

**Northern Tioga School District
2023-2024 School Year
Grades 9-12 Future Planning Guide**



Superintendent: Kristopher Kaufman
110 Ellison Road
Elkland, PA 16920

Cowanesque Valley High School

Principal: Matthew Sottolano
Guidance Counselor: Beverlea Hamilton

51 North Fork Road
Westfield, PA 16950
814-367-2233

Williamson Jr./Sr. High School

Principal: William Butterfield
Guidance Counselor: Christine Wilson
Abby Brown

33 Junction Cross Road
Tioga, PA 16946
570-827-2191

Mission: The mission of the Northern Tioga School District is to equip all students with a foundation of critical thinking and problem-solving tools essential for lifelong learning within local and global communities.

Revised Dec. 2022

Minimum Graduation Requirements

Area of Study	Total Credits	Breakdown of Credits
English	4	4 credits of English
Math	4	4 credits of Math including 1 credit of Algebra and 1 credit of Geometry
Social Studies	3	3 credits of Social Studies including 1 credit of American History and 1 credit of Government
Science	3	3 credits of Science including 1 credit of Science 9 and 1 credit of Biology
Physical Education	2	
Health	.5	
Business Education	1	1 credit of Personal Finance
Fine/Practical Arts	1	1 credit of Band, Chorus, Music, Art, Wood, Metal, Drama, or Guitar
Graduation Project	1	1 credit *see Graduation Project Packet for Details
Electives	6.5	6.5 elective credits are required
Total	26	

Promotion Requirements: 6 credits to grade 10
 12 credits to grade 11
 18 credits to grade 12

A fully scheduled student will have no more than 9 credits per academic school year.

Personal Finance may take the place of a **math credit**. The student will need to declare the intent during their scheduling in the spring and the student's elective requirement increases to 7.5.

Computer Science 1,2,3 may take the place of **math or science credit**. The student will need to declare the intent during their course scheduling in the spring.

Pennsylvania Department of Education and

Northern Tioga School District –

Act 158 of 2018 Pathways to Graduation



Act 158 of 2018 has brought about state level graduation requirements or pathways to graduation. These pathways take effect with the graduating class of 2023. While local grade-based and district-based requirements are still in effect, the state has identified five pathways to graduation: Keystone Proficiency Pathway, Keystone Composite Pathway, CTE Concentrator Pathway, Alternative Assessment Pathway, and Evidence Based Pathway. You will find additional information regarding the pathways below, as well as on the school district website.

The goal of Northern Tioga School District is to work with students and families in goal setting and planning for the pathway that is in alignment with their career and educational goals. We hope that the pathways are not a barrier for students, but rather an opportunity to focus post-secondary plans which may assist students in their planning throughout the high school years. Please contact the high school guidance office if you have any questions or for more information, visit the Pennsylvania Department of Education's website at

<https://pdesas.org/Frameworks/DCEToolKit/Act158PathwaysToGraduationToolkit>.

ACT 158 – State Graduation Pathways

For students graduating in 2023 and beyond, the following pathway options exist to meet state graduation requirements:

- **Keystone Proficiency Pathway**: Scoring proficient or advanced on all three Keystone Exams (Algebra I, Literature, and Biology)
- **Keystone Composite Pathway**: Earning a satisfactory composite score (4452) on the Algebra I, Literature, and Biology Keystone Exams (while achieving at least one proficient/advanced score and no score of below basic on the remaining two)
- **Alternate Assessment Pathway**: Successful completion of locally established, grade-based requirements for academic content areas associated with each Keystone Exam (passing final course grades in Algebra I, Biology, and English 10/Honors English 10) and one of the following. Examples include:
 - Attainment of an established score on an approved alternate assessment:
 - SAT (1010), PSAT (970), ACT (21), ASVAB (31)
 - Successful completion of a concurrent enrollment course (college dual enrollment class) in an academic content area associated with each Keystone Exam in which the student did not achieve at least a proficient score.
 - Acceptance in an accredited 4-year nonprofit institution of higher education and evidence of the ability to enroll in college-level coursework.

- **Evidence Based Pathway:** Successful completion of locally established, grade-based requirements for academic content areas associated with each Keystone Exam (passing final course grades in Algebra I, Biology, and English 10/Honors English 10) and demonstration of **three** pieces of evidence consistent with the student’s goals and career plans, including:
 - ONE or more of the following:
 - Acceptance to any other than 4-year institution of higher education for college-level coursework
 - Attainment of an industry recognized credential
 - Successful completion of any concurrent enrollment or postsecondary course
 - And no more than TWO additional pieces of evidence from the following:
 - Satisfactory completion of a service-learning project
 - Attainment of a score of proficient or advanced on any Keystone Exam
 - Letter guaranteeing full-time employment or military enlistment
 - Successful completion of an internship or cooperative education program
 - Satisfactory compliance with the NCAA’s Division II academic requirements

- **Career and Technical Education Pathway:** Career and Technical Education Concentrators – successful completion of locally established, grade-based requirements for academic content areas associated with each Keystone Exam (passing final course grades in Algebra I, Biology, and English 10/Honors English 10) and ONE of the following:
 - Attainment of an industry-based competency certification
 - Demonstration of the high likelihood of success on an industry-based competency assessment
 - Readiness for continued engagement in the CTE Concentrator’s program of study

Additional information for the state graduation requirements is available on the Northern Tioga School District website. www.ntiogasd.org

CORE HS Courses Requirement Learning Progression Pathways

	9 th Grade General	9 th Grade Acceleration	
Freshman	English 9 Algebra. 1 (Part 1/2) US History II Science 9 (Ag.) PE/Health 9	Honors English 9 Geometry US History II Science 9 PE/Health 9	
Sophomore	10 Grade General English 10 Geometry Western Civilizations Biology Drivers Ed/PE	10th Grade Acceleration Honors English 10 Algebra II Western Civilizations Biology Drivers Ed/PE	
Junior	11 Grade General English 11 Algebra II/3 rd math Personal Finance PE 11	11th Grade Acceleration Honors English 11 Pre- Calculus (3 rd Math) + Personal Finance PE 11	11th Grade Acceleration ACE Composition 1 Pre- Calculus (3 rd Math) + Personal Finance PE 11
Senior	12 Grade General English 12 or Applied 4 th Math Government PE 12	12th Grade Acceleration Honors English 12 4+ Math Credit Government PE 12	12th Grade Acceleration ACE Composition II 4+ Math Credit Government PE 12
	Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +

Grade Scale:

A= 93-100
B= 92-85
C= 85-77

D= 76-70
F= 69-0

Honor Roll:

Honor Roll 88 – 94% overall average
High Honor Roll 95% and above overall average

75% and below in a class is ineligible for Honor Roll or High Honor Roll.

Class Rank Weighting

Dual Enrollment College Courses through Corning Community College, Accelerated College Education (ACE), Mansfield University, Early Start Program (ESP), and Pennsylvania College of Technology, Penn Now will use 1.05 multiplier for the purposes of calculating class rank. (See your guidance counselor for course offerings.)

ACE and Penn Now courses are tuition free. ESP is offered at a reduced tuition rate. There may be associated costs for textbooks and/or materials.

Honors

Honors courses are more rigorous and designed to prepare students for college with additional readings, projects and increased writing requirements. Please note the prerequisite grades and that students must have the recommendation of a teacher to enroll in Honors courses work.

Acceleration

Middle school students taking high school courses will be awarded high school credit to their high school transcripts.

World Languages Online Course Work

Virtual Learning Network/Keystone National High School

Due to the academic rigor of these online courses, enrollment is granted only after parent and student meeting with Principal/Principal of Academic Affairs, principal and guidance counselor to determine appropriateness of placement.

- German 1, 2, 3, 4
- French 1, 2,3, 4
- Japanese 1
- Latin 1,2
- Mandarin Chinese 1, 2

Northern Tioga Academy

Enrollment is granted only after parent/guardian and student meeting with Principal/Principal of Academic Affairs and guidance counselor to determine appropriateness of placement. Once enrolled in the Northern Tioga Academy the student must attend and complete NTA orientation. If a student fails the

majority of his/her scheduled courses by the end of a marking period (9 weeks), he/she may be removed from the NTA program and be required to re-enter the physical building.

Career Technical Program (CTE)

The Department of Education has approved two Career Technical Education (CTE) programs offered at Cowanesque Valley High School. Students enrolled in Agriculture Mechanization or Agriculture General (CIP) are committed to a program of study that results in taking the National Occupational Competency Testing Institute (NOCTI). The NOCTI are standardized assessments for students studying career and technical programs in high school. Colleges may award college credit for scoring on the NOCTI. More information is available at: <https://www.nocti.org>

The following PDE approved CTE programs are offered at Cowanesque Valley HS.

CIP

The following vocational programs are available. Interested students should meet with their guidance counselor for more information and to create a course timeline.

