

**NORTHGATE
MIDDLE/HIGH SCHOOL**

**10TH, 11TH & 12TH GRADE
COURSE DESCRIPTION
BOOK**



2017 – 2018

STUDENT RIGHTS

The Northgate School District does not discriminate on the basis of race, sex, religion, color, national origin, age, handicap 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

It is the policy of the Northgate School District not to discriminate on the basis of race, sex, religion, color, national origin, age, handicap or limited English proficiency in its education programs, services, facilities, activities or employment policies as required by Title IX of the 1972 Educational Amendments, Title 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.

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 Mrs. Caroline Johns, 589 Union Avenue, Pittsburgh, PA 15202.

TABLE OF CONTENTS

Northgate Middle/High School Personnel.....	4
Northgate Middle/High School Graduation Requirements.....	5
Graduation Project.....	5
<u>College Testing</u>	
PSAT.....	6
SAT.....	7
SAT Subject Test.....	7
ACT.....	8
<u>English</u>	9
<u>English Electives</u>	12
<u>Mathematics</u>	12
<u>Science</u>	15
<u>Social Studies</u>	21
<u>Social Studies Semester Electives</u>	23
<u>Foreign Language</u>	24
<u>Health & Physical Education</u>	26
<u>Business/Technology Education</u>	26
<u>Technical Education</u>	28
<u>Family and Consumer Science (FCS)</u>	29
<u>Art</u>	30
<u>Music</u>	31
<u>A.W. Beattie Career Center</u>	35

NORTHGATE MIDDLE/HIGH SCHOOL PERSONNEL
412-732-3300

PrincipalMr. Bryan J. Kyle
X1001

Dean of Students Mr. Jon Nikolajski
X1000

Guidance Counselor-grades 7, 8 & 9Mrs. Stacy Gallagher
X1014

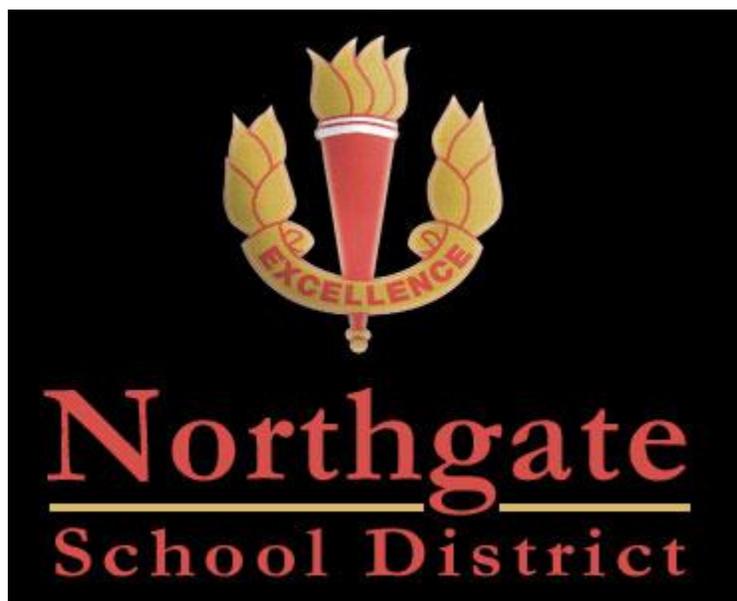
Guidance Counselor-grades 10, 11 & 12..... Mr. Brian Talbert
X1013

Nurse Mrs. Cyndie Kuhlber
X1020

Principal/Attendance Secretary.....Mrs. Dana Bloom
X1001

Dean of Students'/Athletic Secretary..... Mrs. Judy Collins
X1000

Guidance Secretary.....Mrs. Diane Burns
X1012



**NORTHGATE MIDDLE/HIGH SCHOOL
GRADUATION REQUIREMENTS
CLASS OF 2018 TO 2021**

Current Grade Level	9th	10th	11th	12th
Class	2021	2020	2019	2018
English	4.0	4.0	4.0	4.0
Social Studies	4.0	4.0	4.0	4.0
Mathematics	3.0	3.0	3.0	3.0
Science	3.0	3.0	3.0	3.0
Computer Applications II	0.5	0.5	0.5	0.5
Personal Finance	0.5	0.5	0.5	0.5
Physical Education	1.0	1.0	1.0	1.0
Health	0.5	0.5	0.5	0.5
Total	16.5	16.5	16.5	16.5
*Electives	8.0	8.0	8.0	8.0
TOTAL	24.5	24.5	24.5	24.5

**Subject to change upon School Board approval*

GRADUATION PROJECT

In accordance with Chapter 4 Curriculum Regulations of the Commonwealth of Pennsylvania and the Northgate School District graduation requirements, a student must complete a Graduation Project under the guidance and direction of the high school faculty.

The Northgate School District Graduation Project will require students to demonstrate the ability to apply, organize, analyze, synthesize and evaluate information. The student will be able to communicate significant knowledge and understanding after investigating a personal, specialized area of interest.

The Graduation Project will:

- Reflect multiple intelligent behaviors
- Provide the opportunity to exhibit problem solving, self-directed learning, decision making, independent research and cooperation with others
- Encourage enterprise and personal ownership of a task
- Promote time management, accountability and responsibility
- Support diversity and various learning styles
- Challenge students to produce a quality product

This comprehensive learning activity will allow students to showcase creativity, abilities and talents from their educational experience.

COLLEGE TESTING

(Subject to change)

PRELIMINARY SCHOLASTIC APTITUDE TEST (PSAT) & NATIONAL MERIT SCHOLARSHIP QUALIFYING TEST (NMSQT)

The PSAT/NMSQT prepares students for the SAT. The PSAT/NMSQT includes enhanced math content; quantitative comparison questions have been removed. The “verbal” section is called “critical reading” and no longer includes analogies. Unlike the SAT, the PSAT/NMSQT has no official essay.

The PSAT/NMSQT measures:

- Critical reading, math reasoning and writing skills.
- Knowledge and skill developed through years of study in a wide range of courses as well as through experiences outside the classroom. Although the PSAT/NMSQT and SAT Reasoning Test are not directly related to a specific high school curriculum, they are developed to reflect the kinds of academic experiences that teachers consider important.

Scoring:

- Scores on a 160 to 760 scale for critical reading, math and writing skills
- Correct answer = 1 point
- Omitted question = no points
- Wrong answers to multiple-choice questions = minus $\frac{1}{4}$ of a point
- Wrong answers to math student-produced response questions = no points lost

Content:

- Two 25-minute critical reading sections contain a total of forty-eight (48) questions:
 - Thirteen (13) sentence completions
 - Thirty-five (35) passage-based reading questions
- Two 25-minute math sections contain a total of thirty-eight (38) questions:
 - Twenty-eight (28) multiple choice
 - Ten (10) student-produced responses, or grid-ins
- One 30-minute writing skills section contains thirty-nine (39) questions:
 - Twenty (20) improving sentences
 - Fourteen (14) identifying sentence errors
 - Five (5) improving paragraphs

High school juniors usually take the PSAT/NMSQT in October. Tenth graders may elect to take as practice; however, their scores are not applicable to the NMSQT. PSAT scores are reported on a scale that runs from 20 to 80 and is exactly like the SAT scale, except that the final zero has been removed.

