

Conneaut Area Senior High School  
Linesville, Pennsylvania

# YOUR PATHWAY PLANNER

Revised 1/2020

*Use this guide to develop an academic plan and career path.*



**“College, Career and Life Readiness means that individuals possess the knowledge and skills necessary to succeed in life after high school and to thrive in their community.”**

## THE COUNSELING DEPARTMENT

Dear Student and Parent:

The following information is supplied to assist with creating the best possible schedule for the next school year. Consideration needs to be given to choosing courses that satisfy graduation requirements, career aspirations, prerequisites and appropriate curriculum sequencing.

Extensive effort is made by your high school administrators and counselors to ensure you have chosen and receive the best possible schedule.

With approximately 650 students in grades 9-12, a general booklet such as this cannot address all of the individual situations and concerns. If you have any questions about your scheduling choices, please make an appointment with your counselor. Making good choices for your academic plan will make a positive impact in your future.

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The Conneaut Area Senior High school faculty and administration would like to take this opportunity to stress the importance of proper course selection for the school year. Your high school transcript will be with you for the rest of your life. Employers, colleges, apprenticeship programs, or technical training institutions usually request to see high school transcripts. They would like to see if you've prepared yourself for the future.

Sometimes choosing your courses is difficult. The best policy to follow when selecting courses is to take the ones that are challenging but within your capabilities. Also, follow your interests. Students usually find jobs in fields where they feel comfortable.

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# CONNEAUT AREA HIGH SCHOOL

## PROCEDURES & REMINDERS

1. Students should carefully read this booklet and pay special attention to the graduation requirements, required courses and the course descriptions.
2. The English and Mathematics teachers will make course recommendations.
3. Students must schedule a minimum of EIGHT credits.
4. Students are to complete the course selection sheet, which will be seen by their parent/guardian before returning it to their guidance counselor.
5. Students will meet with their assigned counselor to review their schedules.
6. Students who successfully complete all required course work and earn enough credits will be promoted to the next grade level. Options for retaking required courses and making up credit are available and must be approved by the principal.
7. Students who failed a required course will be contacted by their counselor at the end of the school year. Opportunity will be given to either repeat the course through summer credit make-up or to reschedule the course.

## GRADUATION REQUIREMENTS

|                    |  |
|--------------------|--|
| English            | 4 credits  |
| Math               | 4 credits  |
| Science            | 3 credits  |
| History            | 3 credits  |
| Physical Education | 2 credits  |
| Health             | 1 credit (.5 to be taken in 9 <sup>th</sup> and 11 <sup>th</sup> grade)  |
| Computer           | 1 credit   |
| Electives          | Students will select additional courses from among those approved for credit by the school district, including approved CTC courses. |

**Number of credits required for graduation: 26 credits**

# SR. HIGH REQUIRED COURSES

| <b>9TH GRADE REQUIRED COURSES</b> |                      |
|-----------------------------------|----------------------|
| <b>COURSE</b>                     | <b>CREDIT</b>        |
| English                           | 1                    |
| Math                              | 1                    |
| World Cultures                    | 1                    |
| Biology                           | 1                    |
| Computer Applications             | 1                    |
| Phys. Ed.                         | .5                   |
| Health 9                          | .5                   |
| Elective                          | 1                    |
| Elective                          | 1                    |
| <b>TOTAL CREDITS</b>              | <b>8<br/>Minimum</b> |

| <b>10TH GRADE REQUIRED COURSES</b> |                      |
|------------------------------------|----------------------|
| <b>COURSE</b>                      | <b>CREDIT</b>        |
| English                            | 1                    |
| Math                               | 1                    |
| US History                         | 1                    |
| Environmental Science              | 1                    |
| Phys Ed.                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
|                                    |                      |
| <b>TOTAL CREDITS</b>               | <b>8<br/>Minimum</b> |

| <b>11TH GRADE REQUIRED COURSES</b> |                      |
|------------------------------------|----------------------|
| <b>COURSE</b>                      | <b>CREDIT</b>        |
| English                            | 1                    |
| Math                               | 1                    |
| Government                         | 1                    |
| Science                            | 1                    |
| Phys. Ed.                          | .5                   |
| Health 11                          | .5                   |
| Elective                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
| <b>TOTAL CREDITS</b>               | <b>8<br/>MINIMUM</b> |

| <b>12TH GRADE REQUIRED COURSES</b> |                      |
|------------------------------------|----------------------|
| <b>COURSE</b>                      | <b>CREDIT</b>        |
| English                            | 1                    |
| Math                               | 1                    |
| Phys. Ed.                          | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
| Elective                           | 1                    |
|                                    |                      |
| <b>TOTAL CREDITS</b>               | <b>8<br/>MINIMUM</b> |

# SR. HIGH REQUIRED COURSES FOR TECH SCHOOL STUDENTS

| 9TH GRADE REQUIRED COURSES |                      |
|----------------------------|----------------------|
| COURSE                     | CREDIT               |
| English                    | 1                    |
| Math                       | 1                    |
| World Cultures             | 1                    |
| Biology                    | 1                    |
| Computer Applications      | 1                    |
| Phys. Ed.                  | .5                   |
| Health 9                   | .5                   |
| Elective                   | 1                    |
| Elective                   | 1                    |
| <b>TOTAL CREDITS</b>       | <b>8<br/>Minimum</b> |

| 10TH GRADE REQUIRED COURSES |                      |
|-----------------------------|----------------------|
| COURSE                      | CREDIT               |
| English                     | 1                    |
| Math                        | 1                    |
| US History                  | 1                    |
| Phys. Ed.                   | 1                    |
| CTC                         | 4                    |
|                             |                      |
|                             |                      |
|                             |                      |
|                             |                      |
| <b>TOTAL CREDITS</b>        | <b>8<br/>Minimum</b> |

| 11TH GRADE REQUIRED COURSES |        |
|-----------------------------|--------|
| COURSE                      | CREDIT |
| English                     | 1      |
| Math                        | 1      |
| Government                  | 1      |
| Science (choice)            | 1      |
| CTC                         | 4      |
|                             |        |
|                             |        |
|                             |        |

| 12TH GRADE REQUIRED COURSES |        |
|-----------------------------|--------|
| COURSE                      | CREDIT |
| English                     | 1      |
| Math                        | 1      |
| Phys. Ed.                   | .5     |
| Health                      | .5     |
| Elective                    | 1      |
| CTC                         | 4      |
|                             |        |
|                             |        |
|                             |        |

|                      |                      |
|----------------------|----------------------|
|                      |                      |
| <b>TOTAL CREDITS</b> | <b>8<br/>MINIMUM</b> |

|                      |                      |
|----------------------|----------------------|
| <b>TOTAL CREDITS</b> | <b>8<br/>MINIMUM</b> |
|----------------------|----------------------|