CIP 01.0201 Agriculture Mechanization, General (CVHS)

Year Completed

____ Agriculture Mechanics I
____ Agriculture Mechanics II
____ Power Mechanics I
____ Power Mechanics II
____ Agricultural Science
____ Metal Working I
____ Metal Working II
____ Metal Working III
____ Independent Study/____ SAE/____ CO-OP

CIP 01.0000 Agriculture General (CVHS)

Year Completed

____ Agricultural Science
____ Horticulture I
____ Biotechnology
____ Horticulture II
____ Forestry
____ Agriculture Mechanics I
____ Agriculture Mechanics II
____ Animal Science
____ Independent Study/SAE/CO-OP

Cowanesque Valley High School has articulation agreements with:

Delaware Valley University
Alfred State College
SUNY Cobleskill

College and Career Ready

The goal of Northern Tioga School District is to prepare students to be college and/or career ready. Students have spent time in their intermediate school career getting to know their Holland Personality Type. Students and adults should take time to discuss the following types: realistic, investigative, artistic, social, enterprising, and/or conventional. In the eighth-grade year students have participated in the Career Awareness and Exploration class and developed an individual career plan that they will continue to revisit throughout high school. These tools and more will help students, parents and educators to discover who they are, what they want to do and then develop a plan of how to achieve a career that aligns with their skills, interests and abilities.

What is a career pathway?

A broad grouping of careers that share similar characteristics. They are clustered in the following groups:

Arts and Communication
Business, Finance and Information Technology
Engineering and Industrial Technology
Human Services
Science and Health

All students will take the required core courses. Information used from the Holland, individual career plans, job shadowing and other college and career activities should be used to provide a focus on a career cluster and desired career goals. Ultimately, the course progression should align to the career goals. Electives provide a good opportunity for career exploration and developing knowledge, skills and abilities.

Colleges often convert percentages into a 4.0 Grade Point Average.

It is highly recommended that you contact the college(s) of interest to learn of specific requirements for the course of study and admission. Some questions related to programming that may be helpful:

What is the required grade point average for admission into the program of study?

Can I test out of course work?

Do I need a foreign language? If so, is it recommended or required? How many years of the language class is suggested?

Do I need to take an assessment for admission? If so, what specific assessments? (Such as the SAT, TEAS, ACT, or a college placement test)

If needed, when should the exam be taken and how do I study for it?

Will the college accept my dual enrollment course work from high school?

And if so, will it replace a general education course or college elective?

Are there recommended or required classes that I should take in high school?

It is most helpful to begin asking these questions early in high school in order to have discussions with your guidance counselor to work the classes desired into your schedule.

Classes outside of a career focus can be valuable as well- as they continue to provide exposure to other fields and may open up new insights for students.

Career Training Options

Option	Description
On-the-job Training (OJT)	Employer designed training for the worker to gain necessary work skills while getting paid on the job. Depending upon this job, this may take days, weeks or months.
Diploma or Certificate Program	Short term programs of 6 months to 1 year to gain specific skills for entry level employment. These opportunities can be found at technical schools, community colleges, junior colleges and some universities.
Military Training	All branches of the military have skilled training for 3 years or more. Students can use their GI Bill to pay for college after their discharge or service for 20 years until retirement with full benefits.
Apprenticeship Program	Industry-based program training workers on the job and in a classroom setting. Upon completion the worker will gain journeyman status in the specific industry (3-4 years in length). Apprentices are paid as they go to school.
Associate Degree Programs	A degree granted after a two-year course of study, especially by a community or junior college.
Bachelor's Degree Programs	A four-year degree with a combination of general education courses and a specific major. They can be liberal arts colleges, private colleges, public colleges or universities.
Graduate and Professional Degree Program	Post-graduate fields such as law, medicine and Ph.D. or other professional fields, are typically 1-5 years beyond a bachelor's degree.

Arts and Communication Pathway Sample Careers

Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +
High School Diploma & Training/Apprenticeship	High School Diploma & Post-Secondary Training	4-Year Degree or Graduate Degree
Sculptor Circulation Copy Person Desktop Publishing Film Loader Floral Designer Florist Model Ceramicist Newsroom Worker Projectionist Glassblower Jeweler Gallery Assistant Music Retail Furniture Designer Radio Operator Carver Painter Photographer Sound Technician State Hand Stunt Performer Illustrator Cartoonist Weaver Muralist Collagist Print Maker Framer Exhibit Constructor Art Maintenance Slide Maker Lighting Designer Set Designer Conductor/Composer	Actor Animator Artist Billboard/Sign Artist Book Illustrator Broadcast Technician Recording Engineer Camera Technician Choreographer Computer Graphic Artist Dancer Disc Jockey Designer/Stylist Glassblower Make-up Artist Musician Music Arranger Stand Up Comic Computer Graphic Artist Fashion Designer Photographer Talent Agent Web Designer Video Manager Arts Education Restorer Sculptor Ceramicist Art Educator	Advertising Creator Art or Music Teacher Art Director Museum Educator Art Historian Art Restorer News Broadcaster Telecommunications Fashion Design Interior Design Cinematographer Ceramic Artist Composer Sculptor Copy Writer Glassblower Furniture Designer Painter Gallery Administrator Museum Director/Curator Art Preservation Administrator Art Critic Appraiser Director of Photography Research Director Researcher Actor Stand Up Comic Lighting Designer Film Editor Master Animator Project Manager Advertising Creator Gallery Owner
Are you interested in?	Can you?	Do you enjoy?
Art shows Photography Decorating Attending concerts Interviewing others Fashion Performing arts Acting Multi-media News reporting	Sketch, draw, sculpt, etc. Sing, play... Act Articulate clearly Write and conduct interviews Meet deadlines Sell	Creative ideas Making videos, multi-media Working with computers Working with illustrations Creating creative solutions Performing in front of audiences

Holland- match for artistic and realistic.

Business, Finance, and Information Technology Pathway Sample Careers

Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +
High School Diploma & Training/Apprenticeship	High School Diploma & Post-Secondary Training	4-Year Degree or Graduate Degree
Consumer Service Accounts Payable Representative File Clerk Shipping/Receiving Clerk Telemarketer Advertising Sales Agent Car Sales Person Bank Teller Reservation Teller Travel Agent Cashier Payroll Clerk Computer Operator Administrative Assistant Data Entry Title Searcher Retail Sales Clerk Account Executive Treasurer Insurance Sales Agent	Computer Salesperson Production Support Analyst Graphic Designer Bank Collection Officer Claims Adjuster Legal Secretary Paralegal Tax Preparer Desktop Publisher Computer Support Specialist Software Engineer Computer Programmer Medical Secretary Real Estate Agent Restaurant manager Sales Manager	Certified Public Accountant Marketing Manager Accountant Economist Financial Manager/Planner E-Commerce Agent Systems Software Engineer Systems Analyst Hospital Administrator Human Resources Manager Chief Executive Officer Manufacturing Sales Representative News Reporter Project Manager Sports/Entertainment Agent Business Analyst Bank President Tax Examiner
Are you interested in?	Can you?	Do you enjoy?
Advertising Business environment Computers and technology Insurance Sales Office Management Record keeping Telecommunications Presentations	Organize your time efficiently Pay attention to details Solve problems Work with others Work on a team Work independently Work with numbers/statistics Use computers Use technology/software	Following directions Technical writing Learning new software programs Making budgets Meeting with people/groups Organizing a project Processing numbers and figures Selling products and services Customer relations Technical reading

Holland- match for conventional and enterprising.

Engineering and Industrial Technologies Sample Careers

Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +
High School Diploma & Training/Apprenticeship	High School Diploma & Post-Secondary Training	4-Year Degree or Graduate Degree
Drywall worker Roofer Mechanic Dockworker Freight Handler Laborer Machinist Taxi Driver Brick Mason Diesel Mechanic Warehouse Worker Carpet Installer Machine Operator Bus/Truck Driver Carpenter	Air Traffic Controller CAD/CAM Technician Auto Mechanic and Repair Grader/Dozer Operator Metal Engineering Technician Welder Auto Body Repair Laser Technician Motorcycle Mechanic Robotics Technician Civil Engineering Technician Electric Technician HVAC Plumber Machinist Surveyor Electrician Carpenter Draftsman	Construction Manager Airline Pilot Architect Astronaut Aeronautical Engineer Chemical Engineer Civil Engineer Computer Network Engineer Mechanical Engineer Industrial Engineer NASA Scientist Navigator Nuclear Engineer Petroleum Engineer Transportation Engineer Industrial Production Manager Statistician
Are you interested in?	Can you?	Do you enjoy?
Building and construction Computer technology Architecture and design Engineering Woodworking Tools, equipment and materials Precision work Production management How things work Math and science	Apply science and math to real world situations Use a computer See a task through to the end Solve complex problems Understand directives, read maps Read and understand technical manuals Organize people and reports	Building with your hands Designing models, prototypes Working on a team Travel Paying close attention to detail Projects Operating tools and equipment

Holland- match for realistic and conventional.