The PSAT also serves as the National Merit Scholarship Qualifying Test for juniors in nationwide competition for recognition, awards and scholarships.

SCHOLASTIC APTITUDE TEST

The Scholastic Aptitude Test (SAT I) is an entrance examination that measures critical reading, writing and mathematical skills. The test is divided into the following sections:

1. Two twenty-five minute critical reading sections
2. One twenty-five minute reading section
3. Two twenty-five minute math sections
4. One twenty minute math section
5. Two multiple-choice sections (one twenty-five minute section and one ten minute section)
6. One twenty-five minute essay
7. One twenty-five minute variable section

The Critical Reading section measures knowledge of genre, cause and effect, rhetorical devices, comparative arguments and the ability to recognize relationships among parts of a text. Long and short reading passages are taken from different fields: Natural Sciences, Humanities, Social Science and Literary Fiction. Short reading passages, which replace analogies, will measure the kind of reasoning formerly measured by the analogy section.

In the SAT Writing section, students will read a short excerpt, or two quotations, and respond to a prompt that frames an issue. The student must first think critically about the issue presented in the essay assignment and then define and support their point of view, using reasoning and evidence based on their own experience, reading or observations. The essay will be similar to the type of on-demand writing that is typically done in college. There will also be three types of multiple choice questions: identifying sentence errors, improving sentences and improving paragraphs.

The Math section includes expanded number and operations topics, data analysis, statistics, probability, geometry, measurement and algebra.

Only the Critical Reading, Writing and Math sections will count toward your SAT scores. The experimental section on your SAT will look just like a verbal section or a math section, but it won't be scored; ETS uses it to try out new SAT questions and to determine whether the test you are taking is less/more difficult than ones that have been given in the past.

Each of the three sections will be scored between 200-800 points, with a possible total of 2400.

SAT SUBJECT TEST

These tests measure a person's knowledge of a particular subject and one's ability to apply that knowledge. The fourteen (14) tests offered are:

English Composition	German
Literature	Hebrew
American History & Social Studies	Latin
European History & World Cultures	Spanish
Mathematics Level I	Biology
Mathematics Level II	Chemistry
French	Physics

Some colleges require various combinations of SAT II Tests for admission and/or placement purposes. Each test is a one-hour multiple-choice examination in a specific

subject area. SAT II Tests are given in November, January and May of each year at designated sites.

The SAT is published by the Educational Testing Service (ETS) under the sponsorship of the College Entrance Examination Board (the College Board). ETS and the College Board are both private companies. To take the SAT I or II, you must be registered beforehand. Registration forms are usually available in the Northgate Middle/High School Guidance Office. You may also apply online at www.collegeboard.com or they may be obtained by writing:

College Board SAT Program
P.O. Box 6200
Princeton, NJ 08541-6200

Note: Northgate's School Identification Number for the test is 393640.

ACT

The ACT is an all multiple-choice standardized exam given five times a year at various locations. It measures student achievement or knowledge in four academic or subject areas: English (45 minutes – 75 questions, optional writing 30 minutes – 1 essay question), Math (60 minutes – 60 questions), Reading (35 minutes – 40 questions) and Science Reasoning (35 minutes – 40 questions).

Scores in each of the four sections of the test are reported on a scale of 1 to 36 (36 being the highest score possible). Next to each scaled score is a percentile ranking. Percentile ranking refers to the percentage of people who performed better or worse than you did on the test. For instance, a percentile ranking of 87 indicates that 86% of the people who took the test scored lower than you did and 13% scored higher.

The ACT is written by a company called American College Testing. The company's main offices are in Iowa City, Iowa. The people at ACT have been writing a version of this test since 1959. To take the ACT, you must be registered beforehand. Registration forms are usually available in the Northgate Middle/High School Guidance Office. You can also register online at www.act.org or they may be obtained by writing or calling:

ACT National Office
P.O. Box 414
Iowa City, Iowa 52243-0414

(319) 337-1827 – To order registration packets
(319) 337-1270 – To check registration status
(319) 339-3032 – To fax order for registration packets

Note: Northgate's School Identification Number for the ACT is 5559.

ENGLISH

121 ENGLISH 12 ACADEMIC

Senior Academic English is designed to elevate and refine the skills in reading, language, expression and composition the student has acquired in previous courses. The literature portion of the course will concentrate on works from significant periods of time. Essays will include topics drawn from the literature as well as from the students' personal experiences. A study of traditional research methodology will result in the preparation of the senior research paper. The completion of this paper is required for course credit. Language, oral communication skills and vocabulary development will also be emphasized in this course. Homework is required. A final examination is mandatory for the course.

120 ENGLISH 12 HONORS

In order to do well in the Honors class, students will need the recommendation of the preceding year's English teacher and a minimum of 90% in English 11 Honors or 93% in English 11 Academic.

The 12th grade English Honors course is designed to introduce the students to a variety of literature from around the world. Students are expected to analyze texts, consider cultural patterns and interpret different types of prose. There is a focus on the areas of the world where literature has taken a predominant place in society. As a secondary element, the course will review and polish students' writing skills in various areas. The types of writing done will include persuasive, informative, creative and analytical. ***A research project is a requirement for completion of this course.*** A final exam is mandatory.

150 AP LITERATURE & COMPOSITION

Grade 12

In cooperation with the College Board, Northgate Middle/High School offers Advanced Placement English as a senior year elective. This course is an accelerated program designed to meet the needs of the college-bound senior. 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.

A student's entry into the program is dependent upon his/her PSAT and College Board test scores, recommendation of members of the English Department and the instructor's approval. The grades of A and B are weighted for AP English to reflect the accelerated nature of the course work. In May of the senior year students will be expected to take the nationally administered Advanced Placement Test. A score of three or above on this test may enable the student to receive college credit for high school work at over 650 colleges and universities. For entry into the Advanced Placement program, a student must take, and pass, an entrance exam during the spring of his/her junior year. Students **MUST HAVE THE APPROVAL OF BOTH THE 11TH GRADE AND THE AP TEACHER** to schedule this course. A final examination is mandatory for the course.

151 AP ENGLISH LANGUAGE AND COMPOSITION

Grades 11 or 12

As stated by the College Board, “English and Language Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes” (English Language and Composition, Course Description, 6). This course is an accelerated program designed to meet the needs of the college-bound junior or senior. The goal of this course is to teach students to write for mature audiences using proper forms of research, reading, and writing. Students are expected to have and apply an understanding of Standard English grammar. The majority of works covered will be nonfiction prose, but there will be a place for fiction and poetry specifically to “aid students in understanding rhetorical and linguistic choices” (English Language and Composition, Course Description, 8). The course will be taught as a seminar for students who enjoy writing and do not view it and its finer nuances as chores. There will be a rigorous reading schedule as well as extensive writing assignments.

