stamina in longer texts. Students will also 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 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.

MIDDLE SCHOOL MEDIA & DIGITAL LITERACY

This 9-week course for 7th graders will expose students to media literacy at the secondary level, including resources available in the secondary library & media center. Exploration of media sources (digital and print) and appropriate use and application of media sources will expose all students to their rights and responsibilities as a student at the secondary level. Students will leave this course with an understanding of the various types of media available for them to use as learning tools in grades 7-12 in order for them to be successful students at the secondary level.

MIDDLE SCHOOL NEWS

This 9-week course for 8th graders will expose students to basic aspects of journalism 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 to the Northgate News, the school's student run newspaper, for publication. A portion of the class introduces the basics of video production through hands-on experiences of recording videos, editing, and using a green screen. Equipment includes video cameras and laptop computers. Students will work individually and with partners to develop the script and produce videos. They will interview peers and teachers, present middle school-themed recordings such as reporting the sports for the week, birthdays, and middle school events. 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 8th 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 (Grade 8)

Prerequisite: Successful completion of Math 7 and qualifying scores

This course is designed to align with the current PA Core expectations for 8th 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 9th grade.

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.

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 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.

HEALTH AND PHYSICAL EDUCATION

HEALTH /PHYSICAL EDUCATION 7

The quarter-long 7th 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 7th 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

HEALTH /PHYSICAL EDUCATION 8

The quarter-long 8th grade health physical education class is a continuation of the 7th grade class. This class is 9 weeks long and will help the students gain a greater understanding of physical movement and sports activities. The 8th 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.

BUSINESS AND 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

The Computer Science 8 course is designed as a 9-week course for students to learn the very basics of the programming language Python. During this 9-week course students will learn how to draw shapes and basic animation. We use the Carnegie Mellon University computer science academy online platform. The course is called CS0 which is designed for middle school aged students.

FINE AND PERFORMING ARTS

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.

MIDDLE SCHOOL STUDIO ARTS

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.

MIDDLE SCHOOL CHOIR

The Northgate Middle School Chorus is a group of mixed voices all coming together in song. Students experience an array of musical genres and become well-rounded musicians by taking this course. Our Chorus presents various evening performances for Fall, Winter, and Spring. Attendance is mandatory for all tech rehearsals and performances.

Students will learn proper vocal technique, performance skills, and knowledge of musical concepts. The National Standards of the Arts (Music Education) are followed. Middle School Chorus Members are held to the highest standard of excellence as are all Northgate Choral Music Ensembles.

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. Students are required to have completed at least 1 year of Elementary Band in order to participate in Middle School Band.

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.

INDUSTRIAL AND ALLIED ARTS

MIDDLE SCHOOL INDUSTRIAL ARTS

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.

MIDDLE SCHOOL ROBOTICS

Students will be engaged in STEM education through the use of robotics. The students will build robots and complete a series of activities that are structured around iterative, engineering design processes, real-world applications and opportunities for students to build teamwork and collaboration skills. This class will provide students with hands-on, minds-on engagements that encourage students to design creative solutions and innovate through experimentation.

MIDDLE SCHOOL BELL SCHEDULE

Class Minutes	Class Description
8:05 - 8:10 (5)	Homeroom
8:10 - 9:06 (56)	Advisory (Monday, Wednesday, Friday) Intervention/Remediation (Tuesday, Thursday) Band/Chorus (Tuesday, Thursday)
9:10-10:06 (56)	Core Academic Class 1 (Math, ELA, Science, Social Studies)
10:10-11:06 (56)	Core Academic Class 2 (Math, ELA, Science, Social Studies)
11:10-11:44 (34)	Lunch
11:48 - 12:44 (56)	Core Academic Class 3 (Math, ELA, Science, Social Studies)
12:48 - 1:44 (56)	Core Academic Class 4 (Math, ELA, Science, Social Studies)
1:48 - 2:28 (40)	Exploratory Rotation 1 Health, PE, Computer Science, Media & Digital Literacy (7) /MS News (8)
2:32 - 3:12 (40)	Exploratory Rotation 2 Music, Art, Industrial Arts, Robotics

CAREER PLANNING THROUGH HIGH SCHOOL

- As you enter high school, follow and adjust your Northgate Educational Plan (NEP) to include the required courses in addition to career specific electives that are of interest to you based on your career pathway.
- Use the course selection sheet as you plan when you would schedule specific courses.

Consider transition activities as a capstone to your career pathway, such as work based learning experiences, internships, pre-apprenticeship, dual enrollment opportunities, etc. that are related to your career pathway.

SIXTEEN CAREER CLUSTERS

Career Cluster Area	Description	Pathways
Agriculture, Food & Natural Resources	The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.	Agribusiness Systems, Animal Systems, Environmental Service Systems, Food Products and Processing Systems, Natural Resources Systems, Plant Systems, Power, Structural and Technical Systems
Architecture & Construction	Careers in designing, planning, managing, building and maintaining the built environment.	Construction, Design/Pre-Construction, Maintenance/Operations
Arts, A/V Technology & Communications	Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.	Audio and Video Technology and Film, Journalism and Broadcasting, Performing Arts, Printing Technology, Telecommunications, Visual Arts
Business, Management & Administration	Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.	Administrative and Information Support, Business Analysis, Business Financial Management and Accounting, Human Resources, Management, Marketing
Education & Training	Planning, managing and providing education and training services, and related learning support services.	Administration and Administrative Support, Professional Support Services, Teaching/Training

Finance	Planning, services for financial and investment planning, banking, insurance, and business financial management.	Banking & Related Services, Business Financial Management, Financial & Investment Planning, Insurance Services
Government & Public Administration	Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.	Foreign Service, Governance, National Security, Planning, Public Management and Administration, Regulation, Revenue and Taxation
Health Science	Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.	Biotechnology Research and Development, Diagnostic Services, Health Informatics, Support Services, Therapeutic Services
Hospitality & Tourism	Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.	Lodging, Recreation, Amusements & Attractions, Restaurants and Food/Beverage Services, Travel & Tourism
Human Services	Preparing individuals for employment in career pathways that relate to families and human needs.	Consumer Services, Counseling & Mental Health Services, Early Childhood Development & Services, Family & Community Services, Personal Care Services
Information Technology	Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.	Information Support and Services, Interactive Media, Network Systems, Programming and Software Development
Law, Public Safety & Security	Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.	Correction Services, Emergency and Fire Management Services, Law Enforcement Services, Legal Services, Security & Protective Services
Manufacturing	Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.	Health, Safety and Environmental Assurance, Logistics & Inventory Control, Maintenance, Installation & Repair, Manufacturing Production Process Development, Production, Quality Assurance
Marketing, Sales & Service	Planning, managing, and performing marketing activities to reach organizational objectives.	Buying and Merchandising, Distribution and Logistics, E-Marketing, Management and