## Connecting Careers, Curriculum, and Character Education

### What are Career Pathways?

Each pathway is a broad grouping of careers that share similar characteristics and whose employment requirements call for many common interests, strengths, and competencies. A Career Pathway focuses a student's elective course toward preparing for a specific goal area. Career Pathways provide opportunities for students to explore similarly grouped career options. They also serve as an organizing tool for schools to help focus curriculum and bring relevance into the classroom.

### Why should I explore Career Pathways?

- To help focus on a career area that matches interests
- To help set goals and align classes necessary to achieve those goals
- To create career awareness
- To encourage planning for workforce or postsecondary education opportunities
- To provide knowledge that relates the high school experience to the world after graduation

### How do I explore a Career Pathway?

- You will research various career fields in middle school
- You will take a Career Explorations course in tenth grade to help guide your decision-making process
- Your counselors, parents and teachers will assist you
- You will utilize various software tools to explore and research various careers



# The 5 Pathways

## ARTS AND COMMUNICATION (AC)

Careers in the Arts, Audio-Video Technology and Communications involve designing, producing, exhibiting, performing, writing and publishing multimedia content including visual and performing arts and design, journalism and entertainment services.

### Career cluster areas:

- Audio, Video Technology, and Film
- Printing Technology and Graphic Communication Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications

## BUSINESS, FINANCE, AND INFORMATION TECHNOLOGY (BFIT)

Business management and administration careers encompass planning, organization, directing and evaluating business functions essential to efficient and productive business operations.

### Career cluster areas:

- Marketing, Sales, and Service
- Finance
- Business Management
- Information Technology

## ENGINEERING AND INDUSTRIAL TECHNOLOGY (EIT)

This career pathway is designed to cultivate students' interest, awareness and application to areas related to technologies necessary to design, develop, install or maintain physical systems.

### Career cluster areas:

- Architecture and Construction
- Manufacturing
- Engineering and Engineering Technology
- Transportation, Distribution, and Logistics

## HUMAN SERVICES (HS)

This career pathway is designed to cultivate students' interests, skills and experience for employment in careers related to families and human needs.

### Career cluster areas:

- Counseling and Personal Care
- Education
- Law, Public Safety, and Government
- Hospitality and Tourism

## SCIENCE AND HEALTH (SH)

This career pathway is designed to cultivate students' interest in the life, physical and behavioral sciences. In addition, the planning, managing and providing of therapeutic and diagnostic services, health information and biochemistry research development.

### Career cluster areas:

- Health Science
- Agriculture, Food, and Natural Resources
- Science, Technology, and Math



## Arts and Communications (AC) Pathway

*This Pathway is designed to cultivate students' awareness, interpretation, application, and production of visual, verbal, and written work*

| Are you interested in...  | Can you...   | Do you enjoy...   |
|---|--|---|
| <ul style="list-style-type: none"> <li>● News reporting and writing</li> <li>● Interviewing and reviewing</li> <li>● Multi-media productions</li> <li>● Acting</li> <li>● Radio, TV, Film, Video</li> <li>● Performing in a band or chorus</li> <li>● Attending concerts</li> <li>● Drawing, painting</li> <li>● Artwork</li> </ul> | <ul style="list-style-type: none"> <li>● Sing</li> <li>● Play an instrument</li> <li>● Be creative</li> <li>● Act</li> <li>● Articulate clearly</li> <li>● Write and conduct interviews</li> <li>● Meet deadlines</li> <li>● Sell</li> <li>● Draw</li> <li>● Sculpt</li> </ul> | <ul style="list-style-type: none"> <li>● Writing</li> <li>● Making Videos</li> <li>● Working with film props</li> <li>● Seeking creative ideas</li> <li>● Working with sound effects</li> <li>● Performing in front of an audience</li> <li>● Working with computers</li> </ul> |

*If you answered “yes” to many of these questions, you might consider a future in one of the sample occupations listed below.*

### Sample Careers

| Entry   | Technical/Skilled   | Professional (4+ college)  |
|---|---|--|
| <ul style="list-style-type: none"> <li>● Model</li> <li>● Radio operator</li> <li>● Stagehand</li> <li>● Stunt performer</li> <li>● Announcer</li> <li>● Dancer</li> <li>● Film loader</li> <li>● Photographer</li> <li>● Floral designer</li> <li>● Florist</li> <li>● Sound technician</li> <li>● TV, video, and movies</li> <li>● Desktop publisher</li> <li>● Copy person</li> <li>● Newsroom worker</li> </ul> | <ul style="list-style-type: none"> <li>● Actor</li> <li>● Illustrator</li> <li>● Choreographer</li> <li>● Dancer</li> <li>● Disc jockey</li> <li>● Musician</li> <li>● Animator</li> <li>● Artist</li> <li>● Broadway technician</li> <li>● Fashion designer</li> <li>● Jeweler</li> <li>● Make-up artist</li> <li>● Recording Engineer</li> <li>● Video manager</li> <li>● Computer graphic artist</li> <li>● Web designer</li> <li>● Desktop publisher</li> </ul> | <ul style="list-style-type: none"> <li>● Art or music teacher</li> <li>● Cinematographer</li> <li>● Composer</li> <li>● Film editor</li> <li>● Multi-media artist</li> <li>● Music critic</li> <li>● Music director</li> <li>● News broadcaster</li> <li>● Producer and director</li> <li>● Editor</li> <li>● Curator</li> <li>● Advertising creator</li> <li>● Art director</li> <li>● Interior designer</li> <li>● Fashion designer</li> <li>● Industrial designer</li> <li>● Copywriter</li> <li>● News writer</li> <li>● Telecommunications</li> <li>● Writer</li> </ul> |