Students explore the art and craft of writing including poetry, short story, essay, memoir, and drama. The class will be driven by material gathered from imagination, the senses, memory, readings, and the world around us. We will look at the various types of literature that have spawned from current trends such as the graphic novel, song lyrics/poetry, comics, and graphics as word, etc. and debate their value, function, and place in literature as well as speeches, essays, letters, advertisements, documentaries, and other types of nonfiction. All written and spoken word has rhetorical value and recognizing the rhetoric and how it works is what creates better writers in terms of purpose, audience, subject, etc. Emphasis is placed on the craft of writing and revision. One of the goals for the class will be to bring a consciousness to what and how we write. The student will analyze precise diction, language structures, and writing techniques in literature and strive to recognize the agenda in it all.

Students will be required to complete summer reading and writing as a prerequisite for the course. In May, students will be expected to take the nationally administered Advanced Placement Exam. A score of three or above on this test may enable the student to receive college credit for high school work at over 650 colleges and universities. Students must have the approval of both the 10th or 11th English grade teacher along with the AP teacher in order to schedule this course. Recommendation will not be awarded if the student fails to maintain a minimum of a 90% in English 10 or 11 Honors or 93% in English 10 or 11 Academic.

111 ENGLISH 11 ACADEMIC

The 11th grade English Academic course follows the chronology of British History through literature. There is an intense focus on analyzing the texts in order to learn Britain’s unique history. The 11th grade year, in English especially, is a very intense, demanding year. The PSSA tests are required to graduate, thus we practice for the reading and writing components during every day activities and selections, but also with pieces specifically designed for improving the students’ reading and writing skills. Due to the nature of the PSSA tests and life after high school, the course focuses on teaching students to become more independent and critical thinkers. In order to achieve this goal, the students will be required to complete assignments outside of class on a weekly basis. As a culminating project, the students are required to complete a thematic analysis research paper that synthesizes the skills taught during the year. A final examination is a required part of completing the course.

112 ENGLISH 11 HONORS

In order to do well in the Honors class, students will need the recommendation of the preceding year's English teacher and a minimum of 90% in English 10 Honors or 93% in English 10 Academic.

The 11th grade English Honors course follows the chronology of British History through literature. There is an intense focus on analyzing the texts in order to learn Britain's unique history. The 11th grade year, in English especially, is a very intense, demanding year. The PSSA tests are required to graduate, thus we practice for the reading and writing components during every day activities and selections, but also with pieces specifically designed for improving the students' reading and writing skills. Due to the nature of the PSSA tests and life after high school, the course focuses on teaching students to become more independent and critical thinkers. In order to achieve this goal, the students will be required to complete assignments outside of class on a weekly basis. As a culminating project, the students are required to complete a thematic analysis research paper that synthesizes the skills taught during the year. A final examination is a required part of completing the course. The Honors class requires the students to complete a multitude of supplemental assignments while balancing the demands of an already challenging curriculum.

101 ENGLISH 10 ACADEMIC

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

102 ENGLISH 10 HONORS

In order to do well in the Honors class, students will need the recommendation of the preceding year's English teacher and a minimum of 90% in English 9 Honors or 93% in English 9 Academic.

The Honors program for 10th grade English is open to students who have demonstrated excellence in English in previous courses. This class will challenge the student through the critical analysis of literature, extensive writing and intensive study of language as it relates to authors' styles and the student writer's individual style. A final examination is mandatory for the course

ENGLISH ELECTIVES

113 YEARBOOK

Grades 10, 11 & 12 Prerequisite: C or better in Academic English

Primarily, students will explore many facets of journalism in the class including writing, photography, layout and design, desktop publishing, business and advertising. Producing the *Torch*, Northgate Middle/High School's yearbook, is a tremendous project in which students will be required to make a commitment to working on the yearbook. As the yearbook is a student run production, these students will have the opportunity to design their yearbook. Students of yearbook learn valuable, real world experiences such as meeting deadlines, working as members of a team, and dealing with the public.

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

*After school and outside of school work will be required in order to complete the *Torch*. Missing a deadline will result in removal from the class. The student will receive a "W" for the class.

MATHEMATICS

210 CONSUMER MATH

Prerequisite: This course is directed towards 11th and 12th grade students who have completed Algebra I and Geometry

This course will cover all the skills students need to maintain their personal finances and excel at their jobs. Topics will include net pay, gross pay, checking and savings accounts, credit cards, income taxes, buying a car, buying a house, budgeting and many more money management concepts. In addition, students will complete a variety of projects and presentations to assist them on their future endeavors.

212 GEOMETRY

Prerequisite: Algebra I with a passing grade.

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.

223 HONORS ALGEBRA II

Prerequisite: Students must have the recommendation of the preceding year's math teacher. Students must have completed Algebra I and Geometry with a minimum of 80%.

Honors 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 in the Honors course should expect to learn topics at a faster pace and at a more in-depth level than the regular Algebra II course. In addition, homework and test problems will be more challenging and will require students to think at a higher level. Students must be able to apply what they have learned in class to various types of word problems.

207 ALGEBRA I

Algebra I is 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.

205 ALGEBRA II

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

224 HONORS GEOMETRY

Prerequisite: Students must have the recommendation of the preceding year's math teacher. Students must have completed Algebra I with a minimum of 80%

In Geometry, students will begin by exploring fundamental aspects such as points, lines and planes. Properties of logical reasoning will be used to extend into deductive reasoning and proof-writing. As new geometric theorems and postulates are presented, the class will formally prove them and then apply them in real-world situations. These geometric application problems will often be interwoven with concepts of algebra. Students will get hands-on experience by creating constructions that illustrate many of the geometric properties and concepts. This being an Honors class, students can expect to move through the material at a faster pace and be challenged with different types of problems that will be more rigorous than those found in the Geometry courses.

214 AP CALCULUS

Prerequisite: Trigonometry (with an A grade).

**Students must have the approval of the AP Calculus teacher to schedule this course.*

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 multirepresentational 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, experiments, interpret results and verify conclusions. Students enrolling in this course must be committed and motivated to study and learn at the college level. In May of the senior year students will be expected to take the nationally administered Advanced Placement Test. A score of three or above on this test may enable the student to receive college credit for high school work at over 650 colleges and universities. Students **MUST HAVE THE APPROVAL OF BOTH THE 11TH GRADE AND THE AP TEACHER** to schedule this course.

222 AP STATISTICS

Prerequisite: Completed Algebra II

In this course, students will examine statistical data from a number of different sources—their textbook, 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 on 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 (papers, oral presentations, etc.)

