GRADE 9 COURSE DESCRIPTIONS
Middle School Course Offerings 2020-2021

An 8-period day utilizing a 6-day cycle. All students must schedule 42 periods per cycle.

### REQUIRED COURSES: GRADE 9

<table>
<thead>
<tr>
<th>Major Subjects</th>
<th>Periods/ Cycle</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENGLISH 9</td>
<td>6</td>
<td>1.0</td>
</tr>
<tr>
<td>SOCIAL STUDIES</td>
<td>6</td>
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</tr>
<tr>
<td>MATHEMATICS</td>
<td>6</td>
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<tr>
<td>SCIENCE - PHYSICAL</td>
<td>6</td>
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<tr>
<td>READING (FOR STUDENTS READING 1½ YEARS OR MORE BELOW GRADE LEVEL)</td>
<td>6</td>
<td>1.0</td>
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<tr>
<td>ELD (AS PRESCRIBED BY ELD TEACHER)</td>
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<table>
<thead>
<tr>
<th>Minor Subjects</th>
<th>Periods/ Cycle</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HEALTH</td>
<td>2</td>
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</tr>
<tr>
<td>PHYSICAL EDUCATION</td>
<td>2</td>
<td>0.3</td>
</tr>
<tr>
<td>COMPUTER APPLICATIONS 3</td>
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### ELECTIVE COURSES

#### Major Subjects

<table>
<thead>
<tr>
<th>Major Subjects</th>
<th>Periods/ Cycle</th>
<th>Credits</th>
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<tr>
<td>JROTC - SCIENCE OF FLIGHT (3915) AT NPHS</td>
<td>6</td>
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</tr>
<tr>
<td>ART MAJOR (6094)</td>
<td>6</td>
<td>1.0</td>
</tr>
<tr>
<td>INTRODUCTION TO BUSINESS (5594)</td>
<td>6</td>
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</tr>
<tr>
<td>WORLD LANGUAGES: FRENCH 1 &amp; 2, GERMAN 1 &amp; 2, LATIN 1 &amp; 2, SPANISH 1 &amp; 2, JAPANESE 1 AT NPHS</td>
<td>6</td>
<td>1.0</td>
</tr>
<tr>
<td>FCS MAJOR (6195)</td>
<td>6</td>
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</tr>
<tr>
<td>APPLYING TECHNOLOGY (5094)</td>
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#### Minor Subjects

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<thead>
<tr>
<th>Minor Subjects</th>
<th>Periods/ Cycle</th>
<th>Credits</th>
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<tr>
<td>APPLYING TECHNOLOGY MINOR (8509)</td>
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<tr>
<td>ART (8600)</td>
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<tr>
<td>BAND (8621)</td>
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<tr>
<td>BAND (8641)</td>
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<tr>
<td>CHORUS (8622)</td>
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<tr>
<td>CHORUS (8642)</td>
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<tr>
<td>EXPLORATORY BUSINESS (8559)</td>
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<tr>
<td>FCS MINOR (8619)</td>
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<tr>
<td>ORCHESTRA (8623)</td>
<td>2</td>
<td>0.3</td>
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<tr>
<td>ORCHESTRA (8643)</td>
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<td>0.7</td>
</tr>
<tr>
<td>RELATED FINE ARTS (8609)</td>
<td>2</td>
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<tr>
<td>FOUNDATION OF MUSIC THEORY &amp; TECHNOLOGY (8629)</td>
<td>2</td>
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<tr>
<td>TECHNICAL DRAWING AND DESIGN (8539)</td>
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<tr>
<td>THEATER ARTS (8009)</td>
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### Ninth Grade Credit Allocation

- 8 x cycle/year = 1.3
- 6 x cycle/year = 1.0
- 4 x cycle/year = 0.7
- 2 x cycle/year = 0.3
Art/Visual Communications

Major Elective

ART MAJOR 6095
Level 5.0 [Grade 9] (6 periods – 1 credit)
This course promotes and integrates art history, art criticism, aesthetics, and art production. It is for students who wish to continue their education in art and art related fields. In this course, the student will explore the elements and principles of art through drawing, painting, printmaking, and sculpture. Students will develop two and three dimensional art production techniques in a variety of mediums.
Prerequisite: Art Foundation II with a “B” or better

Minor Electives

ART 8600
[Grade 9] (2 periods – 0.3 credit)
This course is designed to promote the student's growth in visual expression using two and three-dimensional art production techniques. Students expand on their study of the elements of art and principles of design which provide the foundation for organizing the content of their own creations. The study of art history, aesthetics, and criticism is incorporated to give a deeper meaning to the learning of art processes.