Human Services Sample Careers

Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +
High School Diploma & Training/Apprenticeship	High School Diploma & Post-Secondary Training	4-Year Degree or Graduate Degree
Child Care Worker Cosmetics Representative Dry Cleaning Operator Home Health Aide Home Care Aide Library Assistant Teachers Assistant Armed Services Career Bailiff Corrections Officer Postal Service Worker Aerobics Instructor Travel Agent Waitress Baker Utility Worker Security Guard Chauffer Truck Driver	Armed Services Career Cosmetologist Crime Lab Technician Manicurist Massage Therapist Mortician Personal Trainer Teacher's Aide Truck Driver Flight Attendant Fire Fighter Postmaster Police Officer Athletic Trainer Probation Officer Human Services GPS Technician	Athletic Agent City Manager College Professor Criminologist Executive Chef Family Planner FBI Agent Food Services Manager Guidance Counselor Hotel Management Lawyer Teacher Marriage and Family Therapist Paralegal Park Ranger Parole Officer Psychologist Workforce Director

Are you interested in?	Can you?	Do you enjoy?
Helping people Aging adults Child development Counseling Family and social services Food preparation Owning your own business Teaching Social services	Assume leadership when needed Be conscientious and dependable Be creative Communicate well Organize well Plan and direct programs Plan budgets Use interpersonal skills Work as a team	Communicate Counsel/advise people Handle customer complaints Help and protect others Interview people Search for answers to human problems Sell products or services Work with people Serve others' needs Communicate via writing

Holland- match for social and enterprising.

Science and Health Pathway Sample Careers

Entry.....Skilled On-the-job Training	Skilled....Professional 1-3 Years	Professional 4 Years +
High School Diploma & Training/Apprenticeship	High School Diploma & Post-Secondary Training	4-Year Degree or Graduate Degree
Hospital Worker Patient Care Technician Dialysis Technician EEG Technician Home Health Aide Nurse's Aide Pharmacy Technician Physical Therapy Aide Animal Caretaker Food Conservation Worker Wildlife Reserve Surgical and Mapping Technician Farm Manager Breeder Data Entry Zoo Caretaker Hazardous Waste Technician	Certified Nursing Assistant Dental Hygienist Emergency Medical Technician Licensed Practical Nurse Medical Lab Technician Personal Trainer Radiological Technician Respiratory Therapist Physical Therapy Assistant Occupational Therapy Assistant Dental Lab Technician Fish and Game Worker Forest Conservationist Surveyor Veterinary Technician Chemical Technician Sound Engineer Sports Instructor	Athletic Trainer Speech/Language Pathologist Dietician Chiropractor Geneticist Physician Assistant Medical Examiner Pharmacist Physician Physical Therapist Occupational Therapist Registered Nurse Agronomist Geologist Marine Biologist Veterinarian Chemist Environmental Scientist Nuclear Engineer Zoologist Statistician
Are you interested in?	Can you?	Do you enjoy?
Helping people Health care environment Conservation Food production Therapy Medical research Science and medicine	Be conscientious and dependable Communicate well Apply scientific theory to real life Collect and analyze data Use a computer and technology Work in a lab setting or medical facility Work with people in need Work outdoors around animals and plants	Diagnosing and caring for sick animals Medical lab research Making a contribution to society Solving problems Working on a team Working with numbers Working on cutting-edge scientific research

Holland- match for social and enterprising.

NORTHERN TIOGA SCHOOL DISTRICT HIGH SCHOOL COURSES

Course Number	Course Title	Grade(s)	Credit(s)	Pre-Req?	Prerequisite(s) and Descriptions
109	English 9	9	1	N	Practice in writing, reading and vocabulary. Grammar is integrated into this course with parts of speech, punctuation, spelling, usage, writing and vocabulary being the major areas involved. Literature, fiction, non-fiction, drama and poetry are explored.
110	English 10	10	1	N	Students receive instruction in analyzing works of fiction, nonfiction and poetry. The course includes organizing and outlining research materials for writing an argumentative essay. Additional instruction is provided in grammar usage and vocabulary. Opportunities are provided for students to develop and refine their speaking and listening skills. Emphasis is also placed on preparation for the Literature Keystone Exam.
111	English 11	11	1	N	The literary periods of American literature are examined through fiction, nonfiction, poetry, and drama. The development of composition skills is furthered through the completion of a research paper. This course also provides instruction in presentation skills.
112	English 12	12	1	N	This course will strike a balance between college and career readiness. Focus is placed on the job acquisition process including resumes, cover letters, applications, and interviews, and further development of research writing, speaking and listening skills, and literature analysis.
115	ACE Composition I	11, 12	1	Y	Prerequisite: Strong or solid writing skills, minimum 85% in English and recommendation of an English teacher. ACE Composition I emphasizes the development of expository and argumentative writing. As students improve the quality of their writing, they improve the quality of their thinking. The course is designed to sharpen the student's perception of the world and to facilitate writing with clarity, organization, depth, and correctness. Students may be eligible for 3 ACE Corning Community College credits based on completion of the course. The ACE books and/or materials may entail a nominal fee.
116	ACE Composition II	12	1	Y	Prerequisite: Successful completion of ACE Composition I and with teacher's approval. ACE Composition II writing course is designed to advance critical and analytical abilities begun in ACE Composition I. Literary analysis includes essays on works of fiction, poetry, and drama. Students may be eligible for 3 ACE Corning Community College credits base on completion of the course. The ACE books and/or materials may entail a nominal fee.

119	Honors English 9	9	1	Y	Prerequisite - Minimum grade of 88% in 8th grade English or the recommendation of the English instructor. Students receive instruction with parts of speech, punctuation, spelling, sentence structure, basic composition and vocabulary. Fiction, nonfiction, drama, and poetry are explored in literature. This course provides more intensive instruction within the English 9 curriculum.
120	Honors English 10	10	1	Y	Prerequisite - Minimum grade of 88% or the recommendation of the English instructor. There is practice in writing, reading, and vocabulary. Also included is organizing and outlining of research materials. World literature is pursued in the literature strand. This course provides more intensive instruction within the English 10 curriculum.
121	Honors English 11	11	1	Y	Prerequisite: Minimum grade of 88% and the recommendation of an English instructor. The literary periods of American literature are examined through fiction, nonfiction, poetry, and drama. The development of composition skills is furthered through the completion of a research paper. This course also provides instruction in presentation skills. This course provides more intensive instruction within the English 11 curriculum.
122	Honors English 12	12	1	Y	Prerequisite - Minimum grade of 88% or the recommendation of the English instructor. English literature is pursued through the areas of essays, short stories, novels, poetry and dramas. Shakespeare's life and works are examined. Increased work in writing skills and composition are pursued.
124	Mythology	9 - 12	1	N	The students will read and examine myths and legends selected by the teacher and articulate their understanding of these by discussion, writing, presenting, or tests. Students will read specific mythos and legends and articulate their understanding of these by discussion, writing, speeches, or tests.
126	Drama and Speech	9 - 12	1	N	Various opportunities are provided for students to refine their speaking technique. After a review of the mechanics of speech preparation, students deliver and critique different types of speeches. Students receive an introduction to the theatre through a study of the following topics: voice and movement, improvisation, character analysis, costuming, make-up, and set design. Students critically analyze aspects of play productions.
128	Journalism/Broadcasting	10 - 12	1	N	Students will participate in journalism activities that may include the school newspaper, yearbook, and morning announcements. This course will offer students the opportunity to create dialogues and report school and community news. Students will learn about the journalism and broadcasting career paths and associated skills. This course may be retaken with extended opportunities for an additional credit by permission of the instructor, guidance counselor and principal.
132	Applied English 12	12	1	Y	Prerequisite: Recommendation of English instructor and Guidance Counselor or Career Coordinator. Students receive instruction in technical writing, career-based composition, and practical speaking/listening skills relevant to the workplace and within the realm of the student's personal future. Study of literature will entail various business related publications, as well as an intense evaluation of technical writing used in the industry.