		Entrepreneurship, Marketing Communications and Promotion, Marketing Information Management and Research, Professional Sales and Marketing
Science, Technology, Engineering & Mathematics	Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.	Engineering and Technology, Science and Math
Transportation, Distribution & Logistics	Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.	Facility and Mobile Equipment Maintenance, Health, Safety and Environmental Management , Logistics Planning and Management Services, Sales and Service, Transportation Operations, Transportation Systems/Infrastructure Planning, Management, and Regulation , Warehousing and Distribution Center Operations

The following pages have the descriptions of careers and courses that correspond with the major career clusters.

Use these pages to help you map out and plan your course selections for 9th grade and beyond by creating your personal Northgate Education Plan (NEP).

It is okay if you are unsure what you want to do for the rest of your life. Use the Career Cluster information you have learned and speak with your school counselor, administrator or trusted adult if you have questions.

Agriculture, Food & Natural Resources	Architecture & Construction	Arts, A/V Technology & Communications	Business, Management & Administration
Career Possibilities			
Occupations Requiring Postsecondary Education ►Agricultural Chemical Dealer ►Aquaculturist ►Bank/Loan Office ►Environmental ComplianceAssurance Manager ►Equine Manager ►Farm Manager ►Health and Safety Sanitarian ►Meat Cutter-Meat Grader ►Park Manager ►Produce Buyer ►Recycling Technician ►Wildlife Manager **Occupations Requiring Baccalaureate Degree** ►Agricultural Educator ►Botanist ►Ecologist ►Environmental Engineer ►Fish and Game Officer ►Plant Pathologist ►Veterinarian	►Carpenter Code Official ►Concrete Finisher Construction ►Engineer Construction ►Foreman/Manager ►Construction Inspector ►Contractor Design Builder ►Drywall Installer Electrician ►Electronic Systems Technician ►Equipment and Material ►Manager General ►Contractor/Builder Heating, ►Ventilation, Air Conditioning and Refrigeration Mechanic ►Mason Painter Paperhanger ►Plumber Project Estimator ►Project Inspector Project ►Manager Roofer Safety Director ►Sheet Metal Worker Specialty ►Contractor Superintendent Tile and Marble Setter	►Actor ►Audio-Video Designer and . Engineer ►Broadcast Technician ►Commercial Artist ►Computer Animator ►Curator/Gallery Manager ►Director and Coach ►Fashion Designer ►Journalist ►Lithographer ►Musician ►Printing Equipment Operator ►Telecommunication Technician ►Videographer ►Web Page Designer	►Administrative Assistant ►Advertising Sales Person ►Auditor ►Business Consultant ►Certified Public Accountant ►Corporate Trainer ►E-Commerce Analyst ►Entrepreneur ►Facilities Manager ►Finance Director ►Human Resources Manager ►Investment Executive ►Marketing Analyst ►Medical Transcriptionist ►Office Manager ►OSHA/ADA Compliance Officer ►Personnel Recruiter ►Public Relations Manager ►Sales Representative ►Wholesale and Retail Buyer
Northgate Course Offerings			
Statistics Personal Finance Science 9 Biology PA Biology 1 and 2 Marine Biology Physics Chemistry Anatomy / Physiology Genetics Astronomy Human Geography Anthropology Computer Science Principles Business Communication Entrepreneurship	Algebra 1 and 2 Geometry Trigonometry/Pre-Calculus Calculus Statistics Personal Finance Computer Science Principles Business Communication Entrepreneurship Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3 Physics Chemistry	English 1-4 AP Literature AP Language and Composition French 1-4 Spanish 1-4 Computer Science Principles Business Communication Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3 Studio Arts 2-4 Marching Band Concert Band Concert Choir Piano	English 1-4 AP Language and Composition Theories of Leadership Algebra 1 and 2 Statistics Personal Finance Economics PsychologyComputer Science Principles Business Communication Entrepreneurship

Education & Training	Finance	Government & Public Administration	Health Science
Career Possibilities			
►Administrator ►Assessment Specialist ►CareerTech Administrator ►Child Care Worker ►Clinical Psychologist ►Coach ►College/University Faculty ►Counselor ►Curriculum Developer ►Elementary Teacher ►High School Teacher ►Middle School Teacher ►Principal ►Speech-Language Pathologist	►Abstractor ►Accountant ►Actuary ►Bill and Account Collector ►Commodities Representative ►Controller ►Credit Analyst ►Debt Counselor ►Economist ►Financial Planner ►Foreign Exchange Manager ►Fundraiser ►Insurance Broker ►Internal Auditor ►Loan Officer ►Non-Profit Manager ►Tax Examiner ►Title Researcher and Examiner ►Treasurer ►Trust Officer ►Underwriter	►Ambassador ►Bank Examiner ►City Manager ►Combat Control Officer ►Commissioner ►Cryptographer ►Election Supervisor ►Elected Official ►Foreign Service Officer ►Immigration Officer ►Intelligence Analyst ►Internal Revenue Investigator ►Lobbyist ►National Security Advisor ►Planner ►Policy Advisor ►Tax Policy Analyst	**Occupations Requiring Less than Baccalaureate Degree** ►Dental Assistant/Hygienist ►EMT/Paramedic ►Health Information Coder ►Home Health Aide ►Lab Technician ►Phlebotomist ►Radiographer ►Registered Nurse **Occupations Requiring Baccalaureate Degree** ►Athletic Trainer ►Biochemist ►Biostatistician ►Geneticist ►Industrial Hygienist ►Nutritionist ►Occupational Therapist ►Physician (MD/DO) ►Physician's Assistant ►Psychologist ►Radiologist ►Research Scientist ►Speech/Language Pathologist ►Toxicologist ►Veterinarian
Northgate Course Offerings			
English 1-4 AP Literature AP Language and Composition Statistics Biology Chemistry Physics Anatomy / Physiology Genetics Psychology Sociology French 1-4 Spanish 1-4 Health Computer Science Principles Business Communication	Algebra 1 and 2 Geometry Trigonometry/Pre-Calculus Statistics Calculus Personal Finance Economics Computer Science Principles Business Communication	English 1-4 AP Language and Composition Theories of Leadership Statistics Personal Finance Forensics Economics Government American Studies 1 and 2 French 1-4 Spanish 1-4 Computer Science Principles Business Communication	Algebra 1 and 2 Trigonometry/Pre-Calculus Statistics Calculus Forensics Biology PA Biology 1 and 2 Marine Biology Physics Chemistry Anatomy / Physiology Genetics Psychology Health Physical Education Computer Science Principles Business Communication