RELATED FINE ARTS 8609
[Grade 9] (2 periods – 0.3 credit)
This course combines components of art and music. Students explore the visual arts and music in the global experience. Topics include rock/pop history, modern art, audio visual technology, and careers in the arts.

Business Administration and Technology

Required Course

COMPUTER APPLICATIONS 3 8552
[Grade 9] (2 periods – 0.3 credit)
This project based course provides students with the 21st century skills necessary for managing their digital lives. Students will develop advanced skills in word processing and spreadsheet development, including the graphical representation of data. Students will also explore, create, and design databases, digital imagery, and animations. Instruction emphasizes good digital citizenship and safe, ethical, and responsible online behavior.

Major Elective Offering

INTRODUCTION TO BUSINESS 5595
Level 5.0 [Grade 9] (6 periods – 1 credit)
In this course, students will explore the areas of Marketing, Economics, Personal Finance, Business Law, Accounting, International Business, Management and Entrepreneurship with heavy emphasis on personal finance concepts. Essential everyday math will be utilized throughout the class (i.e. percents, markup, interest, etc.) The stock market, outside resources, field trips, exploratory projects and videos are used to reinforce the ideas and concepts. This course will prepare the student for further study at a more advanced level.

Minor Elective Offering

EXPLORATORY BUSINESS 8559
[Grade 9] (2 periods – 0.3 credit)
This course introduces students to the world of business and will help prepare them for their roles as consumers, workers, and citizens. It provides students with the basic vocabulary of the business world and will also serve as a background for other courses they take in high school and college. The Big Ideas include: Savings and Investments Strategies, Economic Activity Decisions and Systems, Entrepreneurship, Marketing and Accounting.
English

English Required Course Offerings

ENGLISH 9 (IFE) (6 periods – 1 credit)
Level 5.0 (IEP required) 0095C
Level 5.0 0095
Level 6.0 (Honors) 0096
Level 6.0 (High Potential) 0096P

All classes in grade 9 include composition, grammar, literature, and vocabulary. The composition program provides students with a variety of writing experiences with an emphasis on the writing process. The course also stresses sentence structure and the more difficult aspects of correct usage. Through the study of literature, students learn to appreciate both nonfiction and fiction and to understand and use literary terminology. In addition, a structured spelling and vocabulary program is included.

English Minor Elective

THEATER ARTS 8009
[Grade 9] (2 periods – 0.3 credit)

This course is an introduction to monologues, dialogues, and other skills needed to create character types. Students are required to take part in writing, producing, and performing short skits. Participants will develop an appreciation for theater arts and acquire an ability to critique various elements of a performance. Students will become familiar with techniques and materials used by professionals in the performing arts.

Family and Consumer Sciences

FCS Major Elective

FCS MAJOR 6195
Level 5.0 [Grade 9] (6 periods – 1 credit)

This course involves an in-depth study of the areas of family and consumer science including dietary concerns and nutrition, food preparation, career exploration, consumerism, intergenerational topics, clothing care, and project construction. Class topics are reinforced by numerous hands-on experiences in the family and consumer science classroom and computer labs.

FCS Minor Elective

FCS MINOR 8619
[Grade 9] (2 periods – 0.3 credit)

For the students who would like to take FCS Major but cannot fit it into their schedules, this course is the answer. Selected topics from the FCS Major curriculum will be included. Class topics are reinforced by numerous hands-on experiences in family and consumer science labs.