229 HONORS TRIGONOMETRY/PRE-CALCULUS

Prerequisite: Algebra 2 or equivalent

Admission to this class is by a teacher recommendation only.

Trigonometry topics include: domain, range, distance, co-terminal angles, the unit circle, correlating right triangles and rotation, the six trig functions and transformations of their graphs, identities, navigation, Law of Sines, Law of Cosines, Heron's formula and area, inverse trig functions and their graphs, and vectors. Pre-calculus topics include exponential and logarithmic functions and their graphs, limits and rates of change, 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-83 graphing calculator is necessary along with manual graphing of translations of periodic functions.

The course requires the student to complete homework outside of the 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 of this course.

230 SAT/ACT MATH PREP

Prerequisite: Passing Grade in Algebra I, Geometry or Honors Geometry

Grades 10, 11 and 12

Semester Course

This course is intended to help students do their best when taking the Scholastic Aptitude Test. Students will be solving problems involving arithmetic, algebra and geometry in order to become familiar with what they will be expected to do on the test. The course will provide numerous strategies for test taking and problem solving. Registration material will be provided as well as instructions for registering. Some time will also be spent on becoming familiar with the ACT test. Calculators will be used in this class since students are permitted to use calculators on the SAT/ACT. Homework is a requirement.

SCIENCE

745 ACADEMIC CHEMISTRY

Prerequisite: Honors Biology, Academic Biology, Biology 9 and Algebra I.

Co-requisite: Geometry.

This is a one-year course that involves the study of the fundamental mathematical relationships of chemistry, such as the mathematics based on chemical formulas, writing chemical equations and the mathematics relating to them and the gas laws (relationships between gas volumes and their surroundings). Students are required to purchase a scientific calculator and become familiar with its operation prior to this segment of the course.

In the second term of the course, the study is focused on solids, liquids and gasses and their relation to the solution process. The theory of ionization, acid/base theory and methods of expressing solution concentration are included.

This course requires one double period each week for laboratory work. Since the course meets six periods per week, the student will receive 1.2 credits toward his/her graduation requirements. This course will include a mid-term and final examination.

742 HONORS CHEMISTRY

Prerequisite: Honors Biology with a grade of 85% or higher or Academic Biology with a grade of 90% or higher and the recommendation of the Biology teacher.

Co-requisite: Algebra II or Honors Geometry

Honors Chemistry is recommended for students wishing to take AP Chemistry in their senior year.

Honors Chemistry covers much of the same information as Academic Chemistry; however, Honors Chemistry goes at a faster pace and covers topics more thoroughly. In addition to the topics covered in Academic Chemistry, Honors Chemistry also covers Reaction Rates, Equilibrium and Oxidation-Reduction Reactions and includes an introduction to Organic Chemistry. Honors laboratory experiments are much more in-depth, require more advanced calculations and are more independent. Lab research and formal lab notebooks/reports are required.

752 AP CHEMISTRY

Prerequisites: Honors or Academic Chemistry, Honors or Academic Physics (85% or higher in all of these courses) and the recommendation of the student's Chemistry teacher.

Co-requisite: Trigonometry.

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

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

The grades of A and B in this course are weighted in the student's high school grade average to reflect the accelerated nature of the course work. Also, since the course meets a total of seven periods a week, the student will receive 1.4 credits toward his/her graduation requirements. This course will include a final examination.

751 FORENSICS

Prerequisite: 70% or higher in both Biology and Chemistry

Grade 11 or 12

Semester Course

Forensic Science is an upper level science semester course which is designed to be hands-on, and lab activity driven. It will provide an introduction to the analysis of crime scenes by collecting and analyzing physical evidence.

The course integrates multiple scientific disciplines (biology, chemistry, and physics) and gives students the theory and hands-on experience to develop the skills and knowledge that would be required as a forensic scientist.

Additionally, this course would 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.

762 PHYSICS

Prerequisite: Honors Biology, Academic Biology, Biology 9, Integrated Science A or Integrated Science B

Physics covers the concepts of motion, force and energy. Topics include Newtonian mechanics, the Conservation Laws, rotational dynamics, fluid dynamics, sound, light, optics, electricity and magnetism. Relative to Honors Physics, this class focuses on developing only a conceptual understanding of physics. Students will be assessed based on their ability to conceptually problem solve (use words to make predictions), complete project work and many hands-on in-class activities. Students are not assessed on their ability to quantitatively problem solve (applied mathematics). This course requires a final examination.

777 AP PHYSICS I

Prerequisites: Honors Chemistry (grade of 70% or higher) or Academic Chemistry (grade of 80% or higher) and Algebra or Geometry. This class requires a fundamental understanding of algebra.

This course is designed to meet the demands of the AP Physics 1 syllabus as published by the College Board. The goal of this AP Physics 1 class is to provide students with an experience equivalent to an introductory college level physics course. Students taking AP Physics 1 are expected to have a firm understanding of algebra. The principle mode of instruction for the course will be inquiry based investigations and problem solving activities. Class discussions will be integrated to support concepts covered during investigations. Advanced Placement Physics 1 requires a serious commitment from students. The course content is presented as four units at the college level: Kinematics, Newtonian Mechanics, Circular Motion and gravitation, Torque and rotational motion, Work – Energy Theorem (includes power and momentum), Simple Harmonic Motion, Mechanical waves and sound, and Electrostatics and Simple Circuits. Students are to be prepared to devote a significant amount of time to working on laboratory reports, problem sets, and working on projects outside of class.

763 AP PHYSICS II

Prerequisites: Physics (grade of 90% or higher) and Chemistry (grade of 90% or higher for Academic, grade of 80% or higher for Honors, and the recommendation of the Physics teacher.)

Co-requisite: Trigonometry

This course is designed to meet the demands of the AP Physics 2 syllabus as published by the College Board. The goal of this AP Physics 2 class is to provide students with an experience equivalent to an introductory college level physics course. Students taking AP Physics 2 are expected to have a firm understanding of algebra. The principle mode of instruction for the course will be inquiry based investigations and problem solving activities. Class discussions will be integrated to support concepts covered during investigations. Advanced Placement Physics 2 requires a serious commitment from

students. The course content is presented as six units at the college level: Fluid Mechanics, Thermodynamics, Vibrations and Waves, Electricity and Magnetism, Light and Optics, and Modern Physics. Students are to be prepared to devote a significant amount of time to working on laboratory reports, problem sets, and working on projects outside of class.

772 ANATOMY/PHYSIOLOGY

Prerequisites: Must have one year of Biology and one year of Chemistry.

This is a year course that consists of the following two segments and requires a final examination.