133	Pop Culture Through Lyrics, Literature, and Film	9-12	1	N	In this course, you'll have an opportunity to look deeper at contemporary music, film, and literature, using the history of the roots of rock n' roll and modern tools to deepen your understanding of your favorite entertainment and pop culture. You'll gain tools to analyze contemporary song lyrics, poetry, film, stories, and novels, and gain understanding of how authors' and writers'/directors' choices affect a contemporary work.
135	MU ESP Introduction to Literature	11,12	1		Prerequisite: Recommendation of the guidance counselor. Introduction to reading poetry, fiction, and drama for understanding and enjoyment. Students may be eligible for 3 Mansfield University ESP based on completion of the college requirements. This course is offered at a reduced tuition rate and may include the cost of associated textbooks.
208	Algebra 1 - Part 1	9	1	Y	Prerequisite: Students must have teacher recommendation. The course is intended for students who have demonstrated a need for a slower paced course. This course is the first year of a 2-year Algebra 1 course. CV Only
209	Algebra 1 - Part 2	10	1	Y	Prerequisite: Successful completion of Algebra 1 - Part 1. This course is a continuation of Algebra 1 - Part 1. Students will advance their knowledge of Algebra skills including more advanced equations to solve, systems of equations, and other skills leading to the next course of study, Geometry. CV Only
211	Algebra 1	9, 10	1	N	This course gives the knowledge necessary to solve problems, solve equations, and graph. Students will work with algebraic properties and real-life applications.
212	Geometry	9 - 11	1	Y	Prerequisite: Successful completion of Algebra I. This course gives the knowledge necessary to apply properties of geometric figures and graphs. Students will be able to prove geometric concepts through a variety of techniques.
213	Algebra II	9 - 12	1	Y	Prerequisite: Successful completion of Algebra I. This course gives the knowledge necessary to solve more advanced linear functions and systems of equations, quadratic equations and functions. An introduction to polynomials and exponential and logarithmic functions will also be covered
215	Advanced Math Topics	10 - 12	1	Y	Prerequisite: Successful completion of Algebra 2 and Geometry. This course is designed to further expand on various topics of mathematics for those who are looking to pursue a two or four year degree. These topics may include: set theory, logic, trigonometry, statistics, probability, and precalculus. Technology (graphing calculator & computer software) may also be emphasized to find solutions and present information.
217	PreCalculus	10 - 12	1	Y	Prerequisite: Successful completion of Algebra II. Students identify and use trigonometric functions and their graphs to apply them to practical problems. The students will investigate trigonometric graphs and properties and recognize the practical applications.

219	Applied Mathematics	11, 12	1	Y	Prerequisite: Successful completion of the full course of Algebra 1. This course helps students who are following the entry or skilled on-the-job training pathway to develop and refine their math skills. Applied mathematics materials focus on carrying out arithmetic operations with calculators, solving problems, estimating answers, drawing and reading graphs, and developing measurement skills. Applied mathematics shows how these skills are used in the workplace and teaches problem-solving through hands-on, activity-centered environments.
220	Consumer Math	11,12	1	Y	Prerequisite: Successful completion of the full course of Algebra 1. Students will learn about managing their personal finances allowing them to excel in daily life skills as well as the work place. Students will review and practice math skills. Students will learn practical application of the concepts in areas including income, career, bank accounts, expenses, credit cards, loans, taxes, budgeting, housing, and insurance
221	Calculus/ACE Calculus	11, 12	1	Y	Prerequisite: Successful completion of Precalculus with a minimum grade of 80% or by teacher recommendation. This course deals with topics from algebra, analytic geometry, trigonometry, and limits; then progresses to derivatives, integrals, and application of velocity, acceleration, and areas. It also includes sequences, Riemann sums, volumes, and exponential and logarithmic functions. Additionally, students may be eligible for 4 ACE Corning Community College credits based on completion of the college requirements above the listed Calculus course. The ACE books and/or materials may entail a nominal fee.
223	Statistics/ACE Statistics	11,12	1	Y	Prerequisite: Successful completion of Algebra II and/or by teacher recommendation. This is a statistics course taught in conjunction with our regular statistics course, but with more in-depth instruction from Corning Community College to be completed for 4 ACE credits. The ACE books and/or materials may entail a nominal fee.
301	American History II	9	1	N	The principle focus of this course is from the Civil War to World War II. The United States is studied through an historical analysis of three dominant factors: economy, democracy, and international relations. Skills involving the analysis and interpretation off maps, tables, and primary and secondary historical sources are refined.
302	ACE American History	11,12	1	N	Dreams and concepts brought to the New World and their development into America's institutions and social fabric. Conflict and consensus among groups, dilemmas facing revolutionaries and reformers, and ways economic, political and social changes have occurred. Additionally, students may be eligible for 3 ACE Corning Community College credits based on completion of the college requirements. The ACE books and/or materials may entail a nominal fee.
304	American Government	12	1	N	This course starts with colonial times and incorporates a perspective of American government. American government is a study of the importance of the constitution and its flexibility, realizing that the major function of government is to "establish justice and insure domestic tranquility." The class also studies the effect of the constitution on American heritage.

305	MU ESP American Government	12	1	Y	Prerequisite: Recommendation of the guidance counselor. An introductory course on the major institutions and processes of the U.S. political system. Topics discussed include the principles of governance, separation of powers, checks and balances, federalism, civil rights and liberties, and policymaking. Note: This course may be used to satisfy requirements for the B.A. Political Science program, the B.S. Criminal Justice Administration program, and the B.S.Ed. Secondary Education: Social Studies/History Education concentration, and the Pre-Law minor. It is also an approved general education course in the Ethics and Civic Responsibility category. Students may be eligible for 3 Mansfield University ESP based on completion of the college requirements. This course is offered at a reduced tuition rate and may include the cost of associated textbooks.
306	World History	10	1	N	Students study the importance of the political processes and the need for their participation in these processes to insure democracy. The class will compare and contrast the political process of the American system with other political systems around the world. Students will be involved in uncovering the cultural components and major historical events that shape and effect our modern society. Students will develop an understanding of how global changes in politics, economics, religion and scientific discovery creates dramatic changes in culture.
307	African American Studies	9-12	1	N	African American Studies is a course that is designed for students to understand the African American experience and how it influenced the landscape of American culture. Students will analyze the historical impact of African Americans from the Civil War to present-day America. With this course, students will take an in-depth approach to uncover the African American journey to equality and how it still continues today.
308	MU ESP World Civilizations 1900-Present	11,12	1	N	Prerequisite: Recommendation of the guidance counselor. A survey of the cultural, political, economic, and social forces that have shaped world history since 1900, with particular emphasis on global historical trends. Students may be eligible for 3 Mansfield University ESP based on completion of the college requirements. This course is offered at a reduced tuition rate and may include the cost of associated textbooks.
310	Psychology	10 - 12	1	N	Geared to the maturity of senior high students, this course is a study of individual and group behaviors in terms of psychological principles and concepts. Experiments are conducted to help illustrate these principles. Important historical developments in psychology as well as the most recent psychological theories are examined.
315	Economics	10-12	1	N	Students study such concepts as inflation, deflation, monetary policy, income distribution, as well as international economic issues. Opportunities are provided to use economic concepts in a reasoned, careful manner in dealing with personal, community and national economic issues that students are apt to confront.
320	Sociology	11,12	1	N	This course is designed to help students understand society, social processes, and social reforms and their effects on individuals and groups. Selected sociological principles are illustrated through case studies from life situations. A unit on social psychology includes topics such as group behavior, pressure to conform and hidden influences.

330	Youth and the Law	10 - 12	1	N	This course is designed to prepare students for participation in a democracy by helping them gain a better understanding of our laws, especially with regard to how they are made and enforced.
401	Science 9	9	1	N	The focus of this course includes a review of general earth science topics, an investigation of introductory chemistry, and a review of ecology, and major biochemicals of life.
402	Biology	10	1	N	There is an investigation of the origin of life, the protist, monera, fungi, animal and plant kingdoms, behavior, biological chemistry, genetics, and ecology. Laboratory work is an integral part of each course.
404	Zoology	9-12	1	N	Zoology is a course that will survey some of the major phyla of the Kingdom Animalia. Zoologists research everything they think to ask about animals, including their anatomy, interrelationships, their distribution and habitats. Students will have an opportunity to interact with hands-on labs related to each phylum discussed in the class.
406	Environmental Science	11,12	1	N	Environmental Science provides students with a systematic approach to how their own attitudes, actions and life style interact with the various environmental problems which exist. This establishes the motivation and basis for change.
407	Applied Science	11, 12	1	Y	Prerequisite: Successful completion of Science 9 and Biology and/or by instructor permission. This course investigates the application of chemistry and physics in the real world setting. This class will be limited to 16 students for supervision and supply purposes in this hands-on class.
408	Astronomy	10-12	1	N	Astronomy is designed for the student who is interested in space exploration; planetary characteristics, mythology, and stars. It is the intent of the course to discuss and discover basic astronomical concepts and discover how they relate to the world around us and to potential jobs in the field of astronomy. Some of the units that will be taught are, Astronomy as a Science, Astronomical History, Planetary Formation, Stars and the potential for life beyond.
410	Chemistry I	11,12	1	Y	Prerequisite: Successful completion of Algebra I and Algebra II (or concurrent enrollment in Advanced Algebra). Topics of study include measurements and calculations, matter and the atom, periodic properties of elements, chemical bonding, naming compounds, and chemical reactions. This course uses mathematics to explore and prove various chemical principles. Laboratory work is a necessary part of this course.
412	Chemistry II	11,12	1	Y	Prerequisite: Successful completion of Chemistry I. Topics of study include phases of matter, chemistry of gases, solutions, colligative properties, acids and bases and titrations, reaction kinetics and energy, equilibrium, and oxidation-reduction reactions.
413	ACE Chemistry	12	1	Y	Prerequisite: Successful completion of Chemistry I & II and recommendation of the teacher. Upon completion of this course, students will have basic college level understanding of chemistry processes in both organic and inorganic chemistry. This ACE course is sponsored by Corning Community College to be completed for 4 ACE credits. The ACE books and/or materials may entail a nominal fee.