Gifted

GIFTED SEMINAR 9 8090
[Grade 9] (2 periods – 0.3 credit)

This two period per cycle Gifted Seminar 9 course is available to students who currently have a GiEP in 9th grade. Gifted seminar is an interdisciplinary elective course whose skill-based curriculum is process-rather than content-focused. The framework of this process centered curriculum is constructed around the exploration of communications. Students will have the opportunity to explore topics of choice related to the themes of the class. Students will analyze various forms of communication and will practice public speaking. The course will employ a variety of instructional strategies that will support students in the development of their own knowledge and creativity. This course can be scheduled in place of Computer Applications.

Prerequisite: High level reading, math, social studies, and science skills
Health & Physical Education

Required Course Offerings

HEALTH
[Grade 9] 7290
(2 periods – 0.3 credit)
Some of the units of study included in the health curriculum are human growth and development, skeletal and muscular systems, wellness, nutrition, and physical fitness. Health instruction emphasizes awareness of healthful practices and decisions leading to a wholesome, productive life.

PHYSICAL EDUCATION
[Grade 9] 7090
(2 periods – 0.3 credit)
Physical activities help to improve students' basic skill levels as they are motivated to attain physical fitness levels. Each student must meet uniform and participation requirements.

ADAPTED PHYSICAL EDUCATION
[Grade 9] 7020
(2 periods – 0.3 credit)
This course is offered for those students who, for medical reasons, need special physical activities.

Mathematics

The mathematics program offers a variety of courses designed to accommodate and appropriately develop mathematical proficiency. Courses within the middle school are part of the mathematical sequence in which students make the transition from arithmetic skills and concepts to the more abstract study of algebra and geometry. All courses taught within the mathematics program will include skills developed through a study of concepts, real-world applications, and problem solving experiences. Students are expected to provide their own scientific calculator for all major math courses unless a graphing calculator is noted.

Math Required Course Offerings

ALGEBRA 1 (IFE)
[Grade 9]
Select one math course offering from the options below:

ALGEBRA: OPERATIONS AND EQUATIONS (IFE) 2105 BB
Level 5.0 [Grade 9] (6 periods – 1.0 credits)
This course is specifically designed for students who test at the below basic level on the 8th grade PSSA in mathematics. Students will be assigned to this course based on multiple evaluative criteria. This course develops basic algebraic concepts, principles, and manipulations. This course will meet for 8 periods per cycle and is designed to cover the Algebra 1 curriculum over a two year period. It will culminate with the Keystone Algebra Exam at the end of the second year.

ALGEBRA: FUNCTIONS AND DATA REPRESENTATIONS (IFE) 2106K
Level 6.0 (Honors) [Grade 9] (6 periods – 1 credit)
This course is specifically designed for students who have successfully completed Algebra- Operations and Equations 6.0. This course will continue to develop algebraic concepts, principles and manipulations. Major topics include linear functions, coordinate geometry, and data analysis. It will culminate with the Keystone Algebra Exam at the end of the course.
Prerequisite: Successful completion of 2016A Algebra Operations and Equations

GEOMETRY (IFE) 2206
Level 6.0 (Honors) (6 periods – 1 credit)
This course includes the study of plane and solid figures, similarity, congruence, postulates, theorems, proofs, constructions, areas and volumes. The concepts of space (solid) geometry are introduced early in the course and used thereafter. Finally, the student is introduced to elementary ideas of plane analytical geometry.
Prerequisite for 6.0: “C” or higher in Algebra 1 (2106AK) and Proficient on the Algebra Keystone
**ALGEBRA 2 (IFE) 2316**

**Level 6.0 (Honors)**

(6 periods – 1 credit)

*(Graphing calculator and summer packet required.)*

This course includes a study of real and complex numbers, arithmetic and geometric sequences, and probability. Students will investigate the behavior of polynomial, exponential, logarithmic and radical functions, as well as solve equations, inequalities and systems when applicable. Operations with rational expressions will also be explored.