MOLECULAR (CELL) BIOLOGY

Molecular Biology is a course for those students with an interest and desire to know more in the areas of cell biology, basic biochemistry and organic chemistry. Some of the areas dealt with, in detail, are genetic coding (roles of DNA, RNA and cell management), biochemistry and cell behavior with emphasis on the chemistry of the cell and the role of chemicals in cellular physiology. Dedicated students with a basic background in chemistry or the willingness to learn basic chemistry are encouraged to register for this course.

HUMAN PHYSIOLOGY

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

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

775 AP BIOLOGY

Prerequisites: Successful completion of Biology and Chemistry with a grade of at least an 83% in both Biology and Chemistry. Recommendations from both the Biology and Chemistry teachers are required.

**The placement of the student will be reviewed if he/she is not performing according to expectations.*

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

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

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

It is expected that all students will have read the material before it is discussed BEFORE coming to class. Most of the assignments in this course involve reading the material in the text. It is also expected that the students visit the textbooks website. Best understanding of the material will only occur when the student has read the material and then discussed it in class.

Generally, it is the goal of the course to finish the material identified in the syllabus. This provides the student with the opportunity to achieve a respectable score on the AP exam. It is a course requirement that every student will take the AP Exam in the spring.

784 INTEGRATED SCIENCE A

Prerequisite: General Biology or Academic Biology.

This course is designed to integrate science across the curriculum. Labs are done with lectures, writing assignments and math applications. This course will include topics in renewable and non-renewable resources, parts of a stream and flow velocity, chemical reactions, the law of conservation of mass and conservation of momentum and energy. This course requires a notebook and a lab folder. Students are expected to practice safe procedures during all labs. A final examination is a requirement.

785 INTEGRATED SCIENCE B

Prerequisite: Integrated Science A, Academic Chemistry or Academic Physics.

This course is designed to integrate labs among lectures, writing assignments and math applications. Students will be conducting labs safely and applying them to major themes of the course. This course will include topics in agriculture and society, environment and pest management, wetlands, behavior of gases, light effects and sound effects. Students are required to keep a notebook, lab folder and to write lab reports. A final exam is required.

787 PENNSYLVANIA BIOLOGY I

Semester Course

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.

788 PENNSYLVANIA BIOLOGY II

Semester Course

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).

789 RESEARCH SCIENCE

Semester Course

Students will research topics in any of the science disciplines including botany, zoology, biochemistry, psychology, and environmental sciences. This class requires students to conduct independent research, design a research lab, and collect data. The course requires self-motivation and individual creativity. Students will be required to conduct independent experimentation through laboratory experiences. This course will be offered in the fall. Students will be expected to present their results and also have the opportunity to present at local and state competitions.

790 MARINE BIOLOGY

Semester Course

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 and other areas of science, students will learn to appreciate and understand the diverse and intricate science of the oceans and their inhabitants. Students will be expected to develop connections between the sciences as well as develop critical thinking skills and appropriate academic language.

791 GENETICS

Semester Course

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

792 NEUROSCIENCE

Semester Course

Students will study the function of the human brain. Students will be expected to identify major divisions of the nervous system, nerve functions, and chemical synapses. In this course various in- depth discussions will occur based on mental disorders and how they affect brain function. There will also be comparisons between the human brain and other species. This course will be offered in the spring and requires a final exam.

SOCIAL STUDIES

620 GOVERNMENT

Government is the required Social Studies class for the 12th grade. This class will include the basics of government, formation of government, branches of government, the Constitution, Articles, and Amendments of the Constitution. In addition, Government will include the ideas of Federalism, the different types of government throughout the world, conflict in the government and how the government is able to adjust to current times. In addition, Government will also do an in depth study of the election process concentrating on the different types of elections and political parties.

650 AP U. S. HISTORY

Grade 11 or 12

Advanced Placement United States History is offered as an elective to qualified seniors and, by special request, juniors. Eligibility is determined by PSAT and College Board test scores, the recommendation of former social studies teachers and the approval of the course instructor.

It 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. Studies 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.

Students enrolled in the course that receive grades of A, B or C are awarded an additional quality point by the District and can, thereby improve their NPA and class rank. In May of the senior year students will be expected to take the nationally administered Advanced Placement Test. A score of three or above on this test may enable the student to receive

college credit for high school work at over 650 colleges and universities. For entry into the Advanced Placement program, a student must take, and pass, an entrance exam during the spring of his/her junior year. Students **MUST HAVE THE APPROVAL OF BOTH THE 11TH GRADE AND THE AP TEACHER** to schedule this course. A final examination is mandatory for the course. A final examination is mandatory.

All in all, the Advanced Placement United States History course offers unique opportunities for those who enjoy an academic challenge, have an abiding interest in our country's history and have a desire to excel.

651 AP EUROPEAN HISTORY

Grade 12

Advanced Placement European History is an elective for qualified seniors. All students, regardless of previous class experience, are required to receive the recommendation of their formal social studies teacher, submit an essay and have the approval of the AP European History instructor.

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

All students are expected to participate in the College Board Advanced Placement European History examination. In May of the senior year students will be expected to take the nationally administered Advanced Placement Test. A score of three or above on this test may enable the student to receive college credit for high school work at over 650 colleges and universities. For entry into the Advanced Placement program, a student must take, and pass, an entrance exam during the spring of his/her junior year. Students **MUST HAVE THE APPROVAL OF BOTH THE 11TH GRADE AND THE AP TEACHER** to schedule this course. A final examination is mandatory for the course. Many colleges accept a good performance on the exam as a substitute for European History and Western Civilization classes. (Please note that each institution has its own requirements, and students should consult with each individual admissions office.)

611 WORLD CULTURES 11 ACADEMIC

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. There will be many different ways this class will operate. You will be asked to take notes, draw maps, identify countries, capitals, et cetera, 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 project will be administered and completed for twelve percent of the final grade.

612 WORLD CULTURES 11 HONORS

Prerequisite: Students enrolled in this course must have an 85% or above in their 10th grade Social Studies course.

In addition to the basic World Cultures course, students will do frequent research papers, oral presentations and in-depth readings at an accelerated pace.

601 AMERICAN STUDIES II 10 ACADEMIC

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; the final grade will be decided in accordance with School District guidelines.

602 AMERICAN STUDIES II 10 HONORS

Prerequisites: A final grade of 85% or above in American Studies I and teacher's recommendation is required.

In addition to the curriculum presented in American studies II Academic, the student will do enrichment reading and writing and will become familiar with the literature, art and music of each era.

SOCIAL STUDIES SEMESTER ELECTIVES

Each course is one semester in length and is combined with another offering as noted in the course description. Students may not selectively amend such combinations unless prior administrative approval is granted. No elective social studies course will replace any of the required courses.

642 SOCIOLOGY

Grades 11 & 12 Spring Semester

Sociology is an elective course in the social studies program offered to academically able students in the 11th and 12th grades. Students are expected to develop the ability of thinking 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. There is no final examination.

643 PSYCHOLOGY

Grades 11 & 12 Fall Semester

Psychology is an introductory elective course in the social studies program offered to academically able students in the 11th and 12th 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. There is no final examination.