Hospitality & Tourism	Human Services	Information Technology	Law, Public Safety & Security
Career Possibilities			
► Baker ► Bartender ► Casino Manager ► Caterer ► Concierge ► Convention Services Manager ► Director of Operations - Lodging ► Director of Tourism Development ► Event Planner ► Executive Chef ► Facilities Manager ► Maitre d' ► Museum Director ► Reservations Manager ► Restaurant Owner/Manager ► Sports Promoter ► Theme Park Manager ► Tour and Travel Guide ► Travel Agent ► Wine Steward	► Buyer ► Certified Financial Planner ► Community Service Director ► Consumer Advocate ► Cosmetologist ► Director of Childcare Facility ► Emergency and Relief Worker ► Esthetician ► Funeral Director ► Licensed Professional Counselor ► Market Researcher ► Massage Therapist ► Personal Fitness Trainer ► School Counselor/Psychologist ► Small Business Owner ► Social Worker	► Animator ► Database Administrator ► Data Systems Designer ► E-Business Specialist ► Game Developer ► Information Technology Engineer ► Media Specialist ► Network Administrator ► Network Security Analyst ► PC Support Specialist ► Programmer ► Software Applications Specialist ► Systems Administrator ► Telecommunications Network Technician ► User Support Specialist ► Virtual Reality Specialist ► Web Architect/Designer	► Attorney ► Bomb Technician ► Corrections Officer ► Court Reporter ► Criminal Investigator ► EMT ► Federal Marshall ► Firefighter ► Gaming Surveillance Specialist ► Hazardous Materials Responder ► Loss Prevention Specialist ► Paralegal ► Park Ranger ► Police and Patrol Officer ► Probation/Parole Officer ► Public Information Officer ► Security Director ► Youth Services Worker
Northgate Course Offerings			
Theories of Leadership Statistics Personal Finance Economics Sociology French 1-4 Spanish 1-4 Computer Science Principles Business Communication	English 1-4 AP Literature AP Language and Composition Statistics Personal Finance Biology Chemistry Anatomy / Physiology Genetics Economics Psychology Sociology French 1-4 Spanish 1-4 Health Computer Science Principles Business Communication	Algebra 1 and 2 Geometry Trigonometry/Pre-Calculus Statistics Calculus Personal Finance Computer Science Principles Business CommunicationCreative Showcase of Innovation Innovative Design 1-3	English 1-4 AP Literature AP Language and Composition Theories of Leadership Statistics Forensics Government American Studies 1 and 2 Computer Science Principles Business Communication Chemistry Physics

Manufacturing	Marketing, Sales & Service	Science, Technology, Engineering & Mathematics	Transportation, Distribution & Logistics
Career Possibilities			
►Assembler ►Boilermaker ►Design Engineer ►Environmental Engineer ►Foundry Worker ►Freight, Stock and Material Mover ►Health and Safety Representative ►Industrial Machinery Mechanic ►Inspector ►Labor Relations Manager ►Logistician ►Manufacturing Technician ►Pattern and Model Maker ►Production Manager ►Quality Control Technician ►Safety Engineer ►SPC Coordinator ►Tool and Diemaker ►Traffic Manager ►Welder	►Copywriter/Designer ►E-Commerce Director ►Entrepreneur ►Field Marketing Representative ►Forecasting Manager ►Interactive Media Specialist ►Inventory Manager/Analyst ►Logistics Manager ►Merchandise Buyer ►On-line Market Researcher ►Public Relations Manager ►Promotions Manager ►Retail Marketing Coordinator ►Sales Executive ►Shipping/Receiving Clerk ►Telemarketer ►Trade Show Manager ►Warehouse Manager ►Webmaster	►Aerospace Engineer ►Agricultural Engineer ►Analytical Chemist ►Anthropologist ►Architectural Engineer ►Astrophysicist ►Biomedical Engineer ►CAD Technician ►Civil Engineer ►Computer Programmer ►Ecologist ►Geologist ►Geothermal Engineer ►Math Teacher ►Mathematician ►Metallurgist ►Statistician ►Survey Technician ►Zoologist	►Airplane Pilot/Co-Pilot ►Air Traffic Controller ►Avionics Technician ►Cargo and Freight Agent ►Customs Inspector ►Environmental Manager ►Facility Engineer ►Industrial Equipment Mechanic ►Industrial and Packaging Engineer ►International Logistics Specialist ►Locomotive Engineer ►Marine Captain ►Port Manager ►Safety Analyst ►Storage and Distribution Manager ►Transportation Manager ►Truck Driver ►Urban and Regional Planner ►Warehouse Manager
Northgate Course Offerings			
Theories of Leadership Algebra 1 and 2 Geometry Statistics Personal Finance Economics Computer Science Principles Business Communication Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3 Chemistry Physics	English 1-4 Algebra 1 and 2 Geometry Statistics Personal Finance Economics Psychology Computer Science Principles Business Communication Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3	Algebra 1 and 2 Geometry Trigonometry/Pre-Calculus Statistics Calculus Personal Finance Forensics Biology PA Biology 1 and 2 Marine Biology Physics Chemistry Anatomy / Physiology Genetics Health Computer Science Principles Business Communication Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3	Algebra 1 and 2 Geometry Trigonometry/Pre-Calculus Statistics Calculus Personal Finance Economics Computer Science Principles Business Communication Creative Showcase of Innovation Materials and Fabrication 1-3 Innovative Design 1-3 Physics Chemistry