## 4-Year Planner for Arts and Communications (AC) Pathway

|  | <b>Grade 9</b>                                      | <b>Grade 10</b>  | <b>Grade 11</b>  | <b>Grade 12</b>  |
|--|---|--|--|--|
| <b>English</b>   | Academic English 9<br>College Prep. English 9       | Academic English 10<br>College Prep. English 10              | Academic English 11<br>College Prep. English 11  | Academic English 12<br>College Prep. English 12  |
| <b>Science</b>   | Biology   | Environmental Science  | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience                    | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience            |
| <b>Social Studies</b>  | World Cultures                                      | American History   | Government   | Sr. Social Studies   |
| <b>Math</b>  | Algebra<br>Linear Algebra<br>Algebra II<br>Geometry | Algebra II<br>Functional Algebra<br>Geometry<br>Trigonometry | Practical Geometry<br>Non-Linear Algebra<br>Algebra II<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus | Technical Math<br>Money Management<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus<br>Calculus |
| <b>Required Elective</b>   | Health 9<br>Computer Applications                   |  | Health 11  |  |
| <b>Physical Education</b>  | Physical Education 9                                | Physical Education 10  | Physical Education 11  |  |
| <b>Pathway Electives (Other electives are available...see Course Offerings for more choices)</b> |   |  |  |  |

|  |   |  |  |
|--|---|--|--|
| Spanish I<br>German I<br>Art I<br>Current Events<br>Hist. of Amer. Music I<br>Journalism<br>Drama I<br>Mythology<br>Keyboarding I<br>Sr. High Band<br>Sr. High Chorus<br>Family and Consumer Ed. | Spanish I, II<br>German I, II<br>Art I, II<br>Hist. of Amer. Music I, II<br>Movie Study<br>Public Speaking<br>Journalism<br>Drama I, II<br>Mythology<br>Creative Writing<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar<br>Family and Consumer Ed.<br>Consumer Education | Spanish I, II, III<br>German I, II, III<br>Art I, II, III<br>Hist. of Amer. Music I, II<br>Culinary Arts I<br>Movie Study<br>Public Speaking<br>Journalism<br>Drama I, II<br>Mythology<br>Creative Writing<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar<br>Family and Consumer Ed.<br>Consumer Education | Spanish I, II, III, IV<br>German I, II, III, IV<br>Art, I, II, III, IV<br>Hist. of Amer. Music I, II<br>Culinary Arts I, II<br>Pastries<br>Family and Consumer Ed.<br>Consumer Education<br>Movie Study<br>Public Speaking<br>Journalism<br>Drama I, II<br>Mythology<br>Creative Writing<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar |
|--|---|--|--|

## Business, Finance, and Information Technology (BFIT) Pathway

*This Pathway is designed to prepare students in the world of business, finance, and information services.*

| Are you interested in...   | Can you...   | Do you enjoy...   |
|--|--|---|
| <ul style="list-style-type: none"> <li>● A business environment</li> <li>● Office management</li> <li>● Sales</li> <li>● Computers and technology</li> <li>● Presentations to groups</li> <li>● Telecommunications</li> <li>● Advertising</li> <li>● Different work sites</li> <li>● Record keeping</li> </ul> | <ul style="list-style-type: none"> <li>● Work easily with others</li> <li>● Organize your time</li> <li>● Work with statistics</li> <li>● Use computers and other technology</li> <li>● Pay attention to details</li> <li>● Solve problems</li> <li>● Work independently</li> <li>● Show initiative</li> <li>● Work on a team</li> </ul> | <ul style="list-style-type: none"> <li>● Meeting with groups</li> <li>● Making budgets</li> <li>● Organizing a project</li> <li>● Planning an event</li> <li>● Working with technology</li> <li>● Selling products and services</li> <li>● Processing numbers</li> <li>● Preparing financial reports</li> <li>● Following directions</li> <li>● Learning new software programs</li> </ul> |

*If you answered “yes” to many of these questions, you might consider a future in one of the sample occupations listed below.*

## Sample Careers

| Entry  | Technical/Skilled  | Professional (4+ college)  |
|--|--|--|
| <ul style="list-style-type: none"> <li>● Customer service</li> <li>● Representative</li> <li>● Shipping and receiving clerk</li> <li>● Telemarketer</li> </ul> | <ul style="list-style-type: none"> <li>● Computer salesperson</li> <li>● Graph designer</li> <li>● Retail technician</li> <li>● Bank collection officer</li> </ul> | <ul style="list-style-type: none"> <li>● Marketing manager</li> <li>● Certified public accountant</li> <li>● Economist</li> <li>● Financial manager</li> </ul> |

|   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>● Advertising sales agent</li> <li>● Bank teller</li> <li>● Cashier</li> <li>● Payroll clerk</li> <li>● Title searcher</li> <li>● Computer operator</li> <li>● Accounts payable manager</li> <li>● Administrative assistant</li> <li>● Data entry</li> <li>● Retail sales clerk</li> <li>● Secretary</li> <li>● Account executive</li> </ul> | <ul style="list-style-type: none"> <li>● Claims adjuster</li> <li>● Legal secretary</li> <li>● Tax preparer</li> <li>● Paralegal</li> <li>● Computer support specialist</li> <li>● Software engineer</li> <li>● Computer programmer</li> <li>● Production support analyst</li> <li>● Desktop publisher</li> <li>● Medical secretary</li> <li>● Real estate agent</li> <li>● Restaurant manager</li> <li>● Sales representative</li> </ul> | <ul style="list-style-type: none"> <li>● E-commerce analyst</li> <li>● Securities sales representative</li> <li>● Systems software engineer</li> <li>● Systems analysis</li> <li>● Hospital administrator</li> <li>● Human resources</li> <li>● Manager</li> <li>● Chief executive officer</li> <li>● Manufacturing sales</li> <li>● Representative</li> <li>● Business analysts</li> <li>● Project manager</li> <li>● Sports and entertainment agent</li> <li>● Actuary</li> </ul> |
|---|---|---|