**Prerequisite:** “B” or higher in 2106AK Algebra

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**Music**

A concert band (including a marching component), mixed chorus, and orchestra are available to qualified students as determined by audition or recommendations from previous instructors. Appropriate music is chosen for its appeal as well as its educational and aesthetic value. Some performances and rehearsals are scheduled outside of the school day as part of the curriculum.

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**Minor Electives**

**MUSIC PERFORMANCE CLASSES:**

- **BAND** (2 periods – 0.3 credit) 8621
- **BAND** (4 periods – 0.7 credit) 8641
- **CHORUS** (2 periods – 0.3 credit) 8622
- **CHORUS** (4 periods – 0.7 credit) 8642
- **ORCHESTRA** (2 periods – 0.3 credit) 8623
- **ORCHESTRA** (4 periods – 0.7 credit) 8643

**SECTIONAL OR GROUP INSTRUCTION**

All instrumental students will be assigned to a small group for lessons. The lessons are organized and function according to the needs of the student. Each group meets once per cycle and is scheduled on a rotating schedule from other regularly scheduled classes. Some remedial choral lessons are scheduled as determined by the instructor. Many co-curricular ensembles are scheduled by audition from the larger performing groups. Co-curricular groups may include jazz band, wind ensemble, brass ensemble, percussion ensemble, treble chorus, male chorus, and string ensembles. Students will receive hands-on experience using music software in the music technology lab.

**NOTE:** In order to audition for a select ensemble, students must be enrolled in a performing ensemble class (band, orchestra, chorus). Rehearsals and performances inside and outside the regular school day are a requirement of membership.

**RELATED FINE ARTS** 8609

[Grade 9]  
(2 periods – 0.3 credit)

This course combines components of music and the visual arts in the modern era. Topics include music and art in film and advertising, audio-visual technology, and careers in the arts. Students will also receive hands-on experience with digital music and art in the technology lab using Garage Band, iMovie, and the Adobe Creative Suite.

**FOUNDATION OF MUSIC THEORY & TECHNOLOGY** 8629

[Grade 9]  
(2 periods – 0.3 credit)

This course is designed for band, chorus and orchestra students considering a career in music. The course will explore the advanced concepts of music theory, composition, publishing, ear training, recording, sequencing and audio engineering using the middle school music technology labs. Students will utilize music software programs including Musition, Auralia, Finale, Home Studio, Piano Suite, Band in a Box and Smart Music as well as music on the internet. Some basic piano keyboard skills are helpful but not required.

**Prerequisite:** Students must also schedule 4 periods of band, chorus or orchestra in ninth grade.
THE SCIENCE OF FLIGHT & INTERCOMMUNICATION SKILLS
Level 5.0 (6 periods – 1 credit) 3915
The Science of Flight course introduces the student to the exciting world of aerospace science. The course spans diverse subject areas within the Principles of Flight discipline to include: Basic Aeronautics, Aircraft Motion & Control, Meteorology, Human Flight Physiology & Engineering and Aircraft Design. Flight simulators and aircraft model construction are an integral part of the interactive course curriculum. The Leadership and Intercommunication Skills course is taught in a teamed approach within the Science of Flight curriculum. Emphasis is placed on the importance of the communication and management process including citizenship/patriotism, community service, time management, organizational structures and framework, effective oral and writing skills and team building all designed to develop and hone the student’s leadership skills. Students have a hands-on opportunity to apply their leadership and interpersonal skills through assigned leadership positions responsible for the management of the JROTC corps of cadets. This course will count for an elective science credit.

Middle School students who opt to participate in JROTC will begin the school day at NPHS. Students will take two courses at NPHS; Science of Flight and either a math course, Physical Science or World Language course. Transportation to the appropriate middle school will take place after second period.

NOTE: All students must wear the provided Air Force uniform and comply with grooming requirements. Students are expected to wear the Air Force uniform once per week on Wednesdays.

Reading

LITERATURE EXPLORATIONS
[Grade 9] (6 periods – 1 credit) 4095
This course will provide instruction for students who continue to develop competency in literacy and critical analysis of text. Strategies and skills will be targeted through systematic instruction of comprehension, vocabulary, word study, analysis, and writing. A variety of complex texts will provide the opportunity for close reading, critical analysis, and constructed response. This course will be differentiated to meet the needs of all learners.