GRADUATION REQUIREMENTS

The minimum high school graduation requirements as set forth by the Pennsylvania Department of Education and the Northgate School Board are as follows:

CURRENT GRADE	9TH | 2025	10TH | 2024	11TH | 2023	12TH | 2022
English	4.0	4.0	4.0	4.0
Social Studies/ Government	4.0	4.0	4.0	4.0
Mathematics/Algebra*	3.0	3.0	3.0	3.0
Science	3.0	3.0	3.0	3.0
Computer Science Principles or AP Computer Science Principles A	1.0	1.0	1.0	1.0
Business Communications	1.0	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
CORE COURSE TOTAL	**17.5**	**17.0**	**17.0**	**17.0**
Electives	7.0	7.5	7.5	7.5
TOTAL	**24.5**	**24.5**	**24.5**	**24.5**

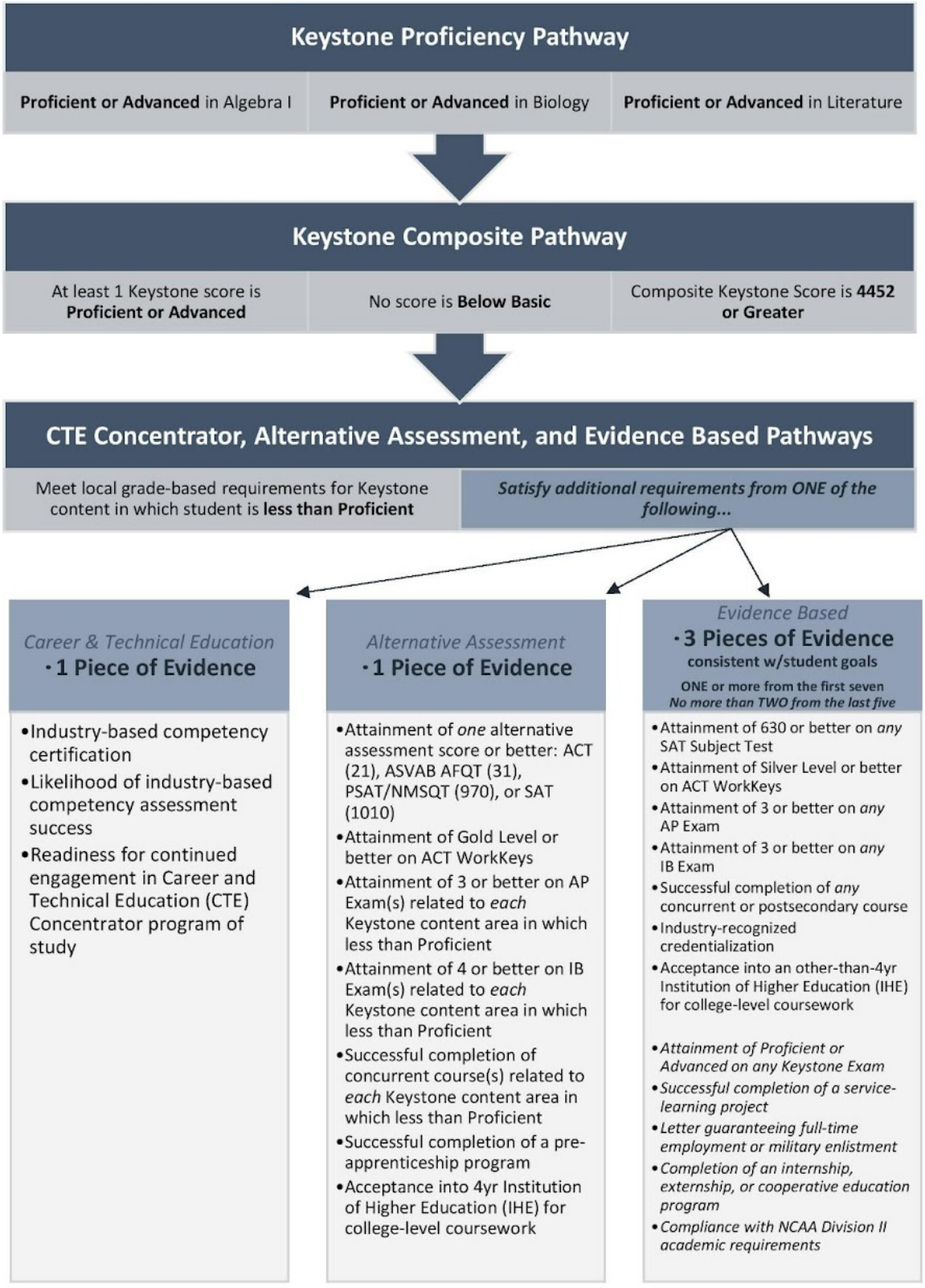
*Students may satisfy the Algebra requirement in 8th grade. These students are still required to complete a minimum of 3.0 credits of mathematics coursework during grades 9-12.

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

ACT 158 Pathways

Act 158 of 2018 (Act 158) provides alternatives to Pennsylvania's statewide requirement of attaining proficiency on the three end-of-course Keystone Exams (Algebra I, Literature, and Biology) in order for a student to achieve statewide graduation requirements. Effective with the graduating class of 2023, students have the option to demonstrate postsecondary preparedness through one of four additional pathways that more fully illustrate college, career, and community readiness. Keystone Exams will continue as the statewide assessment Pennsylvania uses to comply with accountability requirements set forth in the federal Every Student Succeeds Act (ESSA). Although students will no longer be required to achieve proficiency on the Keystone Exams in order to meet statewide graduation requirements, students must take the Keystone Exams for purposes of federal accountability.