## 4-Year Planner for Business, Finance, and Information Technology (BFIT) Pathway

|  | <b>Grade 9</b>  | <b>Grade 10</b>  | <b>Grade 11</b>  | <b>Grade 12</b>  |
|--|---|--|--|--|
| <b>English</b>   | Academic English 9<br>College Prep. English 9         | Academic English 10<br>College Prep. English 10              | Academic English 11<br>College Prep. English 11  | Academic English 12<br>College Prep. English 12  |
| <b>Science</b>   | Biology   | Environmental Science  | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience                    | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience            |
| <b>Social Studies</b>  | World Cultures  | American History   | Government   | Sr. Social Studies   |
| <b>Math</b>  | Algebra I<br>Linear Algebra<br>Algebra II<br>Geometry | Algebra II<br>Functional Algebra<br>Geometry<br>Trigonometry | Practical Geometry<br>Non-Linear Algebra<br>Algebra II<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus | Technical Math<br>Money Management<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus<br>Calculus |
| <b>Required Elective</b>   | Health 9<br>Computer Applications                     |  | Health 11  |  |
| <b>Physical Education</b>  | Physical Education 9                                  | Physical Education 10  | Physical Education 11  |  |
| <b>Pathway Electives (Other electives are available...see Course Offerings for more choices)</b> |   |  |  |  |

|  |  |  |   |   |
|--|--|--|---|---|
|  | Agriculture Ed. I<br>Keyboarding I<br>Spanish I<br>German I<br>Art I<br>Current Events<br>Hist. of Amer. Music I<br>Journalism<br>Sr. High Band<br>Sr. High Chorus | Agriculture Ed. I, II<br>Accounting I<br>Business & Marketing<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Spanish I, II<br>German I, II<br>Art I, II<br>Hist. of Amer. Music I, II<br>Public Speaking<br>Journalism<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III<br>Accounting I, II<br>Personal Finance<br>Sales and Marketing<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Spanish I, II, III<br>German I, II, III<br>Art I, II, III<br>Hist. of Amer. Music I, II<br>Culinary Arts I<br>Public Speaking<br>Journalism<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III, IV<br>Accounting I, II<br>Personal Finance<br>Sales and Marketing<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Spanish I, II, III, IV<br>German I, II, III, IV<br>Art, I, II, III, IV<br>Hist. of Amer. Music I, II<br>Culinary Arts I, II<br>Movie Study<br>Public Speaking<br>Journalism<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar |
|--|--|--|---|---|

## Engineering and Industrial Technology (EIT) Pathway

*This Pathway is designed to cultivate students' interest, awareness and application to careers related to technologies necessary to design, develop, install, and maintain physical systems.*

| Are you interested in...   | Can you...  | Do you enjoy...  |
|--|---|--|
| <ul style="list-style-type: none"> <li>● Building and construction</li> <li>● Tools, equipment and materials</li> <li>● Woodworking</li> <li>● Math and science classes</li> <li>● Fitness and sports</li> <li>● Precision work</li> <li>● Design and architecture</li> <li>● Engineering</li> <li>● Computer technology</li> <li>● How things work</li> </ul> | <ul style="list-style-type: none"> <li>● Apply science and math to the real world</li> <li>● Read and understand directions</li> <li>● Solve problems</li> <li>● Understand and read maps</li> <li>● Organize reports and people</li> <li>● See a task through to completion</li> <li>● Use a computer</li> </ul> | <ul style="list-style-type: none"> <li>● Travel</li> <li>● Working with your hands</li> <li>● Designing/working with projects, models, and prototypes</li> <li>● Working in a lab</li> <li>● Working on a team</li> <li>● Operating tools and equipment</li> <li>● Paying close attention to detail</li> </ul> |

*If you answered "yes" to many of these questions, you might consider a future in one of the sample occupations listed below.*

## Sample Careers

| Entry  | Technical/Skilled  | Professional (4+ college)  |
|--|--|--|
| <ul style="list-style-type: none"> <li>● Carpet installer</li> <li>● Drywall worker</li> </ul> | <ul style="list-style-type: none"> <li>● Grader and dozer operator</li> <li>● Electrical technician</li> </ul> | <ul style="list-style-type: none"> <li>● Construction manager</li> <li>● Cost estimator</li> </ul> |

|  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>● Roofer</li> <li>● Machine operator</li> <li>● Industrial machine mechanic</li> <li>● Baggage handler</li> <li>● Dock worker</li> <li>● Freight handler</li> <li>● Laborer</li> <li>● Warehouse worker</li> </ul> <p style="text-align: center;"><b>Apprenticeships</b></p> <ul style="list-style-type: none"> <li>● Brick mason</li> <li>● Carpenter</li> <li>● Electrician</li> <li>● HVAC</li> <li>● Plumber</li> <li>● Machinist</li> <li>● Surveyor</li> <li>● Diesel mechanic</li> </ul> | <ul style="list-style-type: none"> <li>● Metal engineering technician</li> <li>● Supervisor</li> <li>● Welder</li> <li>● Civil engineering technician</li> <li>● Robotics technician</li> <li>● CAD/CAM technician</li> <li>● Laser technician</li> <li>● Auto mechanic</li> <li>● Air traffic controller</li> <li>● Auto body repair</li> <li>● Bus driver</li> <li>● Diesel mechanic</li> <li>● Dispatch</li> <li>● Motorcycle mechanic</li> <li>● Taxi driver</li> <li>● Truck driver</li> </ul> | <ul style="list-style-type: none"> <li>● Industrial production manager</li> <li>● Purchasing agent</li> <li>● Astronaut</li> <li>● Nuclear engineer</li> <li>● Petroleum engineer</li> <li>● NASA scientist</li> <li>● Chemical engineer</li> <li>● Technical writer</li> <li>● Architect</li> <li>● Civil engineering</li> <li>● Industrial engineering</li> <li>● Mechanical engineering</li> <li>● Aeronautical engineer</li> <li>● Aerospace engineer</li> <li>● Airline pilot</li> <li>● Transportation engineer</li> </ul> |
|--|---|--|