414	Anatomy & Physiology	11,12	1	Y	Prerequisite: Successful completion of Biology and Chemistry I or by teacher recommendation. Anatomy provides students with a detailed study of the morphology and physiology of the comparative structural study of the skeletal, muscular, digestive, circulatory, excretory, reproductive, respiratory, endocrine and nervous systems of cat and man. This is accomplished by an extensive dissection of the cat and library research in comparison with humans.
415	Anatomy & Physiology I	11,12	1	Y	Prerequisite: Successful completion of Biology and Chemistry I or by teacher recommendation. Human Anatomy & Physiology I explores the inner workings of the human body and focuses on anatomical and medical terminology. The course will provide a detailed study of the tissues and blood, as well as the integumentary, skeletal, muscular, endocrine, and cardiovascular systems. Clinical application, hands-on laboratory experiences, and dissection will be included.
416	Anatomy & Physiology 2	11,12	1	Y	Prerequisite: Successful completion of Biology and Chemistry I or by teacher recommendation. Human Anatomy & Physiology 2 is a continuation of Human Anatomy & Physiology 1. This course will provide a detailed study of the lymphatic, respiratory, digestive, urinary, reproductive, and nervous systems. Clinical application, hands-on laboratory experiences, and extensive dissection will be included. Using preserved adult cat and rabbit specimens, structures and systems closely analogous to the human body will be studied, as well as, a comparative analysis of carnivorous and herbivorous mammals.
418	Advanced Placement (AP) Chemistry	11,12	2	Y	Prerequisite: Successful completion of Chemistry I and Algebra II. (It is recommended but not necessary, a successful completion of Chemistry 2). This course is a college level course and will be very demanding. This course is 2-semester block class. To receive college credit, you must pass both semesters of this course and pass the end-of-year AP Chemistry Exam (administered by College Board Inc off-site in early May for a fee). The student is responsible for the exam application and cost. The topics of study will include measurement, matter, atomic structure and periodicity, reactions, thermochemistry, intermolecular forces, kinetics, equilibria, and electrochemistry. Lab work is a key component of the AP Chemistry experience. NOTE: There will be mandatory summer work prior to the start of class and there will be some weekend work during each semester that students are obligated to attend and complete. During the semester the student will be expected to commit at least 1 hour per night to this class each night including weekends and holidays. A copy of the College Board approved syllabus may be requested at any time. CV only.
420	Physics	11, 12	1	Y	Prerequisite: Successful completion of both Algebra II and Geometry. Physics is a study of the physical world and the laws that describe it. The primary focus of this course is to obtain a firm understanding of mechanics. Students will review relevant mathematical skills, scientific measurement, and calculations with measurements. Topics of study include one dimensional motion, two dimensional motion, forces, work and power, circular motion, wave phenomena, and sound.

421	Robotics	10-12	1	Y	Prerequisite: Successful completion of Algebra 1. This course will focus on providing the skills necessary to construct robots to perform tasks. Both remote controlled and autonomous controlled robots will be examined. Mathematical concepts from Algebra will be reinforced, while concepts from Physics will be introduced. Topics to be discussed include electronic circuits, mechanics, and programming. The primary system used for this course is the VEX Robotics system controlled by RobotC software.
422	Robotics II	11,12	1	Y	Prerequisite: Successful completion of Robotics 1. This course will focus on providing the skills necessary to build robots from universal components. Rather than being based around one system, the robots will be designed and constructed from generic electronic components that are integrated through programming, 3-D printed parts, and fabricated pieces. Topics examined will include Arduino programming, multicopter design and construction, and battlebot design and construction. Mathematics and Physics concepts will be reinforced.
423	Building Automation Systems	11,12	1	Y	Prerequisite: Successful completion of Robotics 1. Building Automation Systems (BAS) is the use of technology to increase the efficiency and safety of a building. This is accomplished through computer controllers, software, networks, sensors, actuators, and motors. This course will look at the basics of setting up and controlling systems like those used in commercial and industrial businesses.
425	ACE Biology	11, 12	1	Y	Prerequisite: Successful completion of Biology with a grade of a minimum of 80% and successful completion of Chemistry with 75% or higher. This course emphasizes the modern aspects of biology and its techniques. Includes biochemistry, cell structure and physiology, genetic mechanisms, a survey of the five kingdoms of organisms, and plant structure and physiology. Additionally, students may be eligible for ACE Corning Community College credits based on completion of the college requirements. The ACE books and/or materials may entail a nominal fee.
426	ACE Biology II	11,12	1	Y	Prerequisite: Successful completion of ACE Biology I. Emphasizes the modern aspects of biology and its techniques. Includes evolution, animal diversity, human and animal anatomy/physiology, animal behavior, reproduction and development, and ecology. Additionally, students may be eligible for 4 ACE Corning Community College credits based on completion of the college requirements. The ACE books and/or materials may entail a nominal fee.
508	Health 9	9	0.5	N	Students gain the knowledge and skills to become health literate, maintain and improve health, prevent disease, and reduce health-related risk behaviors. Students will develop the skills needed to protect them from the six categories of risk behaviors as identified by the Centers for Disease Control and Prevention.
509	Physical Education 9	9	0.5	N	Students participate in a variety of physical education activities including team sports, physical conditioning, and individual/lifetime activities. These activities provide students the opportunity to gain physical skills and skills needed in team building, problem solving, leadership, and safety procedures.

510	Driver's Education	10	0.5	N	Students will acquire the knowledge to be able to select vehicles, accessories, and insurance in keeping with their transportation needs. Students will be able to recognize, accept and exercise their rights, responsibilities, and obligations to others who share the highway transportation system.
511	Physical Education 10	10	0.5	N	Through both classroom study and, more frequently, physical activities, students are provided opportunities to become or remain physically fit; to appreciate good health; to develop or reinforce a positive self-concept; to demonstrate appropriate social and emotional behavior; to develop physical skills; to appreciate efficient and creative movement; and to learn about history, development, and the rules of each sport.
527	Physical Education 11-12	11 and 12	1	N	Students will participate in numerous activities, including team sports, obstacle courses, individual activities, team challenges, physical conditioning, and lifetime sports. These activities give students the opportunity to enhance physical skills as well as to improve team building skills, work on problem solving techniques and practice safety procedures. They will also understand the importance of daily activity in the maintenance of personal health. Students will gain the knowledge needed to be intelligent, respectful spectators as well as participants
528	Becoming a Successful Coach/Official	11 and 12	0.5	N	The course will use Human Kinetics Coach Education Curriculum for Successful Coaching and Sport First Aid to certify the student to coach within the state of Pennsylvania, as well as most other states. Students will also have the opportunity to become a PIAA Certified Jr. Official in up to 2 sports, certified in Concussion and Cardiac Wise, Sport First Aid, and Coaching Principles
530	Weight Training and Fitness	11 and 12	1	N	This course is intended to provide students an opportunity to learn principles and concepts of weight training and fitness activities. It will provide a more in-depth look at joint mobility, stability, neuromuscular stimulation, and nutrition. Proper weight room etiquette, safety, and leadership will also be incorporated.
601/ 602	Chorus Half Year	9 - 12	0.5	N	Students learn many styles of music, from the Renaissance to the Twentieth Century and from classical to rock. Exercises for developing and nurturing the voice are sung daily. The following are emphasized: the blending of voices, choral ensemble, diction, tone quality, pronunciations, enunciation, posture, and the phases of musical theory. The very best examples of choral literature are used. Constructive self-criticism and student conducting are encouraged.
603/ 604	Band Half Year	9 - 12	0.5	N	Students play musical instruments and study the full range of musical literature. They perform and study music at various levels of difficulty. Pupils increase their knowledge of music theory, ensemble intonations and balance, the proper rendition of scales and rhythms, and other aspects of musical scores. They explore and develop those skills which are basic to careers in music. As members of the advanced band students will play for concerts, assemblies, parades, sports activities, and other community and school events.