FOREIGN LANGUAGE

301 FRENCH I

The purpose of the beginning course in French is to learn the language as a means of communication. The students will be introduced 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 ½ to 2 hours of out-of-class time per week.

302 FRENCH II

Prerequisite: C grade or better in 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. A minimum of thirty minutes of homework is expected each night.

303 ADVANCED FRENCH III

Prerequisites: C grade or better in French I & 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 student 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. A minimum of thirty minutes of homework is expected each night.

304 ADVANCED FRENCH IV

Prerequisite: C grade or better in 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. A minimum of thirty minutes of homework is expected each night.

305 ADVANCED FRENCH V

Prerequisite: C grade or better in French IV

Students in this course will learn advanced grammar and communication skills. They will read stories in French (Petit Nicolas and Le Petit Prince), and write reports in French about these books. Students will have an independent project each 9 weeks, focusing on French history, culture, current events, and a topic of their choice.

311 SPANISH I

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 preterit 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. A minimum of thirty minutes each night should be spent on homework.

312 SPANISH II

Prerequisite: C grade or better in Spanish I.

Course Requirement: Students must purchase a University of Chicago Dictionary in paperback form.

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. A minimum of thirty minutes each night of homework is expected.

313 ADVANCED SPANISH III

Prerequisites: C grade or better in Spanish I & II.

This course is designed to strengthen the students' writing and reading skills. Activities include studying selection of Hispanic literature chosen for style theme. Students will then use the author's style for their own original essays. Also included is a survey of the civilization of the Hispanic world through its history, geography, traditions, customs, music and art, which provide an exposure to and appreciation of the Spanish-speaking countries. Each year students read one or more novels in Spanish. The background of the author is discussed as well as the plot, theme and literary style. A minimum of thirty minutes each night of homework is expected.

314 ADVANCED SPANISH IV

Prerequisite: C grade or better in 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. A minimum of thirty minutes each night of homework expected.

HEALTH AND PHYSICAL EDUCATION

504 HEALTH

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.

542 PHYSICAL EDUCATION 9, 10, 11 & 12

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 sweat pants, appropriate athletic shoes and socks.

Successful completion in grades 9-12 is a Commonwealth of Pennsylvania and Northgate School Board requirement for graduation.

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

BUSINESS/TECHNOLOGY EDUCATION

885 COMPUTER APPLICATIONS II

Prerequisite: Passing grade in Computer Applications I
Required Semester Course for 10th Grade

This course will continue to strengthen the student's computer skills and knowledge. Students will create newsletters, flyers, brochures, business cards and advertisements using MS Publisher. Students will create their own web pages using MS FrontPage and create databases using MS Access.

854 PERSONAL FINANCE

Required Semester Course for 10th Grade

This course will introduce students to their role as a citizen, student, family member, consumer, and active participant in the business world. This course will discuss concepts related to students' financial responsibilities, as well as, developing strategies for managing their personal resources.

Personal Finance will allow a student to choose, plan, and adapt to the career of their choice. It will touch upon obtaining a job and keeping a job, as well as, saving for the future.

Security First Bank is a customer simulation that introduces ideas involving checking accounts, writing checks, making deposits, reconciling bank statements, and applying for loans. This simulation will provide the most current information on direct deposits, online banking (virtual wallet), automatic bill payments, automatic withdrawals, and debit cards vs. credit cards. This simulation gives students a foundation in banking procedures from a consumer standpoint.

225 COMPUTER PROGRAMMING I

Prerequisite: 7-% or better in Algebra I

This course is an introduction into computer programming. Students will be learning JAVASCRIPT, in logical stages with the programming problems increasing in sophistication and complexity from beginning to end. Grading in the course is based upon written quizzes, tests, and actual programming performances.

857 ACCOUNTING I

Accounting I is an elective course for grades 10, 11 and 12 and should be considered for all college-bound students studying any field of business. Accounting is for personal use or for those who need to understand financial records to enter computer-related jobs or various other business positions. Many opportunities are available for young people who seek to become accountants, accounting clerks, record keepers or owners of small businesses. Although most work is completed in class, homework will be assigned periodically.

860 LAW AND JUSTICE

Grades 11 & 12

Semester Course

The purpose of this course is to produce well-informed citizens with a strong awareness of their legal rights and duties and, in everyday life, to develop their respect for those laws that influence daily living in our society. The students will learn about the criminal, civil and juvenile law and how they pertain to the court system. The students will take a field trip to the Butler County Courthouse and the Butler County Jail. Students will also be conducting at least two mock trials. One will be civil and one will be criminal. This is an excellent course for seniors.

883 MARKETING YOUR BUSINESS

Grades 10, 11 & 12

Semester Course

This semester course is designed to give students an understanding of the fundamentals and foundations of marketing. Students will learn about various functions of marketing including how to create many different marketing strategies. This course will cover many different elements including sales, pricing, business plans, entrepreneurship, real-world applications, simulations and ethics.

TECHNICAL EDUCATION

401 WOOD I

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.

403 WOOD II

Prerequisite: C grade or better in Wood I.

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

404 WOOD III

Prerequisite: C grade or better in Wood II and teacher recommendation.

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

406 WOOD IV

Prerequisite: C grade or better in Wood III and teacher recommendation.

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

416 HOME MAINTENANCE AND REPAIR

Grades 10, 11 & 12

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

FAMILY AND CONSUMER SCIENCE (FCS)

432 FOOD SCIENCE I

Grades 9, 10, 11 & 12

Semester Course

This course promotes healthful eating and physical activity plans by using the Dietary Guidelines for Americans, My Plate, food labels and wise consumer decisions. Students will learn how to choose, purchase, prepare and eat healthful foods. They will be introduced to various ways of combining fresh foods, convenience foods, prepared foods and eating out into a healthful eating plan. This course will combine technology and theory with hands-on practical experiences.

433 FOOD SCIENCE II

Prerequisite: Food Science I

Grades 10, 11 & 12

Semester Course

This course will address the Pennsylvania Standards in Food Science and Nutrition. Students will continue to utilize skills and information learned in Food Science I while focusing on proper nutrition, meal planning, and using more advanced recipes and equipment. This course will combine theory and technology with practical hands-on experiences.

434 FOOD SCIENCE III

Prerequisite: Foods Science I & II

Grades 10, 11 & 12

Semester Course

This course will delve even further into nutrition and maintaining a healthy lifestyle. Students will evaluate the application of nutrition and meal planning principles in the selection, planning, and serving of meal that meet the specific nutritional needs of individuals across the lifespan while aligning choices to the Dietary Guidelines for Americans. An exploration of foreign foods and customs will occur. Students will be encouraged to choose recipes that challenge their culinary skills and to utilize equipment that may not be familiar with. This course will combine theory and technology with practical hands-on experience

ART

457 ART FOUNDATION

Grades 9 - 12

Semester Course

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

462 ADVANCED ART I

Prerequisite: Art Foundation.