### 4-Year Planner for Engineering and Industrial Technology (EIT) Pathway

|                           | <b>Grade 9</b>                                      | <b>Grade 10</b>   | <b>Grade 11</b>  | <b>Grade 12</b>  |
|---------------------------|---|---|--|--|
| <b>English</b>            | Academic English 9<br>College Prep. English 9       | Academic English 10<br>College Prep. English 10                                   | Academic English 11<br>College Prep. English 11  | Academic English 12<br>College Prep. English 12  |
| <b>Science</b>            | Biology   | Environmental Science<br>Organic Chemistry<br>Physical Science<br>Applied Physics | Physical Science<br>Organic Chemistry<br>Applied Physics   | Physical Science<br>Organic Chemistry<br>Applied Physics<br>Physics<br>AP Chem                           |
| <b>Social Studies</b>     | World Cultures                                      | American History  | Government   | Sr. Social Studies   |
| <b>Math</b>               | Algebra<br>Linear Algebra<br>Algebra II<br>Geometry | Algebra II<br>Functional Algebra<br>Geometry<br>Trigonometry                      | Practical Geometry<br>Non-Linear Algebra<br>Algebra II<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus | Technical Math<br>Money Management<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus<br>Calculus |
| <b>Required Elective</b>  | Health 9<br>Computer Applications                   |   | Health 11  |  |
| <b>Physical Education</b> | Physical Education 9                                | Physical Education 10   | Physical Education 11  |  |

**Pathway Electives (Other electives are available...see Course Offerings for more choices)**

|  |   |   |  |
|--|---|---|--|
| Agriculture Ed. I<br>Keyboarding I<br>Diversified Technology<br>Spanish I<br>German I<br>Art I<br>Current Events<br>Hist. of Amer. Music I<br>Journalism<br>Drama I<br>Mythology<br>Sr. High Band<br>Sr. High Chorus | Agriculture Ed. I, II<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Power & Structure I<br>Drafting Technology I<br>Pre-Engineering<br>Spanish I, II<br>German I, II<br>Art I, II<br>Hist. of Amer. Music I, II<br>Public Speaking<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III<br>AP Computer Science<br>iOS Development<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Power & Structure I, II, III<br>Drafting Technology I, II<br>Pre-Engineering<br>Manufacturing<br>Small Engine/Welding<br>Spanish I, II, III<br>German I, II, III<br>Art I, II, III<br>Hist. of Amer. Music I, II<br>Culinary Arts I<br>Public Speaking<br>Creative Writing<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III, IV<br>AP Computer Science<br>iOS Development<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Power & Structure I, II, III<br>Drafting Technology I, II<br>Pre-Engineering<br>Manufacturing<br>Small Engine/Welding<br>Spanish I, II, III, IV<br>German I, II, III, IV<br>Art, I, II, III, IV<br>Hist. of Amer. Music I, II<br>Culinary Arts I, II<br>Public Speaking<br>Creative Writing<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar |
|--|---|---|--|

**Human Services (HS)  
Pathway**

*This Pathway is designed to cultivate students' interests, skills, and experiences for employment in careers related to family and human needs.*

| Are you interested in...   | Can you...   | Do you enjoy...  |
|--|--|--|
| <ul style="list-style-type: none"> <li>Working with people</li> <li>Owning your own business</li> <li>Aging adults</li> <li>Child development</li> <li>Family and social services</li> <li>Food preparation</li> <li>Teaching</li> <li>Counseling</li> </ul> | <ul style="list-style-type: none"> <li>Organize well</li> <li>Plan and direct programs</li> <li>Be creative</li> <li>Communicate well</li> <li>Assume leadership roles</li> <li>Work with a team</li> <li>Be conscientious and dependable</li> <li>Plan budgets</li> </ul> | <ul style="list-style-type: none"> <li>Communication services</li> <li>Helping and protecting others</li> <li>Working with people</li> <li>Counseling and advising people</li> <li>Serving others' needs</li> <li>Interviewing people</li> <li>Selling products or services</li> <li>Handling customer complaints</li> <li>Human problems</li> </ul> |

*If you answered "yes" to many of these questions, you might consider a future in one of the sample occupations listed below.*

**Sample Careers**



| Entry   | Technical/Skilled  | Professional (4+ college)   |
|---|--|---|
| <ul style="list-style-type: none"> <li>● Child care worker</li> <li>● Cosmetic representative</li> <li>● Dry cleaning operator</li> <li>● Home health aide</li> <li>● Library assistant</li> <li>● Teacher's assistant</li> <li>● Postal services worker</li> <li>● Security guard</li> <li>● Utility worker</li> <li>● Aerobics instructor</li> <li>● Waitress</li> <li>● Baker</li> <li>● Travel agent</li> </ul> | <ul style="list-style-type: none"> <li>● Barber</li> <li>● Cosmetologist</li> <li>● Fashion designer</li> <li>● Manicurist</li> <li>● Massage therapist</li> <li>● Mortician</li> <li>● Truck driver</li> <li>● Personal trainer</li> <li>● Teacher's aide</li> <li>● Firefighter</li> <li>● Postmaster</li> <li>● Police officer</li> <li>● Flight attendant</li> <li>● Chef</li> </ul> | <ul style="list-style-type: none"> <li>● Funeral director</li> <li>● Therapist</li> <li>● Counselor</li> <li>● Professor</li> <li>● Principal</li> <li>● Teacher</li> <li>● Criminologist</li> <li>● FBI agent</li> <li>● Lawyer</li> <li>● Police officer</li> <li>● Park ranger</li> <li>● Executive chef</li> <li>● Food services manager</li> <li>● Hotel/motel management</li> </ul> |