ENGLISH/STRATEGIC LITERACY 1 (12 periods – 2 credits)
Level 5.0 (IFE) 0095A/4095A
This course will provide targeted, systematic instruction of comprehension strategies and skills for developing reading independence. Targeted literacy skills including comprehension, vocabulary, word study, and writing will be addressed through the use of technology, direct instruction and the use of both literature and informational text. A variety of complex texts will provide the opportunity for close reading, critical analysis, and constructed response. The various modes of writing, along with the writing process, will also be taught. Students in Strategic Literacy Level 1 and Level 2 may be combined in the same classroom since the program will be differentiated to meet the varied needs of learners.

ENGLISH/STRATEGIC LITERACY LEVEL 2 (12 periods – 2 credits)
Level 4.0 (IFE) 0095B/4095B
This course will provide targeted, systematic instruction for comprehension strategies and skills for developing reading independence. Targeted literacy skills including comprehension, vocabulary, word study, and writing will be addressed through the use of technology, direct instruction and the use of both literature and informational text. Instruction will focus on the foundational skills for reading (phonemic awareness, phonics, decoding/encoding) in addition to comprehension, vocabulary and writing. A variety of challenging texts will provide the opportunity to apply these skills to critical analysis and response. The various modes of writing, along with the writing process, will also be taught. Students in Strategic Literacy Level 1 and Level 2 may be combined in the same classroom since the program will be differentiated to meet the varied needs of learners.
Science

Required Course Offerings

**PHYSICAL SCIENCE (IFE)**
(6 periods – 1 credit)

- **Level 5.0 (IEP required)**
  - 3095C
- **Level 5.0**
  - 3095
- **Level 6.0 (Honors)**
  - 3096

This course combines a standards-aligned study of physics and chemistry concepts with an exploration of laboratory and problem-solving skills. Utilizing an inquiry-based approach, students develop an understanding of topics such as force, motion, energy, atoms, and chemical bonding. Students learn to apply process skills to reach scientific conclusions based on data and evidence. These skills form the foundation for success in future laboratory science courses.

Social Studies

Required Course Offerings

**AMERICA IN HISTORY 2 (IFE)**
(6 periods – 1 credit)

- **Level 5.0 (IEP required)**
  - 1095C
- **Level 5.0**
  - 1095
- **Level 6.0 (Honors)**
  - 1096
- **Level 6.0 (High Potential)**
  - 1096P

The ninth grade Social Studies curriculum reflects the PA standards in civics and government, economics, history, and geography. These standards are integrated into the study of America’s history and culture. This American History course will include the following time frame: Reconstruction through World War II. Students will have the opportunity to continue to develop their geography skills, to study primary and secondary source documents, as well as to investigate how culture and events in history have shaped the country and world in which we live. The research process, integral to the Social Studies class, is included in this curriculum.

Special Education

See Course 10-12 for more information.

Technology and Engineering Education

Courses in technology and engineering education reflect innovations, technological systems, resources, and products related to technology. Technology education explores the social, cultural, and environmental impacts of technological developments in the world. Opportunity is provided in classroom and laboratory settings for students to develop knowledge, skills, and attitudes regarding technology. The technology education program is designed to ensure that citizens are prepared to contribute to a competitive and complex technological society.

Major Elective

**APPLYING TECHNOLOGY MAJOR**
(6 periods – 1 credit)

- **Level 5.0 [Grade 9]**
  - 5095

This is a project-based course that focuses on the applications of the tools, materials, and processes in technology and engineering related disciplines, including bio-related, communications, construction, manufacturing and transportation systems. Students experiment the way materials, energy, and information are processed to solve technological problems. Topics include aerodynamics, automation, plastics/synthetics, energy production, robotics, structural design/analysis, environmental and medical technology.
Minor Electives

APPLYING TECHNOLOGY MINOR 8509
[Grade 9] (2 periods – 0.3 credit)
This is a project-based course that focuses on the applications of the tools, materials and processes in bio-related, communications, construction, and manufacturing and transportation systems. Students are guided through activities which reflect developments in technology. Through problem solving activities, students design, fabricate, test, and present a variety of solutions to technical problems.