Grades 10, 11 & 12

Prerequisite: Art Foundations and Teacher recommendation

Skills learned in Art Foundation are essential for success in Advanced Art 1. 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. Advanced art 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.

463 ADVANCED ART II

Prerequisite: Advanced Art I and Teacher recommendation

Grades 11, 12

Skills learned in Advanced Art I will be essential for success in Advanced Art II. Students will continue to build on advanced art techniques learned in previous course and begin to form an area of concentration. The first semester of this course will focus on advanced art techniques in both two and three-dimensions. The use of a sketchbook is required from all students to complete homework and research assignments given at the beginning of every lesson to aid in their personal and artistic development. The use of the Internet will also be required in this course as students develop and post an online portfolio.

Advanced Art II second semester will focus on the student's academic goals and areas of concentration. The students will be required to choose two areas of concentration to work through independently throughout the remainder of the year. The instructor will assign students an individualized course of study to reflect the students' level of artistic talent in accordance with their chosen areas of concentration. The ability to work independently is a privilege given to those students with advanced art skills and will be taken away at teacher discretion.

464 ADVANCED ART III

Prerequisite: Advanced Art II and teacher recommendation

Grade 12

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

MUSIC

466 CONCERT CHOIR

Grades 10, 11 & 12

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

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

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

MUSIC QUARTER COURSES:

467 MARCHING BAND Q1

Grades 10, 11 & 12

This course will focus mainly on marching band during the usual marching season, which coincides with the varsity football schedule as well as other scheduled or announced non-football events, such as parades. All students in Marching Band must be cognizant of the fact that participation in all band and band-related events is mandatory excepting prior administrative excusal. These will include all varsity football games, festivals, parades and/or concerts scheduled during the first semester. Eighth grade students may be permitted to participate at the discretion of the band director. Marching Band meets two days per week after school and one evening per week during football season. Progress is monitored through playing and written tests. Attendance at summer band rehearsals and band camp are primary prerequisites unless prior administrative excusal is granted.

Related activities: Members of the Marching Band are eligible to audition for small instrumental ensembles. These groups rehearse after school. Additionally, students are chosen by audition to represent Northgate at district and regional band festivals held at various high schools throughout Western Pennsylvania.

470 CONCERT BAND Q2

Grades 10, 11 & 12

Concert Band Q2 will focus on concert band repertoire and performances, including some outdoor performances and ceremonies. This class will also focus on improving the fundamentals of ensemble playing. All students must understand that attendance at all concerts and band-related events is mandatory except when prior administrative excusal is granted for extenuating circumstances. Concert Band Q2 is a nine-week class in the first semester and meets once a day, five days a week; however, additional rehearsals may periodically be required as needed. Progress is monitored through class participation, playing tests and performances.

468 CONCERT BAND Q3 & Q4

Grades 10, 11 & 12

Concert Band Q3 & Q4 will focus mainly on concert band repertoire and performances; however, some outdoor performances may be scheduled including parades and ceremonies. All students must understand that participation at all band and band-related events is mandatory except when prior administrative excusal is granted for extenuating circumstances. Concert Band Q3 & Q4 is a second semester course and meets once a day, five days a week. Additional rehearsals may periodically be required as needed. Progress is monitored through playing tests and performances.

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

484 ORCHESTRA

Grades 7 to 12th

All Year (M-F)

This course is designed to continue the strings education from the elementary program to the middle school. This course gives the string players the opportunity to enhance and build upon the fundamentals by providing a daily ensemble rehearsal. This course also provides the younger players with the chance to play and perform with older and more experienced students. Since this class meets on a daily basis the students will not be pulled out of other classes for their lessons. This class is not encouraged for students who have not already played a string instrument. Any student wishing to enroll without previous playing experience must get permission from the director.

A.W. Beattie Career Center

A.M. Morning Session
Credit 3.0

Grades 10, 11, 12

General Information-

A.W. Beattie Career Center offers students an opportunity to prepare for their chosen career field through advanced career preparation during their 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 advance college credit upon successful completion.

Potential college credits range from three to twenty-two credits

A.W. Beattie Career Center Programs are approved Programs of Study (POS) providing for seamless transition to post-secondary education through rigorous content aligned with challenging academic and relevant career context in a non-duplicative progression of courses aligned to post-secondary education. SOAR is a Pennsylvania program which allows CTE students to earn free college credits. Students earn free credits with a qualifying score from the NOCTI Senior year assessment and confirmation that they have completed the entire CTE program of study. To obtain free credits, students must submit the proper paperwork to the college, as outlined below. This paperwork requires CTE administrative signatures for submittal.

SEE WHICH COLLEGES OFFER FREE CREDITS FOR YOUR CTE PROGRAM OF STUDY (POS)

To determine the free credits offered for Pennsylvania Career and Technical Education Programs of Study (POS) visit the website <http://www.collegetransfer.net/>. After selecting your Program of Study and your high school graduation year, you can view all of the colleges offering free credits for your particular CTE program. Additionally, A. W. Beattie Career Center maintains many college credits articulation agreements with two and four year post secondary institutions, please visit our website www.beattietech.com 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.

Course Offerings-

- *Advanced Computer Programming
- *Advertising Design
- *Agile Robotics/Intelligent Systems
- *Auto Body Repair
- *Automotive Technology
- *Carpentry/Building Construction
- *Computer System Technology
- *Cosmetology
- *Culinary Arts
- *Dental Careers
- *Early Childhood Education
- *Emergency Response Technology
- *Health Science Technology
- *Heating, Ventilating and Air-Conditioning Technology
- *Introduction to Pharmacy
- *Networking Engineering Technology
- *Pastry Arts
- *Mandarin Chinese
- *Sports Medicine-Rehab Therapy and Exercise Science (SMART-EST)
- *Sports Medicine-Rehab Therapy and Exercise Science (SMART-EST)
- *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: kim.zylinski@beattietech.com**

Course Descriptions:

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

Advertising Design-The Advertising Design program at A.W. Beattie Career Center focuses on a wide variety of professional art-related fields, including: Digital Graphic Design, Multimedia, Digital Photography, and Web Design. Students will train in a dual-platform (Mac and PC) environment using the latest in professional graphic design software and equipment, such as: Adobe Photoshop CS5.5, Adobe Illustrator CS5.5, Adobe Premier Pro, Adobe Dreamweaver CS5.5, and many others. Students can achieve advanced standing at local colleges or universities by utilizing college credits you can earn while you are an Advertising Design student working towards your Adobe Certified Associate Certificate.