Act 158 Pathway Graphic



NORTHGATE EDUCATION PLAN (NEP)

Student Name:		**Mentor:**		**Career Pathway/Interest: (Highlight the courses that will count as your career pathway requirements)**	
Required Courses For Graduation	**9th Grade**	**10th Grade**	**11th Grade**	**12th Grade**	**Additional Courses** (if doubled up within a year)
English (4 credits)					
Social Studies (4 credits)					
Mathematics (3 credits)					
Science (3 credits)					
Business Communications (1 credits)					
Computer Science Principles or AP Computer Science Principles A (1 credit)					
Physical Education (1 credits)					
Health (0.5 credit)					
Electives (7.0 credits)					

COLLEGE IN HIGH SCHOOL PROGRAM

In partnership with local colleges and universities, Northgate High School is excited to offer eligible high school students an opportunity to earn college credits. Northgate high school courses have been analyzed to ensure that Northgate High School students will have the opportunity to engage in a fully enriched curriculum that prepares them for college and career success.

Students interested in earning dual enrollment credit should register for Northgate's College in High School (CIHS) program courses. Each course has its own set of eligibility guidelines to ensure that students are prepared for the rigorous expectations of college-level work. Northgate instructors will provide enrollment information to students during spring registration or at the start of each course.

For some courses, there will be fees for tuition in order to earn credits. Costs cover all registration fees and access to technology and academic support resources. The cost of each course is set annually by each college or university. At times, sponsorship is available through the district. You can apply for sponsorship at https://bit.ly/CIHSSponsorship. 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 local colleges and universities offers exceptional access to top-notch college-level academics, and it is our hope that all Northgate High School students will take advantage of this exciting opportunity!

Sincerely,

Dr. Caroline Johns

NORTHGATE CREDIT-BEARING DUAL ENROLLMENT COURSES

ENGLISH DEPARTMENT

NORTHGATE TEACHER	NORTHGATE COURSE	ROBERT MORRIS UNIVERSITY COURSE
Mrs. Egger	CIHS English 3	CSEN 1010 "Reading and Writing Strategies"
Mrs. Mignella	CIHS English 4	ENGL 1040 "Reading Literature: Coming of Age"
Mrs. Egger	A.P. Language & Composition	CSEN 1020 "Argument and Research"
Mr. Smith	A.P. Literature & Composition	ENGL 1050 "Classic and Modern Literature"
NORTHGATE TEACHER	**NORTHGATE COURSE**	**THE UNIVERSITY OF PITTSBURGH COURSE**
Mr. Smith	CIHS Theories of Leadership	LDRSHP 1100 "Theories of Leadership"

HISTORY DEPARTMENT

NORTHGATE TEACHER	NORTHGATE COURSE	ROBERT MORRIS UNIVERSITY COURSE
Mr. Hogle	CIHS Human Geography	GEOG 1020 "World Geography"
Mr. Pipak	CIHS Government	POLS 1020 "American National Government"
Mr. Michalow	CIHS AP European History	HIST 2600: "Modern European History"
NORTHGATE TEACHER	**NORTHGATE COURSE**	**CARLOW UNIVERSITY**
Mr. Michalow	AP US History	HS 170 "US History Prior to 1865"
Mr. Michalow	AP US History	HS 171 "US History After 1865"

MATH DEPARTMENT

NORTHGATE TEACHER	NORTHGATE COURSE	CARLOW UNIVERSITY COURSE
Mr. Veshio	CIHS Algebra II	MAT110 "College Algebra"
Mr. Veshio	CIHS Trig/Pre-Calculus	MAT150 "Pre-Calculus"
Mr. Veshio	AP Statistics	MAT115 "Applied Statistics"
Mr. McKay	AP Calculus	MAT160 "Calculus 1"

SCIENCE DEPARTMENT

NORTHGATE TEACHER	NORTHGATE COURSE	CARLOW UNIVERSITY COURSE
Mrs. Rusnak	AP Physics 1	PCS 201 "Physics I"/ PCS 203 "Lab"
Mrs. Malm	CIHS Chemistry	CHM 111 "General Chemistry I Lecture"/ CHM113 "Lab"
Mrs. Malm	AP Chemistry	CHM 112 "General Chemistry II Lecture"
Mr. Donini	CIHS Anatomy and Physiology	BIO 201 "Anatomy and Physiology I"
Mr. Donini	AP Biology	BIO 120 "Foundations of Molecular and Cell Biology"

BUSINESS DEPARTMENT

NORTHGATE TEACHER	NORTHGATE COURSE	ROBERT MORRIS UNIVERSITY COURSE
Mrs. Wertheimer	CIHS Computer Science	INFS 1020 "Fundamentals of Informational Technology"
Mrs. Wertheimer	AP Computer Science A	INFS 2151 "Programming I"

We continuously seek opportunities for dual enrollment courses, and many of these offerings are contingent on our partnerships. Therefore, the list of courses offered is subject to change.

NORTHGATE HIGH SCHOOL COURSES

ENGLISH

ENGLISH 1 ..... 1 Credit
English 1 will provide a foundation for skills that will be built upon in the later 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. 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 I class. Students will be assessed through quizzes/tests, assignments, projects, writings, class participation, and final exam.

ENGLISH 2 .....1 Credit
This course aligns with the Keystone Literature Exam. The students will develop the discipline and techniques necessary for effective writing through concentration on the development of ideas, clarity of expression, and correct grammar. Both fiction and nonfiction texts will be examined throughout the course. Stress will be placed on learning to respond orally and in writing to all genres of literature, including several novels within the course of the year. A final examination is mandatory for the course. Upon successful completion of this course, students will take the Keystone Literature Exam.