## 4-Year Planner for Human Services (HS) Pathway

|  | <b>Grade 9</b>                                      | <b>Grade 10</b>  | <b>Grade 11</b>  | <b>Grade 12</b>  |
|--|---|--|--|--|
| <b>English</b>   | Academic English 9<br>College Prep. English 9       | Academic English 10<br>College Prep. English 10              | Academic English 11<br>College Prep. English 11  | Academic English 12<br>College Prep. English 12  |
| <b>Science</b>   | Biology   | Environmental Science  | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience                    | Physical Science<br>Organic Chemistry<br>Forensic Chemistry<br>Applied Physics<br>Agriscience            |
| <b>Social Studies</b>  | World Cultures                                      | American History   | Government   | Sr. Social Studies   |
| <b>Math</b>  | Algebra<br>Linear Algebra<br>Algebra II<br>Geometry | Algebra II<br>Functional Algebra<br>Geometry<br>Trigonometry | Practical Geometry<br>Non-Linear Algebra<br>Algebra II<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus | Technical Math<br>Money Management<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus<br>Calculus |
| <b>Required Elective</b>   | Health 9<br>Computer Applications                   |  | Health 11  |  |
| <b>Physical Education</b>  | Physical Education 9                                | Physical Education 10  | Physical Education 11  |  |
| <b>Pathway Electives (Other electives are available...see Course Offerings for more choices)</b> |   |  |  |  |

|  |  |   |   |  |
|--|--|---|---|--|
|  | Family and Consumer Ed.<br>Spanish I<br>German I<br>Art I<br>Current Events<br>Hist. of Amer. Music I<br>Journalism<br>Drama I<br>Mythology<br>Keyboarding I<br>Sr. High Band<br>Sr. High Chorus | Family and Consumer Ed.<br>Consumer Education<br>Spanish I, II<br>German I, II<br>Art I, II<br>Hist. of Amer. Music I, II<br>Movie Study<br>Public Speaking<br>Journalism<br>Creative Writing<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Child Development<br>Family and Consumer Ed.<br>Consumer Education<br>Spanish I, II, III<br>German I, II, III<br>Art I, II, III<br>Hist. of Amer. Music I, II<br>Culinary Arts I<br>Movie Study<br>Public Speaking<br>Journalism<br>Creative Writing<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Child Development<br>Family and Consumer Ed.<br>Consumer Education<br>Spanish I, II, III, IV<br>German I, II, III, IV<br>Art, I, II, III, IV<br>Hist. of Amer. Music I, II<br>Culinary Arts I, II<br>Pastries<br>Movie Study<br>Public Speaking<br>Journalism<br>Creative Writing<br>World Geography<br>Current Events<br>Video Production<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar |
|--|--|---|---|--|

## Science and Health (SH) Pathway

*This Pathway is designed to cultivate students' interests in the life, physical and behavioral sciences. In addition, it involves and planning, managing and producing of therapeutic services, diagnostic services, health information and biochemistry research and development. Many of the careers involved with the food, fiber, environmental and natural resource systems fall under this pathway*

| Are you interested in...  | Can you...  | Do you enjoy...  |
|---|---|--|
| <ul style="list-style-type: none"> <li>● Health care environment</li> <li>● Science and medicine</li> <li>● Medical research</li> <li>● Food production</li> <li>● Environment and conservation</li> <li>● Pharmacy</li> <li>● Animals</li> <li>● Physical therapy</li> <li>● Sports and fitness</li> <li>● Information systems</li> <li>● Radiology</li> </ul> | <ul style="list-style-type: none"> <li>● Pay attention to detail</li> <li>● Use a computer and technology</li> <li>● Work in a lab setting or medical facility</li> <li>● Apply scientific theory to real life problems</li> <li>● Work outdoors around animals and plants</li> <li>● Collect and analyze data from experiments</li> <li>● Work with people in need</li> <li>● Work with science and math theories</li> </ul> | <ul style="list-style-type: none"> <li>● Diagnosing and caring for sick animals</li> <li>● Working outdoors with wildlife</li> <li>● Working on cutting edge scientific research</li> <li>● Working on a team</li> <li>● Medical lab research</li> <li>● Making a contribution to society</li> <li>● Working with numbers</li> <li>● Developing conclusions from a database</li> </ul> |

*If you answered "yes" to many of these questions, you might consider a future in one of the sample occupations listed below.*

## Sample Careers

| Entry  | Technical/Skilled  | Professional (4+ college)   |
|--|--|---|
| <ul style="list-style-type: none"> <li>● Hospital worker</li> <li>● Patient care technician</li> <li>● Dialysis technician</li> <li>● EEG technician</li> <li>● Home health aide</li> <li>● Nurse's aide, orderlies</li> <li>● Pharmacy technician</li> <li>● Physical therapy aide</li> <li>● Animal caretaker</li> <li>● Breeder</li> <li>● Extension service worker</li> <li>● Wildlife reserve worker</li> <li>● Optician</li> <li>● Data Entry</li> <li>● Farmer</li> </ul> | <ul style="list-style-type: none"> <li>● Certified nursing assistant</li> <li>● Dental hygienist</li> <li>● Emergency medical technician</li> <li>● Licensed practice nurse</li> <li>● Medical lab technician</li> <li>● Personal trainer</li> <li>● Radiological technician</li> <li>● Respiratory therapist</li> <li>● Dental lab technician</li> <li>● Fish and game worker</li> <li>● Forest conversationalist</li> <li>● GPS technician</li> <li>● Surveyor</li> <li>● Veterinary Technician</li> </ul> | <ul style="list-style-type: none"> <li>● Athletic trainer</li> <li>● Speech/Language pathologist</li> <li>● Dietician</li> <li>● Physician assistant</li> <li>● Medical examiner</li> <li>● Pharmacist</li> <li>● Physician</li> <li>● Registered nurse</li> <li>● Marine biologist</li> <li>● Soil conversationalist</li> <li>● Veterinarian</li> <li>● Chemist</li> <li>● Environmental scientist</li> <li>● Zoologist</li> <li>● Nuclear engineer</li> </ul> |