607	Intro to Modern Band and Song writing	9-12	1	N	Over the course of this exploratory class, students will be exposed to techniques and skills necessary to play guitar, bass guitar, keyboard, drumset, and vocalizing. Students will additionally learn the fundamentals of songwriting to include music and lyrics and the technical aspects of sound equipment setup. Through instruction and assessment, students would be prepared to perform original compositions and covers in a solo or group setting
608	Music Through Time	9-12	1	N	Music Through Time offers a look into six genres of music: jazz, rap, country, blues, rock, and stage and film. The focus of this class is to learn how and why music has developed to what it is today. Content will be taught through, discussion, projects, and listening. This course is designed for all students who have an interest in music. The ability to read music is not required.
610	Music Theory	9 - 12	1	N	Students will learn how music is written, and how to write their own music by learning music theory, listening to and analyzing historic and modern compositions, and learning the history of Western music. The class is demanding and relies on students being self-motivated during several composition processes. Successful students will gain skills that will allow them to compose many styles of music including pop and country.
615	Guitar	9 - 12	1	N	Guitar class teaches students to read single note melodies, chord symbols, and tabs, as well as teaching the basics of music theory. It is suitable for a student who has never picked up a guitar, or a student who plays, but wants to learn music reading skills. The class has a homework requirement in the form of 30+ minutes of at-home daily practice time, some students will require more.
620	Introduction to Art	9 - 12	1	N	Students acquire a basic knowledge of various art media and the skills necessary to work with these media. The various elements of drawing, painting, sculpting, and ceramic creation are stressed. Students work with all the basic media in the visual arts and become acquainted with the procedures and functions of the art class environment.
625	Drawing and Painting	9 - 12	1	Y	Prerequisite: Successful completion of Introduction to Art. Students draw and paint with the following media: pencil, oil pastel, charcoal, pen and ink, watercolor, ink wash, oil, tempera, and acrylic. The focus is upon landscapes, figures, and still life conceptualizations.
630	Sculpture and Ceramics	9 - 12	1	Y	Prerequisite: Successful completion of Introduction to Art. This course focuses on production of representational and non-representational sculpture in several of the following media: clay, plaster, and paper-maché. Students learn techniques for clay preparation, hand-building, throwing, glazing, and kiln firing.
635	Printmaking and Design	9 - 12	1	Y	Prerequisite: Successful completion of Introduction to Art. Principles of design and a variety of printmaking techniques are taught. Students will explore concepts of design and advertising. Students use one or more of the following media: woodblock, linoleum block, silk-screen, and lithography.

640	Studio Art	10 - 12	1	Y	Prerequisite: Successful completion of Introduction to Art and one additional course in Art. This course is offered for exceptionally talented students who would love to do intensive work in a particular art discipline. The guidance offered will help prepare the student to enter a crafts school, fine arts school, or the fine arts department of a university.
646	Digital Photography	9 - 12	1	Y	Prerequisite: Successful completion of Introduction to Art. Students will be taught the basic functions of the digital camera. The students learn the important elements of capturing an image, focusing on composition and design. The course also includes image enhancement through the use of Photoshop. CV Only
701	Mechanical Drawing I	9 - 12	1	N	Students learn how to read and draw a mechanical drawing. Topics covered are: lettering, alphabet lines, multi-views projection, pictorial projections and dimensions.
702	Mechanical Drawing II	9 - 12	1	Y	Prerequisite: Successful completion of Mechanical Drawing I. Students will work with mechanical engineers' sketches to formalize engineering ideas into drawings. Other topics include architecture, electronic drawing and trigonometry.
703	Mechanical Drawing III	10 - 12	1	Y	Prerequisite: Successful completion of Mechanical Drawing II. Mechanical Drawing III is a continuation of Mechanical Drawing II. Students may specialize in an area of interest: mechanical engineering, designing, architecture, computer aided drafting (CAD), or computer aided mechanics (CAM). Advanced students must prove abilities in all areas covered in the Mechanical Drawing III course.
704/ 705	Advanced Mechanical Drawing/ACE Engineering Graphics	11 - 12	1	Y	Prerequisite: Successful completion of Mechanical Drawing III. Engineering graphics fundamentals incorporates both manual and computer-aided drafting. This course includes freehand sketching, principles of applied geometry, multi-view drawings, dimensioning, sectioned views, pictorials, and conventional drawing practices and standards. Successful students will be eligible for 3 ACE Corning Community College credits base on course completion. The ACE books and/or materials may entail a nominal fee. SPECIAL CIRCUMSTANCES: This course may be retaken for an additional credit to complete the mechanical drawing sequence.
707	ACE CAD	11 - 12	1	Y	Prerequisite: Successful completion of Mechanical Drawing III with a grade of 80% or better. Students will learn commands necessary to generate two-dimensional engineering drawings through use of a computer using a solid modeling program. Students may be eligible for 3 ACE Corning Community College credits based on completion of the course. The ACE books and/or materials may entail a nominal fee.
708	Woodworking I	9 - 12	1	N	Students learn basic woodworking skills dealing with hand tools and simple woodworking machines. Emphasis will be placed on construction of instructor-assigned projects.
709	Woodworking II	9 - 12	1	Y	Prerequisite: Successful completion of Woodworking I. Students learn design, functions and construction of wood and wood projects. Students will be exposed to larger, more complex equipment and operations.

710	Woodworking III.	10 - 12	1	Y	Prerequisite: Successful completion of Woodworking II. This course will focus on even larger more complex projects. These will require more difficult techniques and trades such as cabinetmaking, millwork, and CNC machining.
711	Advanced Woodworking	11 - 12	1	Y	Prerequisite: Completion of Woodworking III. Further experimentation and work in advanced technical projects will be assigned.
712	Building Construction Principles	10 - 12	1	Y	Pre-Requisites: Successful completion of mechanical drawing 1 and wood 1 or industrial art teacher recommendation. This course will provide students with an introductory experience in the basic construction of a wood framed, enclosed structure. Topics in the course will be explored sequentially as students work through a complete construction process. The major end result product will be a finished shed. WHS only.
713	Construction Hand and Power Tools/Penn NOW	11-12	1	Y	Prerequisite: 75% minimum overall GPA. Survey of hand and power tools used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology.
714	Framing Principles/Penn NOW	11-12	1	Y	Prerequisite: 75% minimum overall GPA. Theory and application of framing techniques in residential and light commercial construction. Emphasis on basic principles and skills used in hand and machine woodworking operations.
715	Metal Working I	9 - 12	1	N	Students learn basic metal working techniques. Topics covered will involve pattern development, sheet metal construction, and foundry work.
716	Metal Working II	10 - 12	1	Y	Prerequisite: Successful completion of Metal Working I. Students learn arc, oxyacetylene and mig welding. Students design and construct projects in the following areas: sheet metal, foundry, lost wax, forge, lathe and welding.
717	Metal Working III	11 - 12	1	Y	Perquisite: Successful completion (with a "C" or better) of Metal Working I & II. Students will learn basic advanced concepts of arc welding, oxyacetylene, MIG and TIG welding and metal lathe. Students may be allowed to design and construct projects in the following areas: sheet metal, foundry, arc welding, MIG welding, oxyacetylene, TIG welding, metal lathe. Students will learn concepts of forge and foundry work.
718	Advanced Metal Working	12	1	Y	Prerequisite: Successful completion of Metal Working III. Further experimentation and work in advanced technical projects will be assigned.
725	Family and Consumer Science	9 - 12	1	N	This course will introduce students to basic sewing skills, child development, elements of design, consumerism, general nutrition and laboratory experimentation. Students who plan to take courses in foods, clothing, and/or crafts should elect this course as their initial course in home economics.

726	Foods	9 - 12	1	N	This course will introduce students to modern and classic theories of food preparation and the culinary service field. Students will be trained in multiple aspects of food service and production such as measurement skills and scale use will be utilized. Kitchen organization and health practices in preparation and presentation will be stressed as well. Students will have multiple opportunities to practice and demonstrate proficiency.
727	Foods II	10 - 12	1	Y	Prerequisite: Successful completion of Foods I. This course is a continuation of the skill sets emphasized in Foods. Specific food preparations skills will be practiced. Students will focus on sanitation, safety, quality production, as well as presentation. Catering special events will also be an aspect of this course.
728	Hospitality and Design	10-12	1	N	Students will be introduced to a variety of careers directly aligned with the Hospitality and Design Industry. Students will participate in event planning and interior design/decorating skills practice. They will also develop key employability skills related to these industries.
730	Independent Living	11-12	1	N	Students will study various aspects of single adult life to gain a realistic idea of the responsibilities accompanying that role. Topics to be studied are adult roles and functions, health and personal safety, money management including consumerism and housing. Units of study will also include career exploration and career skills. Laboratory experiences will include hands on projects and event planning.
731	Child Development	9 - 12	1	N	This course is valuable for students interested in child-related careers or studying child development and parenting skills. Students will have an in-depth study of the emotional, physical, social, intellectual, and moral development of children. Laboratory experience will include direct contact working with children. Due to career oriented nature of this course professional attire and appearance will be expected.
732	Sanitation and Introductory Baking/Penn NOW	11,12	1	Y	Prerequisite: Successful completion of Foods 2. FHD 118 Sanitation is offered in the first half of the semester as a corequisite for FHD 137Introductory Baking, which is offered during the second half of the semester. FHD 118 will address food safety standards, practices, and strategies of implementation for the prevention of foodborne illness in the hospitality industry. Hazard analysis and allergens will be completed. Completion of a national certification exam with a 75% or higher is a requirement. FHD 137 will explore the fundamental principles and procedures used to prepare a variety of bakery products and desserts. Students will engage in the study of ingredients and mixing methods for producing various baked goods.
745	Small Engine Repair I	11,12	1	N	This course is designed around small gas engines. Tune-up, disassemble/reassemble and repair utilizing 2-cycle and 4-cycle theory will be used.
746	Small Engine Repair II	11,12	1	Y	Prerequisites 11 or 12th grade students that have completed Small Engine Repair 1 with a grade of 80% or above. The concentration of this course will be performing an overhaul of four cycle overhead valve engines and valve in block engines.