CIHS ENGLISH 3.....1 Credit / 3 RMU Credits
This course introduces students to college-level, academic writing. Emphasis is placed on critical analysis, argumentation, intellectual honesty and revision. Through the writing process, students will refine arguments; develop and support ideas; investigate, evaluate, and integrate appropriate sources; revise and edit for effective style and usages; and develop an awareness of the variety of contexts, audiences, and purposes of academic writing. Students produce five to seven reading-based, multi-paragraphed essays of increasing difficulty. 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 4.....1 Credit / 3 RMU Credits
This course is a survey course of literature. The course 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. English 4 provides a supportive environment including in-class workshops, drafting opportunities and peer-to-peer evaluations so that students may demonstrate proficiency in their reading and writing skills. This course 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 LANGUAGE AND COMPOSITION.....1 Credit / 3 RMU Credits
Prerequisite: Successful completion of English CIHS 3

AP English Language focuses on rhetoric. Students will study language as a persuasive tool and examine the integral relationships of writer, context, audience, and argument. The course focuses primarily on nonfiction works. Techniques of diction, syntax, imagery, and tone are studied in order to better understand the nature of argumentation. Students should be able to read complex texts with understanding and write in a manner that explores ideas, reconsiders strategies, and emphasizes revision of drafts. Students will write formally and informally through revised essays, journals, collaborative writing, and in- class responses as well as produce expository and argumentative compositions that introduce complex ideas developed through cogent and sustained reasoning. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

AP LITERATURE.....1 Credit/ 3 RMU Credits
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. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

THEORIES OF LEADERSHIP.....1 Credit/ 3 Pitt Credits
This course is designed to acquaint students with multiple theories and practices associated with effective leadership. In answering the question, "What is leadership?" It examines such theories as situational, participative, transformational, and servant leadership. Consideration is given to issues of followership and the many roles we play in life. The class also addresses those leadership and administrative skills and practices usually associated with effective professional management.

MATHEMATICS

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 I

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.

CIHS ALGEBRA II ..... 1 Credit / 3 Carlow Credits
Prerequisite: Successful completion of Algebra I

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 / 3 Carlow 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.

CIHS AP STATISTICS..... 1 Credit / 3 Carlow 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.

CIHS AP CALCULUS ..... 1 Credit / 4 Carlow 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. At the end of the year, students will be encouraged to take the nationally administered Advanced Placement Test.

PERSONAL FINANCE ..... 1 Credit

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.

SCIENCE

SCIENCE 9 ..... 1 Credit
This course will be taken by incoming 9th grade students. The course will examine physical, chemical, and life sciences through connected themes and concepts. All students will study 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 order to be introduced to a variety of interconnected content, and to prepare for future opportunities and courses.

BIOLOGY ..... 1 Credit
Prerequisite: Successful completion of Science 9 or faculty recommendation

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. Projects will be assigned regularly. Scientific writings and readings are required. Class periods are devoted to labs, inquiry observations, and scientific methodology. Final examination is required.

PHYSICS ..... 1 Credit
Prerequisite: Successful completion of Science 9 or faculty recommendation

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 Carlow Credits
Prerequisite: Successful completion of Science 9 or faculty recommendation

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.

CIHS AP CHEMISTRY ..... 1 Credit / 3 Carlow Credits
Prerequisite: Successful completion of CIHS Chemistry

The course will include topics in the structure of matter, kinetic theory of gasses, 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. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

CIHS AP BIOLOGY ..... 1 Credit / 4 Carlow Credits
Prerequisite: Successful completion of CIHS Biology

Students planning to take AP Biology are highly encouraged to take Chemistry. 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. Labs will be included throughout the semester.

CIHS AP PHYSICS 1 ..... 1 Credit / 4 Carlow Credits
Prerequisites: Successful completion of Algebra II 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. Students should be prepared to devote a significant amount of time to working on laboratory reports and problem sets outside of class. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

CIHS ANATOMY/PHYSIOLOGY ..... 1 Credit / 4 Carlow Credits
Prerequisite: Successful completion of Biology

Anatomy and Physiology is a course designed to better familiarize the student with the scientific concept of bodily functions and the causes and effects 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 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 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 this class will cover include but are not limited to Microbiology, Renewable Energy, and other advanced science topics.

FORENSICS ..... 0.50 Credit

Forensic Science is an upper level science 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.

ASTRONOMY ..... 0.50 Credit

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

PENNSYLVANIA BIOLOGY I ..... 0.50 Credit
Prerequisite: Successful completion of 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
Prerequisite: Successful completion of 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).

MARINE BIOLOGY ..... 0.50 Credit
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 an integrated study of chemistry, biogeography, biology, ecology, 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
Prerequisite: Successful completion of Science 9

Genetics is a semester long, introductory course offered to upperclassmen. 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.

SOCIAL STUDIES

AMERICAN STUDIES I .....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 19th 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 II ..... 1 Credit
American Studies II 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 RMU 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 RMU 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. This course will also do an in-depth study of the election process concentrating on the different types of elections and political parties.

CIHS AP EUROPEAN HISTORY .....1 Credit/ 3 RMU Credits
Prerequisite: Successful completion of American Studies II
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. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

CIHS AP US HISTORY ..... 1 Credit/ 6 Carlow Credits
Prerequisite: Successful completion of American Studies II
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. At the end of the year, all students will be encouraged to take the Advanced Placement Exam.

PSYCHOLOGY ..... 0.50 Credit
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
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
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
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.

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.

FRENCH IV ..... 1 Credit
Prerequisite: Successful completion of 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.

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 themes. 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.

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 .....0.50 Credit

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 ..... 1 Credit

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.

BUSINESS AND TECHNOLOGY EDUCATION

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.

AP COMPUTER SCIENCE A ..... 1 Credit
Prerequisite: Successful completion of Algebra I or enrollment in Algebra I

AP Computer Science A (CSA) is an introductory college-level computer science course. It introduces students to software engineering and object-oriented design while learning the Java programming language.

The AP CSA curriculum is recommended for any high school student who wishes to continue their computer science education after completing an introductory course, such as Computer Science Principles (CS Principles) or Computer Science Discoveries (CS Discoveries).

BUSINESS COMMUNICATIONS ..... 1 Credit
(Grades 10, 11, and 12 only)

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 .....1 Credit
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.

TECHNOLOGY, ENGINEERING, AND ART

(MCS) Making Cool Stuff ..... 0.50 Credit

This course will be provided to all 9th-graders and will rotate with their required Health class. Students will engage in project-based making, rooted in their passions across the three curriculums of Technology Education, Art and Design/Engineering This course will provide students with a thorough understanding of Technology, Engineering and Art courses available in grades 10-12.

STUDIO ARTS I, II, and III..... 1 Credit
Prerequisite: Successful completion of Studio MCS

Skills learned in MCS are essential for success in Studio Arts. 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 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.