### 4-Year Planner for Science and Health (SH) Pathway

|                          | <b>Grade 9</b>                                      | <b>Grade 10</b>  | <b>Grade 11</b>  | <b>Grade 12</b>  |
|--------------------------|---|--|--|--|
| <b>English</b>           | Academic English 9<br>College Prep. English 9       | Academic English 10<br>College Prep. English 10              | Academic English 11<br>College Prep. English 11  | Academic English 12<br>College Prep. English 12  |
| <b>Science</b>           | Biology   | Environmental Science<br>Organic Chemistry<br>Biology II     | Biology II<br>Organic Chemistry<br>AP Chem<br>Medical Terminology<br>Anatomy and Physiology<br>Microbiology<br>AP Biology<br>Inorganic Chemistry | Biology II<br>Organic Chemistry<br>AP Chem<br>Medical Terminology<br>Anatomy and Physiology<br>Microbiology<br>AP Biology<br>Inorganic Chemistry |
| <b>Social Studies</b>    | World Cultures                                      | American History   | Government   | Sr. Social Studies   |
| <b>Math</b>              | Algebra<br>Linear Algebra<br>Algebra II<br>Geometry | Algebra II<br>Functional Algebra<br>Geometry<br>Trigonometry | Practical Geometry<br>Non-Linear Algebra<br>Algebra II<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus                                 | Technical Math<br>Money Management<br>Geometry<br>Trigonometry<br>Statistics<br>Pre-Calculus<br>Calculus   |
| <b>Required Elective</b> | Health 9<br>Computer Applications                   |  | Health 11  |  |

| Physical Education   | Physical Education 9   | Physical Education 10   | Physical Education 11   |  |
|--|--|---|---|--|
| <b>Pathway Electives (Other electives are available...see Course Offerings for more choices)</b> |  |   |   |  |
|  | Agriculture Ed. I<br>Spanish I<br>German I<br>Art I<br>Current Events<br>Hist. of Amer. Music I<br>Journalism<br>Drama I<br>Mythology<br>Keyboarding I<br>Sr. High Band<br>Sr. High Chorus | Agriculture Ed. I, II<br>Spanish I, II<br>German I, II<br>Art I, II<br>Hist. of Amer. Music I, II<br>Movie Study<br>Public Speaking<br>Creative Writing<br>Current Events<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III<br>Spanish I, II, III<br>German I, II, III<br>Art I, II, III<br>Hist. of Amer. Music I, II<br>Culinary Arts I<br>Movie Study<br>Public Speaking<br>Creative Writing<br>World Geography<br>Current Events<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar | Agriculture Ed. I, II, III, IV<br>Spanish I, II, III, IV<br>German I, II, III, IV<br>Art, I, II, III, IV<br>Hist. of Amer. Music I, II<br>Culinary Arts I, II<br>Movie Study<br>Public Speaking<br>Creative Writing<br>World Geography<br>Current Events<br>Photography<br>Intro to Computer Prog.<br>Keyboarding I, II<br>Sr. High Band<br>Sr. High Chorus<br>Intro to Guitar |

## Course Descriptions

### *English Courses*

#### **Academic English - (Grade 9)**

English 9 General is designed for the student who is not planning to attend college but will enter the workforce upon graduation or seek no-college post-secondary training. The reading selections include a survey of all literary genres. Vocabulary is incorporated through a variety of methods. Writing includes poems, stories, narrative, informational, and persuasive pieces. Students are expected to develop discussion and note-taking skills. In addition, students must prepare and deliver two formal speeches.

#### **College Prep English - (Grade 9)**

English 9 College Prep is designed for the student planning to attend college. The reading selections include a survey of all literary genres. Vocabulary is incorporated through a variety of methods. Writing includes poems, stories, narrative, information and persuasive pieces. Students are expected to develop

college-level discussion, research, and note-taking skills. In addition, students must prepare and deliver two formal speeches.

This course is designed to be academically challenging and will receive a weighted grade. The district recommends that this course be taken only by students proficient in language arts.

### **Academic English - (Grade 10)**

English 10 General is designed for the student who is not planning to attend college but will enter the workforce upon graduation or seek no-college post-secondary training. The reading selections emphasize world literature. Vocabulary is incorporated through a variety of methods. Writing includes a reinforcement of basic narrative, informational, and persuasive pieces with an emphasis on the composition format. Students are expected to develop discussion and note-taking skills. In addition, students must prepare and deliver two formal speeches.

### **College Prep English - (Grade 10)**

English 10 College Prep is designed for the student planning to attend college. The reading selections emphasize world literature. Vocabulary is incorporated through a variety of methods. Writing includes poems, stories, narrative, information and persuasive pieces. Students are expected to develop college-level discussion, research, and note-taking skills. In addition, students must prepare and deliver two formal speeches.

This course is designed to be academically challenging and will receive a weighted grade. The district recommends that this course be taken only by students proficient in language arts.

### **Academic English - (Grade 11)**

English 11 General is designed for the student who is not planning to attend college but will enter the workforce upon graduation or seek no-college post-secondary training. The reading emphasizes American literature. Vocabulary is incorporated through a variety of methods. Writing includes a reinforcement of basic narrative, informational, and persuasive pieces with an emphasis on the composition format. Students are expected to develop discussion and note-taking skills. In addition, students must prepare and deliver two formal speeches.

### **College Prep English - (Grade 11)**

English 11 College Prep is designed for the student planning to attend college. The reading selections chronologically survey American literature, emphasizing American history and philosophy. Vocabulary is incorporated through a variety of methods. Writing includes poems, stories, narrative, information and persuasive pieces and a research paper. Students are expected to develop college-level discussion, research, and note-taking skills. In addition, students must demonstrate proficiency in public speaking.

This course is designed to be academically challenging and will receive a weighted grade. The district recommends that this course be taken only by students proficient in language arts.

### **Academic English - (Grade 12)**

English 12 General is designed for the student who is not planning to attend college but will enter the workforce upon graduation or seek no-college post-secondary training. The reading selections include a survey of all literary genres with an emphasis on British literature. Vocabulary is incorporated through a variety of methods. Writing includes poems, stories, narrative, informational, and persuasive pieces. Students are expected to develop discussion, research, and note-taking skills. In addition, students must demonstrate proficiency in public speaking. There is a strong component of career exploration and future planning.