Agile Robotics/Intelligent Systems-Students interested in the most recent, innovative technology have a unique opportunity for training in the cutting-edge Robotics Industry. Through a partnership with the Technology Collaborative and California University of Pennsylvania, along with guidance and support from Carnegie Mellon University, students will study Robotics using curriculum developed through the Nation Robotics Education Center. They will move through a series of introductory activities into more advanced design and control challenges, using the same state-of-the-art equipment as California University. Students will study robotics technology case studies and participate in hands-on lab experiences. Students can earn up to 17 credits at A.W. Beattie Career Center for use in continuing their education at California University. Because the application of robotics systems is beneficial to many industries, there are numerous employment opportunities for Robotics Technicians in the Pittsburgh area, well as nationally. Students also participate in FIRST Robotics Team Competition.

Automotive Collision Technology-Auto Body Repair trains students in all aspects of the industry including MIG welding, computerized paint, mixing, and spraying techniques. Using the latest technology in our fully equipped auto shop keeps students up-to-date with current standards. Cooperative education experiences in local area dealerships provide authentic educational experiences.

Automotive Technology-The NATEF(National Automotive Technicians Education Foundation) certified Automotive Technology program at A.W. Beattie Career Center meets strict standards, providing students with hands-on experience using up-to-date diagnostic equipment in our state-of-the-art auto shop. Students learn all aspects of the trade, as well as participating Automotive Technology is an AYES (Automotive Youth Education Systems) training facility, providing students during their senior year, with work experience in local area dealerships, allowing for those important career connections. NATEF and AYES certification assure students the best training and preparation to complete their ASE (Automotive Service Excellence) certification in less time, upon graduation. Students will have the opportunity to earn their PA Safety and Emissions Inspection credentials.

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

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

Cosmetology-In Cosmetology, the Beattie Salon provides qualified Cosmetology students with the opportunity to use their energy, skills, and imagination on clients from the community, in a state-of-the-art Cosmetology Salon. Students will study care of hair, nails, and skin. They will learn the proper use of cosmetology tools and equipment, as well as techniques in hair cutting, styling, coloring, permanent waving, relaxing, manicuring, pedicuring, and skin care. Students will also focus on professionalism and customer relations, while preparing to test for their Pennsylvania State Cosmetologist License.

Culinary Arts-The culinary Arts department has built a solid reputation as one of the finest programs throughout the State. The Beattie Dining Room, give a three star rating by the Pittsburgh Press, serves breakfast and lunch to more than 150 people a day! Located in the Dining Room, the Bake Shop sells cookies, brownies, pies, cakes, and various pastries. Students learn all aspects of the restaurant business from meal planning, food preparation, baking and carving, top dining room management, and banquet serving. There are many job opportunities within the always growing Culinary Industry as well as scholarships for students provided by prestigious culinary colleges. Students practice their craft in a commercially equipped kitchen and bakery while earning their ServSafe Food Safety Certification.

Dental Careers-Dental Careers students learn the necessary skills for employment in Dental Assisting, Lab Technician, Infections Control Assistant, and many more opportunities within the Dental Industry. Seniors participate in hands-on work experiences in dental offices learning and assisting in four handed dentistry, chair-side assisting, administrative skills, and other techniques. Students will prepare to test for their PA Radiological Certification on the Career Centers state of the art Digital X-Ray System. Upon successful program completion and two years of employment, students will be eligible for their Dental Assisting National Board exam.

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

Emergency Response Technology- This course challenges students with exciting hands-on training in a fully equipped on-site lab, as well as field trips to the local Police and Fire Academies, throughout the school year. Students study several technical fields including police science, fire science, rescue operation, hazardous material, and emergency medical services. Certification as an Emergency medical Technician (EMT) at A.W. Beattie Career Center will prepare students for immediate employment in the growing Emergency Response Industry.

Health and Nursing Sciences-This course will show students that today's medical field is rapidly growing and changing. There's never been a better time to pursue a career in the Health Industry. The core curriculum will prepare students for entry level positions, such as Medical Assisting and Nurse Assisting. For those students that have an interest in becoming a Nurse, Radiology Technician, or Physical Therapy Assistant, this program will prepare them for post-secondary education. During the course of study, students will gain valuable hands-on clinical experience in hospitals, nursing homes, physical therapy clinics, and private offices where they will practice and perfect their skills, preparing them for an exciting and rewarding career in healthcare. Pennsylvania Nurse Aide Certification is available to students who successfully complete their clinical rotation and state exam.

Heating, Ventilating, and Air-Conditioning-This is a course that trains students with the necessary skills to become qualified technicians and mechanics. Students learn heating installation and service, air-conditioning installation and service, plumbing, electrical wiring, refrigeration, and sheer metal fabrication. Students will put these skills into use when they participate in the plumbing, ventilating, and wiring of the Beattie modular home. They also test for their EPA certification and OSHA-10 Safety Certification at A.W. Beattie Career Center, helping to ensure immediate employment opportunities along with post secondary opportunities.

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

Networking Engineering Technology-Are you interested in knowing how the Internet works, building things, and working with computers? Are you familiar with the components and software aspects of a computer and interested in pursuing a career in computers? Then you may be a potential candidate for the Networking Engineering Technology course at the A.W. Beattie Career Center. Students will construct various types of network cables, install network cards and drivers, set up peer-to-peer networks, and create network neighborhoods for several host computers. Lab exercises include setting up and troubleshooting Netscape and Internet Explorer, as well as participating in online curriculum. Each semester, students completing the two-year program will be eligible to test for the Cisco Certified Networking Associates Certification. Students with CCNA certification received preference when seeking employment.

Pastry Arts-This course provides students with an opportunity to learn all functions of a commercial bakery while perfecting their creative pastry skills. Students keep the bakery cases, located in the Beattie Dining Room stocked full of cases, cookies, pies, brownies, breakfast pasties, and a variety of specialty breads and rolls. Students receive quality training in our fully equipped Pastry Arts lab learning everything from baked goods preparation to merchandising, and dining room service. There are classroom demonstrations from industry professionals throughout the school year, as well as field trips to local bakeries and restaurants. Students will prepare special orders for holidays, weddings, and special events throughout the year. Students have the opportunity to earn their ServSafe Food Safety Certification.

Veterinary Sciences Technology (VET-TECH)-Students enrolled in the Vet-Tech program will experience a wide variety of care and management techniques throughout the program. Students will learn to maintain medical records, schedules, offer client education, explore authentic laboratory procedures, and assist with nursing and prepare for surgical duties; along with routine exams. Students will gain a solid foundation in the Vet-Tech program on which to build a post-secondary degree. The Vet-Tech Program may lead to additional career pathways such as Animal Trainer, Animal Breeder, Non-Farm and Laboratory Animal Caretaker, Groomer, Animal Control Officer, Veterinary Technician or Technologist, and Veterinarian. Students will have the opportunity to earn the following recognized industry certification: Purina Certified Weight Coach, Pet Tech First Aid and CPR.

Sports Medicine-Rehab Therapy and Exercise Sciences Technology (SMART-EST)-

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