750	Supervised Vocational Experience	9 - 12	1 to 4	Y	Prerequisite: Participation in related vocational curriculum. Students are required to conduct a program using the required record book in an area of occupational investigation of their choice. A minimum of 120 clock hours of work outside the classroom and supervision by the vocational teacher is required. This course may be repeated annually throughout the high school years for credit. This course is offered for all NTSD students but facilitated through the school housing the particular vocational program selected (Agriculture, Child Care, Administrative Assisting and Accounting).
751	Agricultural Science	9	1	N	This course will offer comprehensive units in plant science, small and large animal science, forestry, agronomy, natural resources, agricultural products, processing and marketing, conservation, wildlife, air, wind and water, and our impact on the environment. Leadership development and public speaking skills are taught to increase self-confidence in communications with others. Tractor and farm safety will be taught and participation in the FFA and an SAE is recommended. This course is intended to introduce students to numerous career paths in the field of agricultural sciences. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.
752	Animal Science	10 - 12	1	Y	This course will offer comprehensive units in animal nutrition, animal health, animal biotechnology, animals for food production - beef, sheep, swine, goats, and dairy, quality assurance, reproduction, and digestion. An emphasis will be based on production animals but such areas will also be covered - aquaculture, exotic animal production, and economics of raising and selling animals. Debating will occur to develop speaking and organization skills in areas of animal ethics. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.
753	Agricultural Mechanics I	10	1	Y	This course will concentrate on the three main units of small engines, concrete and masonry, and plumbing. Theory of operation, maintenance, repair, overhaul and safe operation of small engines are covered. All aspects of the concrete and masonry industry are involved in this part of the course. Required projects of concrete, brick, block, and stone are included. All types of plumbing, from safe water systems to sewage disposal are studied in this unit. Much of the course deals with hands-on skills as well as job skills. FFA membership is encouraged. A student SAE program course selection will be encouraged in conjunction with this course. This course is offered for all NTSD students but located at Cowanesque Valley High School.
754	Agricultural Mechanics II	11,12	1	Y	This course offering deals with electricity, electric motors and controls, welding and building construction. Career possibilities and requirements to enter an occupation will be stressed in each area; students are required to make a career choice and identify objectives to meet the requirements of that choice. Emphasis will be placed on safety, theory and practical application of learned skills. Required projects in each area will assist the student in the development of stable life skills. FFA membership is encouraged for students taking this course. A student SAE program course selection may be encouraged in conjunction with this course. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.

755/ 755A	Power Mechanics I / II	11,12	1 / 1	Y	Prerequisite: Agricultural Mechanics I and II are strongly encouraged. This course is designed around small and large gas and diesel engines. The emphasis will be on tractor engines, however truck and auto engines are also considered. Students disassemble and reassemble engines. Students will work on transmissions, cooling systems, and electrical systems as well as all other systems in internal combustion engines. Safe tractor and machinery operation and repair are taught. Students are encouraged to be a member of the FFA. A student SAE program course selection will be encouraged in conjunction with this class. This course is offered for all NTSD students but located at Cowanesque Valley High School.
756	Horticulture I	9 - 12	1	N	This course will devote half of the time to animal science and the other half to plant science. Soils, fertility, cultural management, agronomic crop production, marketing and research will be included in the plant science portion. The animal science part will include production and reproduction, genetics, breeding, health, and market research in production animals. FFA membership is open and encouraged for all students in this class. A student SAE program course selection will be encouraged in conjunction with this course. This course is offered for all NTSD students but located at Cowanesque Valley High School.
757	Horticulture II	11,12	1	Y	Prerequisite: Successful completion of Biology. Careers in horticulture, plant physiology, plant pathology, landscape design, landscape architecture, and plant biotechnology all require study beyond high school. This course is designed for students who like science and laboratory experiences. The experiences will be in plant propagation, aquatics, flower arranging, bulb forcing and other practical applications of the principles learned in class. FFA membership is encouraged for all students in this class. Students will be encouraged to complete an appropriate SAE project. This course is offered for all NTSD students but located at Cowanesque Valley High School.
758	Biotechnology	11,12	1	Y	Prerequisite: Successful completion of Science 9 and Biology and an interest in science. This course content will vary, but the main emphasis is placed on food. The various scientific applications of improved production, preservation, storage, and preparation of foods will be studied. The application of cell chemistry, DNA, genetic mapping, immune systems, enzyme technology and disease diagnostic tests as they apply to humans, plants, and other animals will be explored. Research presentations in an area of interest will be required of each student. Career awareness in biotechnology will be explored. The impact of man on his environment will be an avenue of discussion and debate. An individualized laboratory write-up booklet will be required of all lab work. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.

759	Forestry Technology and Natural Resources	11,12	1	Y	Prerequisite: Successful completion of Biology, Ag. I, Ag. II, with a grade of 70% or higher. This course will involve all aspects of the forestry industry and in the relationship with the natural resources of soil, water, waste management, outdoor recreation and alternative energy uses. Career opportunities will be stressed in each of the areas of forestry and natural resources. Much of the time will be spent in the field and/or laboratory setting with hands-on competency development. FFA memberships is encouraged. A student FAE program course selection will be encouraged in conjunction with this course. This course is offered for all NTSD students but located at Cowanesque Valley High School.
761	Computer Science I	9 - 12	1	Y	Prerequisite: Passing grade in Algebra I or with teacher recommendation. This course gives the knowledge necessary to create programs using an object oriented language. Other technological applications may be included to enhance students' computer knowledge.
762	Computer Science II	10 - 12	1	Y	Prerequisite: Successful completion of Computer Science I. This course gives the knowledge necessary to create programs using an object oriented language. Other technical applications may be included or substituted to enhance students' computer knowledge.
763	Computer Science III	10-12	1	Y	Prerequisite: Successful completion of Computer Science II. This course studies advanced programming techniques an object oriented language. Other technological applications may be included or substituted based on the needs of students or technological advancements.
764	Web and Multimedia Design	10 - 12	1	N	This course provides the knowledge necessary to create effective web pages and presentations using various multimedia applications.
766	ACE Computer Essentials	11-12	1	Y	Theories and applications for computers. Includes architecture, hardware, software, number coding, problem solving paradigms, microcomputer applications, networking technology, computer ethics, computer careers, e-commerce, and system software. This ACE course is sponsored by Corning Community College to be completed for 4 ACE credits. The ACE books and/or materials may entail a nominal fee. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.
768	ACE Structured and Object-Oriented Problem Solving	11-12	1	Y	Logic for analyzing problems and communicating problem-solving procedures to the computer. Data types and variables, control structures, arrays, sorting, searching, "common Sense" analysis, problem-solving, logic flow charting, pseudo coding, and Unified Modeling Language (UML). This ACE course is sponsored by Corning Community College to be completed for 3 ACE credits. The ACE books and/or materials may entail a nominal fee. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.
772	Computer Applications I	9 - 12	1	N	This course is designed to provide students with instruction in using Word, Excel, and PowerPoint for the creation of documents, spreadsheets, and slide show presentations. Other applications may be introduced.

773	Computer Applications II	9 - 12	1	Y	Prerequisite: Successful completion of Computer Applications I. This course will provide students with instruction in using advanced features of Word, Excel, and PowerPoint including Access and Publisher. Various advanced business applications may be introduced or explored. The focus is on construction, editing, and producing perfect copies of related documents.
775	Accounting I	10 - 12	1	N	An introductory course in double-entry accounting will be presented involving the principles and methods of recording business transactions and the preparations and interpretation of the financial record of a small business. Accounting for both service and merchandising businesses will be emphasized, with additional applications in payroll and computer accounting.
776	Accounting II	11,12	1	Y	Prerequisite: Successful completion of Accounting I. An advanced course in accounting will introduce departmental, control, cost and managerial accounting. Additional applications in payroll and computerized accounting will be completed. Corporate accounting will be emphasized. Basic principles of accounting will be reviewed along with an overview of jobs in accounting.
777	Accounting III	12	1	Y	Prerequisite: Successful completion of Accounting II. Advanced accounting procedures requiring a strong business aptitude. Understanding of college level accounting concepts will be the focus of this course.
778	Business Law and Marketing	10-12	1	N	This course is designed to help students recognize legal problems and to sharpen their ability to think. Actual court cases carefully chosen for student interest are discussed. Students learn how legal problems affect their homes, families, school and the business community. Good business practices and ethics are emphasized. Tort law is discussed, at length, to teach students their rights and responsibilities in business situations. Marketing concepts will also be incorporated. The process of taking a product or service from the production phase to the hands of the final customer will be thoroughly examined. Students will understand customer behavior-- why people buy what they buy.
779	ACE Business Math	11,12	1	Y	Prerequisite: Successful completion of three math credits and recommendation of the teacher. Upon completion of this course, students will understand the four arithmetic processes and the algebra of business. Application of mathematics to typical business problems. Taxes, insurance, payroll, depreciation, trade and cash discounts, markup, simple interest and bank discounts, and financial statement analysis. This ACE course is sponsored by Corning Community College to be completed for 3 ACE credits. The ACE books and/or materials may entail a nominal fee. This course is offered for all NTSD students, but is located at Cowanesque Valley High School.
780	Personal Finance	11-12	1	N	Students are provided a broad overview of how to manage their money and finances from opening a checking account to growth and income funds for retirement. They will be exposed to credit, the effects of interest rates on investment, home and auto purchasing, stocks, bonds, insurance and the money market. Students will actively develop a product complete with marketing strategy and advertisement. Students will develop their financial literacy and will also be given an introduction to selling on E-bay. Guest speakers from local business may be invited. The Internet plays an important role in this course.