MATERIALS AND FABRICATION I, II, and III ..... 1 Credit
Prerequisite: Successful completion of MCS

This course builds upon the skills and material covered in CSP and is for students who wish to develop a better understanding of the tools and techniques used in a materials processing shop. 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.

INNOVATIVE DESIGN I, II, and III ..... 1 Credit
Prerequisite: Successful completion of MCS

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.

PERFORMING ARTS

MARCHING BAND/CONCERT BAND S1..... 1 Credit

Prerequisite: Successful completion of Middle School Band.
This course will have a dual focus on Marching Band and Concert Band. During the 1st 9 weeks there will be portions of the class dedicated to practice Marching Band related music and content. 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.* However there will be concert band elements included as part of the class for the entire semester. Once the 2nd 9 weeks begins the focus will solely be on Concert Band. 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. 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 S2 .... 1 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.

CONCERT CHOIR ..... 1 Credit
The Northgate High School Concert Choir is a group of mixed voices all coming together in song. Students experience an array of musical genres and become well-rounded musicians by taking this course. Our Choir presents various evening performances for Fall, Winter, and Spring. Attendance is mandatory for all tech rehearsals and performances.
Being a Member of our Choir, you are able to showcase your artistic expression while developing self-confidence and esteem. We give back to our school and surrounding communities in a positive way spreading our love of music. All students who are dedicated to singing, music, and the arts should consider joining this life-changing elective.

PIANO ..... 1 Credit
Students will develop beginning, intermediate, and advanced piano skills. You will read music, have a comprehension of theory, improve self-discipline, concentration, coordination, and several additional concepts will be learned. All students who are dedicated to playing, music, and the arts should consider joining this rewarding elective.

INTERNSHIPS

INTERNSHIPS ..... 1-4 Credits
An internship is a highly-structured, sustained career preparation activity in which students are placed at a workplace for a defined period of time to participate in and observe work firsthand within a given industry. With the support of a counselor students will be consulted to determine placement, mentor and learning objectives will be specified, as well as reviewing how student performance is assessed. Length of the internship will vary based on credit weight, a longer time period in the workplace deepens the learning experience for the student. This deepened experience enhances the transference of employability skills and increases the acquisition of technical skills through hands-on experiences. The internship will be awarded 1 credit for every 120 clock hours. Internships will be graded as pass or fail.

HIGH SCHOOL BELL SCHEDULE

High School Times & Class Minutes	Course Description
8:15-9:00	HR/Intervention & Enrichment
9:04-10:24	Period 1
10:28-11:48	Period 2
11:50-1:44	Lunch (11:50-12:20) + Period 3 (12:24-1:44) **OR** Period 3 (11:52-1:12) + Lunch (1:14-1:44)
1:48-3:08	Period 4

A.W. BEATTIE CAREER CENTER

A.M. Morning Session ..... 3 Credits
This program is for students in grades 10th, 11th, and 12th

General Information

A.W. Beattie Career Center offers students an opportunity to prepare for their chosen career field through advanced career preparation during their 10th, 11th and 12th 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 advanced 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 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 9th or 10th grade and will be carefully reviewed. Further information concerning the A.W. Beattie Career Center's program is available in the School Counseling Office.

A.W. Beattie Career Center Programs

- Advertising Design
- Automotive Collision Technology
- Automotive Technology
- Carpentry/Building Construction
- Computer System Technology, Network Engineering Technology and Cyber Security
- Cosmetology
- Culinary Arts
- Dental Careers
- Early Childhood Education
- Emergency Response Technology
- Health and Nursing Sciences
- Heating, Ventilating and Air-Conditioning Technology
- Introduction to Pharmacy (limited to 12th grade only)
- Pastry Arts
- Robotics Engineering Technology
- Sports Medicine/Rehab Therapy
- Surgical Sciences
- Veterinary Sciences Technology (VET-TECH)

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.

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

A.W. Beattie Career Center | 9600 Babcock Boulevard | Allison Park, PA 15101
Phone: 412-847-1912 | Fax: 412-366-9600
www.beattietech.com
Email: sara.goodyear@beattietech.com (last names A-L)
Email: kim.zylinski@beattietech.com (last names M-Z)

A.W. BEATTIE CAREER CENTER PROGRAM DESCRIPTIONS

Advertising Design: The Advertising Design program focuses on a wide variety of professional art-related fields including: Digital Graphic, Design, Multimedia, Digital Photography, and Web Design.Students will use the latest in professional graphic design software to hone their creativity.

Automotive Collision Technology: Students are trained in all aspects of the industry including MIG welding, computerized paint mixing, and automotive spraying techniques. Students have the opportunity to earn certification in I-CAR.

Automotive Technology: Instruction covers a wide range of skills including engine repair, computer diagnostics, and maintenance. Students will have the opportunity to earn a Pennsylvania State inspection and Emissions Certification.

Carpentry/Building Construction: Students will receive classroom and hands-on training in carpentry, masonry, plumbing, residential wiring, and blueprint reading, while also having the opportunity to build a modular home.

Computer Systems Technology, Network Engineering Technology and Cyber Security: Students will learn the basics of networking as well as building, maintaining, and troubleshooting computers. They will set up and maintain internet services.

Cosmetology: Students will study the care of hair, nails, and skin while learning the proper use of cosmetology tools and equipment. Students will practice their skills in the professional salon that is open to the public. Upon completion of the required hours, students will be eligible to test for their Pennsylvania State Cosmetologist License.

Culinary Arts: In this program, students learn all aspects of the restaurant business from meal planning, food preparation, baking and carving, to dining room management and banquet serving. In this program, students practice their craft in a commercially equipped kitchen as well as their customer service skills in the restaurant.

Dental Careers: This program provides students with the necessary skills for employment in dental assisting and lab technician, among other opportunities within the dental industry. Students learn the latest techniques to prepare for their PA Dental Radiology Certification.

Early Childhood Education: Students learn about the physical, social, emotional, and intellectual aspects of early childhood development. In addition to a variety of classroom activities, qualified students apply their teaching skills in Beattie's onsite child care center.