TECHNICAL DRAWING AND DESIGN MINOR 8539
[Grade 9] (2 periods – 0.3 credit)
This introductory course in technical drawing and design includes freehand sketching, use of mechanical drawing instruments, computers to generate CAD (Computer Aided Drafting), and explore related careers. This course should be of interest to those students who may be considering the Engineering Academy at the high school or technical profession.

Technical Career Center Cluster Experience
For information on the program at the TCC, please refer to NMTCC link on website

World Languages

All students are encouraged to pursue the study of a world language, modern or classical. They are urged to complete a three to five year sequence of one language and in the high school may begin second language for an additional sequence. Research has proven that world language students generally show improvement in their English skills and attain noticeably higher scores on the verbal portion of their SAT’s as well as college entrance exams. In practically every job situation in today’s shrinking world, the graduate with a world language background has a major advantage. A student may begin the study of a world language in grade 8 by enrolling in one of four choices: French, German, Latin or Spanish. World language courses successfully completed are recorded on the official high school transcript. Credit toward high school graduation is earned beginning in 9th grade. Students will not be permitted to enroll in the same level of a language for a third time. It is recommended that students requesting the first year of a language have at least a “C” average in mainstreamed English for the preceding year in order to meet with success.

MODERN LANGUAGE 1
Level 5.0 (6 periods – 1 credit)
In the first level of each of these languages, students are introduced to the four basic skills of language learning: listening, speaking, reading, and writing. Students spend much class time in listening/speaking activities. Teachers emphasize the ability to produce the basic sounds of each language. Audio-visual aids such as tapes, recorded by native speakers, cue cards, and posters are used. Students are exposed to the culture and customs of each country through the use of films, internet access, stories, and songs. Grammar is introduced as well as elementary vocabulary.

MODERN LANGUAGE 1—SPANISH 1 4215
MODERN LANGUAGE 1—FRENCH 1 4315
MODERN LANGUAGE 1—GERMAN 1 4415
MODERN LANGUAGE 1—JAPANESE 1* 4515

* JAPANESE 1 can only be taken at North Penn High School in combination with a 6 period per cycle math course, or physical science, or JROTC course. Ninth grade students selecting this course begin their day at North Penn High School at 7:21 AM. Bus transportation to the high school is via the AM high school bus run. Bus transportation to the middle schools will follow at the end of the high school’s second period.
MODERN LANGUAGE 2
Level 5.0 (6 periods – 1 credit)
Select one Modern Language 2 course offering from the options below:

MODERN LANGUAGE 2 — SPANISH 2 4225
MODERN LANGUAGE 2 — FRENCH 2 4325
MODERN LANGUAGE 2 — GERMAN 2 4425

The second year of world language study builds upon the first year’s program. Vocabulary development is much greater, including idiomatic expressions, more complicated sentence structure and additional verb tenses. Language patterns become more sophisticated. The study of culture and customs continues to be emphasized in both the target language and in English. Students begin to read short stories and essays. They will write original paragraphs and short compositions in the target language while grammar and syntax continue to be taught as an inherent and important skill.

Prerequisite: “C” or higher in year 1

LATIN 1 4115
Level 5.0 (6 periods – 1 credit)
Latin 1 is a beginning course in Latin grammar through which the student learns to read and write the language on an elementary level. It also introduces the student to the study of Roman civilization, and Greek and Roman mythology. Emphasis is placed on the contribution of Latin to the English language, thus helping to develop the student’s English verbal skills.

LATIN 2 4125
Level 5.0 (6 periods – 1 credit)
Latin 2 continues the study of Latin grammar and vocabulary. Readings are selected to introduce more advanced grammatical construction. Roman civilization, Greek and Roman mythology, and English word derivation also continue to be emphasized.

Prerequisite: “C” or higher in Latin 1