781	Entrepreneurship	11,12	1	Y	Prerequisite: Successful completion of Personal Finance. Students will learn how to start a small business. This will involve start-up capital (seed capital) development, business plan development, marketing, sales, organizational development and staffing. Additionally, taxes, insurance, and facilities management issues will be discussed. Analysis of successful entrepreneurs and Internet research will play a large role in this course. Guest entrepreneurial speakers will be invited into the classroom.
782	Personal Budgeting/ACE	11,12	1	Y	Prerequisite: Successful completion of three math credits and recommendation of the teacher. This course will introduce students to personal budgeting, including budget preparation and analysis, understanding credit reporting agency procedures and credit reports, overview of what types of credit, effective credit card use, and establishing financial goals. This ACE course is sponsored by Corning Community College to be completed for .5 ACE credits. The ACE books and/or materials may entail a nominal fee.
783	MU ESP Introduction to Business and Management	11-12	1	Y	Prerequisite: Recommendation of the guidance counselor. This course provides an overview of the broad concept of business functions, including providing a foundation for understanding the relationship among essential activities of business. Helps students to determine and pursue their areas of interest and aptitude. Note: This course is required by the A.S. Business Administration degree program, all B.S. Business Administration concentrations (Accounting, Management and Marketing), and the B.M. Music: Music Business degree program. Students may be eligible for 3 Mansfield University ESP based on completion of the college requirements. This course is offered at a reduced tuition rate and may include the cost of associated textbooks.
801	German I	9 - 12	1	Y	Prerequisite: Parent and student meeting with the guidance counselor and Principal of Academic Affairs. This course serves as the foundation for the development of a student's proficiency in the language. Emphasis is given both to developing the basic language skills of listening, speaking, reading, and writing, and to introducing the student to the culture and daily living practices of the native speakers of the language. The course requires that students work both in and outside of school to be successful.
802	German II	10 - 12	1	Y	Prerequisite: Successful completion of German I. Parent and student meeting with the guidance counselor and Principal of Academic Affairs. The student improves his/her language proficiency through the functional use of language in authentic situations. Listening, speaking, reading, and writing skills are stressed. Vocabulary is gained, in part through assigned readings. The course requires that students work both in and outside of school to be successful.
803	German III	11 - 12	1	Y	Prerequisite: Successful completion of German II. Parent and student meeting with the guidance counselor and Principal of Academic Affairs. Language skills are expanded to include a variety of structures, literary forms are examined. Contemporary topics based on Germanic, Francophile, or Hispanic societies are studied to develop oral proficiency and cultural awareness. The course requires that students work both in and outside of school to be successful.

804	German IV	12	1	Y	Prerequisite: Successful completion of German III. Parent and student meeting with the guidance counselor and Principal of Academic Affairs, completed Keystone National HS enrollment form signed by the principal. The emphasis is on the effective use of oral and written language to meet survival and social demands. Diverse literary forms are examined. Selections depicting culture and civilization are studied. The course requires that students work both in and outside of school to be successful.
811	French I	9 - 12	1	Y	Prerequisite: Parent and student meeting with the guidance counselor and Principal of Academic Affairs. This course serves as the foundation for the development of a student's proficiency in the language. Emphasis is given both to developing the basic language skills of listening, speaking, reading, and writing, and to introducing the student to the culture and daily living practices of the native speakers of the language. The course requires that students work both in and outside of school to be successful.
812	French II	10 - 12	1	Y	Prerequisite: Successful completion of French I. Parent and student meeting with the guidance counselor and Principal of Academic Affairs. The student improves his/her language proficiency through the functional use of language in authentic situations. Listening, speaking, reading, and writing skills are stressed. Vocabulary is gained, in part through assigned readings. The course requires that students work both in and outside of school to be successful.
813	French III	11 - 12	1	Y	Prerequisite: Successful completion of French II. Parent and student meeting with the guidance counselor and Principal of Academic Affairs. Language skills are expanded to include a variety of structures, literary forms are examined. Contemporary topics based on Germanic, Francophile, or Hispanic societies are studied to develop oral proficiency and cultural awareness. The course requires that students work both in and outside of school to be successful.
814	French IV	12	1	Y	Prerequisite: Successful completion of French III. Parent and student meeting with the guidance counselor and Principal of Academic Affairs. The emphasis is on the effective use of oral and written language to meet survival and social demands. Diverse literary forms are examined. Selections depicting culture and civilization are studied. The course requires that students work both in and outside of school to be successful.
821	Spanish I	9 - 12	1	N	This course serves as the foundation for the development of a student's proficiency in the language. Emphasis is given both to developing the basic language skills of listening, speaking, reading, and writing, and to introducing the student to the culture and daily living practices of the native speakers of the language.
822	Spanish II	9 - 12	1	Y	Prerequisite: Successful completion of Spanish I. The student improves his/her language proficiency through the functional use of language in authentic situations. Listening, speaking, reading, and writing skills are stressed. Vocabulary is gained, in part through assigned readings.
823	Spanish III	10 - 12	1	Y	Prerequisite: Successful completion of Spanish II. Language skills are expanded to include a variety of structures, literary forms are examined. Contemporary topics based on Germanic, Francophile,

or Hispanic societies are studied to develop oral proficiency and cultural awareness.

824	Spanish IV	11 - 12	1	Y	Prerequisite: Successful completion of Spanish III. The emphasis is on the effective use of oral and written language to meet survival and social demands. Diverse literary forms are examined. Selections depicting culture and civilization are studied.
825	Advanced Spanish/ACE Spanish	12	1	Y	Prerequisite: Successful completion of Spanish IV. This advanced level course emphasizes continued language development together with more intensive study of culture, civilization, and literature. This is a Spanish course taught in conjunction with our regular Advanced course, but with more in-depth instruction from Corning Community College to be completed for 3 ACE credits. The ACE books and/or materials may entail a nominal fee.
910	Character & Leadership	9 - 10	1	Y	Prerequisite: Nomination by the building principal. The main objective of this course is to improve character and leadership traits by developing critical thinking, building basic skills, emphasizing positive changes in attitude and promoting essential components of character and leadership. Students will complete readings about one positive role model each week. Successful community leaders will speak to the class about their achievements, failures and life-lessons. The instructor will utilize various forms of pop-culture to demonstrate core components of character traits. Students will be given different opportunities to apply the concepts of the course to their personal lives, academic competencies and future goals.
950	School-to-Work	11,12	.5-4	Y	Prerequisite: The student must meet academic and behavioral eligibility requirements. The occupational choice must match a stated and documented career goal as discussed on the vocational assessment sheets from September of the year of participation. Students must meet with the School-To-Work Coordinator to complete the necessary paperwork prior to the start of the school year. No applications will be accepted once the semester has begun.

NON-DISCRIMINATION POLICY

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

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

The Board encourages students and third parties who have been subject to discrimination to promptly report such incidents to designated employees.

The Board directs that complaints of discrimination shall be investigated promptly, and corrective action be taken when allegations are substantiated. Confidentiality of all parties shall be maintained, consistent with the district's legal and investigative obligations.

The Northern Tioga School District does not discriminate on the basis of race, color, creed, sex, sexual orientation, national origin, ancestry, religion, marital status, pregnancy, or handicap/disability in matters affecting employment or providing access to programs.

It is the policy of the NORTHERN TIOGA SCHOOL DISTRICT not to discriminate on the basis of sex, handicap, race, age, and national origin in its educational and vocational programs, activities, or employment as required by Title IX, Section 504 and Title VI.

For more information about your rights or grievance procedures, contact Section 504 Coordinator and Title IX Coordinator, Kristopher Kaufman at 110 Ellison Road, Elkland, PA 16920, (814) 258-5642.