Emergency Response Technology: Students study police science, fire science, rescue operations, hazardous materials, and emergency medical services. They will be challenged with exciting hands-on training in a fully equipped on-site lab. Also, students will have the opportunity to earn their Pennsylvania Department of Health EMT Certification.

Health and Nursing Sciences: The core curriculum will prepare students for entry level positions such as medical

assisting and nurse assisting. Students will gain valuable hands-on clinical experience in hospitals and nursing homes where they will practice and perfect their skills.

Heating, Ventilating, and Air Conditioning: HVAC trains students with the necessary skills to become qualified technicians and mechanics. Students learn heating installation and service, air-conditioning, plumbing, electrical wiring, refrigeration and sheet metal fabrication.

Introduction to Pharmacy: Students will learn compounding formulas and ratios, laws and regulations, and practice with industry equipment. The interactive training prepares students to test for the Pharmacy Technician certification. The program is limited to 12th grade students.

Pastry Arts: Pastry Arts provides students with an opportunity to learn all functions of a commercial bakery while perfecting their creative pastry skills. Students receive training on everything from baked goods preparation to merchandising and dining room service.

Robotics Engineering Technology: Students move through a series of introductory activities into advanced design using curriculum developed through the National Robotics Engineering Center. Due to the broad application of robotics, numerous employment opportunities exist locally and nationally.

Sports Medicine/Rehab Therapy: This program is designed for students looking toward careers in the fields of physical therapy, occupational therapy, physical rehabilitation, exercise physiology, and sports medicine. The program provides a knowledge base that a student may build upon with a post-secondary degree or advanced certification.

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 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: Students enrolled in the Veterinary Assistant program will learn a wide variety of care and management techniques including examination room procedures, surgical assisting, pet first aid, and small animal nursing. They will gain a solid foundation of skills for an entry level position or to begin their pursuit of a post-secondary degree.

*Course offerings and information are subject to change.

You attend a high school where you have the ability to chart & plan for your learning experience. What does that mean? What goals do you hope to achieve by the time you graduate? Where do you see yourself starting after you graduate from high school?

These are questions we want you to consider regularly as you go through your years at Northgate. Listed below are school indicators that help define successful learners who are prepared to enter college or a post-secondary program, a career, or a combination of all three!

We want you to check each item that you've completed. Some are not intended to be completed until your senior year. It is not expected that every box will be checked; rather we want learners to use this as you set goals and assess your progress.

Northgate Graduate Profile — KEYS TO SUCCESS

Name:_____ **Mentor:**_____ **Grade:**_____

Career Pathway/Interest: _____

Post-Graduation Plan: College (2 or 4 year)

Essential Actions	Recommended Actions
❑ Complete a mock interview ❑ Complete a job shadow ❑ Complete grad project ❑ Create a resume ❑ Attend college visits ❑ Attend counseling office college rep visits ❑ Complete scholarship applications ❑ Take the PSAT ❑ Take the SAT or ACT ❑ Take at least one AP course ❑ Take at least one AP exam ❑ Member of a club, sport, or organization at Northgate ❑ Member of a community organization ❑ Community service project ❑ Complete at least Algebra II ❑ Complete two consecutive world language courses	❑ Complete an Internship ❑ Take at least 5 courses in career pathway ❑ Take at least 2 lab sciences ❑ Take Dual Enrollment courses ❑ Hold a student leadership position ❑ Attend career speaker activity or field trip ❑ Attend Planning events hosted by Northgate or other institutions about financial aid, college & career fairs, etc.

You attend a high school where you have the ability to chart & plan for your learning experience. What does that mean? What goals do you hope to achieve by the time you graduate? Where do you see yourself starting after you graduate from high school?

These are questions we want you to consider regularly as you go through your years at Northgate. Listed below are school indicators that help define successful learners who are prepared to enter college or a post-secondary program, a career, or a combination of all three!

We want you to check each item that you've completed. Some are not intended to be completed until your senior year. It is not expected that every box will be checked; rather we want learners to use this as you set goals and assess your progress.

Northgate Graduate Profile — KEYS TO SUCCESS

Name:_____ **Mentor:**_____ **Grade:**_____

Career Pathway/Interest: _____

Post-Graduation Plan: Military

Essential Actions	Recommended Actions
❑ Complete a mock interview ❑ Complete a job shadow ❑ Complete grad project ❑ Create a resume ❑ Take the ASVAB ❑ Member of a club, sport, or organization at Northgate ❑ Member of a community organization ❑ Community service project ❑ Complete at least Algebra II	❑ Complete an Internship ❑ Take at least 5 courses in career pathway ❑ Hold a student leadership position ❑ Attend career speaker activity or field trip ❑ Complete two world language courses ❑ Take at least one AP course ❑ Take at least one AP exam ❑ Take Dual Enrollment course ❑ Take the SAT or ACT

You attend a high school where you have the ability to chart & plan for your learning experience. What does that mean? What goals do you hope to achieve by the time you graduate? Where do you see yourself starting after you graduate from high school?

These are questions we want you to consider regularly as you go through your years at Northgate. Listed below are school indicators that help define successful learners who are prepared to enter college or a post-secondary program, a career, or a combination of all three!

We want you to check each item that you've completed. Some are not intended to be completed until your senior year. It is not expected that every box will be checked; rather we want learners to use this as you set goals and assess your progress.

Northgate Graduate Profile — KEYS TO SUCCESS

Name:_____ **Mentor:**_____ **Grade:**_____

Career Pathway/Interest: _____

Post-Graduation Plan: Work/Certification Program

Essential Actions	Recommended Actions
❑ Complete a mock interview ❑ Complete a job shadow ❑ Complete grad project ❑ Create a resume ❑ Visit a furthering education center ❑ Attend career speaker activity or field trip ❑ Member of a club, sport, or organization at Northgate ❑ Member of a community organization ❑ Community service project ❑ Take specific courses in field of interest (technology education, business, art)	❑ Complete an Internship/pre-apprentice program ❑ Take at least 5 courses in career pathway ❑ Hold a student leadership position ❑ Take ASVAB ❑ Complete Algebra II ❑ Complete two world language courses ❑ Research scholarship opportunities specific to your field of interest ❑ Pre-apprenticeship program ❑ Hold a Part-time Job