### **College Prep English - (Grade 12)**

English 12 College Prep is designed for the student planning to attend college. The reading selections chronologically survey British literature, emphasizing British history, and philosophy. Vocabulary is incorporated through a variety of methods. Writing includes narrative, information and persuasive pieces with emphasis on the college-level essay format. Students are expected to develop college-level discussion, research, and note-taking skills. In addition, students must demonstrate proficiency in public speaking.

This course is designed to be academically challenging and will receive a weighted grade. The district recommends that this course be taken only by students proficient in language arts.

### **Advanced Placement English Literature and Composition - (Grade 12)**

AP 12 is an offering based on a nationally established curriculum guidelines. The course must consistently meet the guidance established by the College Board. This course has an end of course assessment. The course is meant to challenge both student and instructor to the highest critical reasoning and expression skills.

## ***Mathematics Courses***

### **Algebra I**

The content of the Algebra 1 course is based on the assumption that all students have obtained competency in the four basic operations with whole numbers, fractions, and decimals. Topics covered include: solving equations, operations on polynomials, factoring, graphing, solving systems of equations and solving word problems.

### **Algebra II - (Prerequisite: Algebra I)**

This course reviews and enhances the concepts and skills learned in first year Algebra. Algebra II includes an extended study of operations on polynomials, graphs of linear equations, and solving quadratic equations. Additionally, students will master the skills of solving inequalities, absolute values, and solving systems of two and three equations. More advanced topics will include the operations on both irrational numbers and complex numbers and the ability to solve systems of equations using matrices and determinants. One of the highlights of the course will be the opportunity to utilize the graphing calculator to develop insights and an appreciation for the use of today's technology in the field of mathematics.

### **Plane Geometry - (Grades 9-12) (Prerequisite: Algebra II - can be taken concurrently)**

The geometry course is designed to develop and extend the logic and reasoning ability of each student. The concept of a proof, both inductive and deductive, is developed throughout the course. Topics covered include: logic, congruent and similar triangles, polygons, circles, construction, and area. This course will encourage students to think creatively and independently.

### **Trigonometry/Advanced Algebra - (Grades 10-12) (Prerequisite: Geometry)**

This course provides a working knowledge and applications of plane trigonometry, analytical geometry, and advanced topics in algebra. The trigonometry portion of the course deals with solving both right and oblique triangles, graphs of trigonometric functions and solving trigonometric equations. Additional topics covered in this course include: complex numbers, polar coordinates and equations, exponential and logarithmic functions, sequences and series, and conic sections. There will be a strong emphasis placed on "real-life" applications of trigonometric skills. Students will be expected to complete lab experiments, be competent in the use of a graphing calculator and, be able to use a CBL unit to collect and analyze data.

### **Pre-calculus - (Grades 11-12) (Prerequisite: Trigonometry)**

The principal objective of Pre-calculus is to provide those students planning on taking college-level math and science courses with the best possible understanding and integration of algebra, trigonometry, analytical geometry, and discrete math. Students will be expected to solve problems algebraically, numerically, and graphically. Real-life applications and data from various fields of science, business, economics, engineering, and statistics will be used extensively. Students will be exposed to numerous



problem-solving techniques many including the use of technology. All students will be expected to use a graphing calculator to visualize and solve problems.

### **Calculus - (Grade 12) (Prerequisite: Trigonometry)**

This course begins with an in-depth analysis of elementary functions. A transformational approach is utilized in graphing quadratic, polynomial, and rational functions. Extensive coverage of polynomial functions and theory of equations provides the background for learning concepts of calculus – limits, continuity, differentiation, and integration. Applications of differentiation and integration are investigated. This course is designed to be computational and an intuitive approach is used.

### **Linear Algebra**

The first  $\frac{3}{4}$  of Algebra 1 is covered including: Variable, Functions Patterns and Graphs, Rational Numbers, Solving Equations, Solving Inequalities, Graphs and Functions, Linear Equations and Their Graphs, Systems of Equations and Inequalities. Exponents and Exponential Functions.

### **Functional Algebra**

Completion of Algebra 1 and First  $\frac{1}{2}$  of Algebra 2: Including Polynomials and Factoring, Quadratic Equations and Functions, Radical Expressions and Equations, Rational Expressions and Equations, Rational Expressions and Functions, Tools of Algebra, Functions, Equations and Graphs, Linear Systems and Matrices.

### **Non-Linear Algebra**

Completion of Algebra 2 to include: Quadratic Equations and Functions, Polynomial and Polynomial Functions, Radical and Rational Exponents, Exponential and Logarithmic Functions, Rational Functions, Quadratic Relations and Conic Sections, Sequences and Series, Probability and Statistics.

### **Keystone Algebra**

Keystone Algebra is a test prep specific course reviewing and reinforcing basic algebraic concepts in preparation for the Keystone exam in the spring of each year. Student population will be students needing to successfully complete the Keystone Algebra exam.

### **Statistics - (Grades 11-12)**

In this course we will understand the differences among various kinds of studies and which types of inferences can legitimately be drawn from each, understand histograms, parallel box plots, and scatterplots and use them to display data, and compute basic statistics and understand the distinction between a statistic and a parameter. Also, we will understand how sample statistics reflect the values of population parameters and use sampling distributions as the basis for informal inference and understand the concepts of sample space and probability distribution and construct sample spaces and distributions in simple cases.

### **Applied Geometry - (Grades 11-12 - Algebra II recommended)**

This course will help prepare students for an apprenticeship or career in the technical/manufacturing industry. It is a practical approach to Geometry. The topics covered will be tools/terminology of Geometry, parallel and perpendicular lines, triangle theory, quadrilaterals, similarity, applied trigonometry, area and volume of shapes. This course will have an emphasis in the areas of measurement and calculation of wood and metal.

### **Technical Math - (Grades 11-12 - Algebra II recommended)**

This course is designed for those students who learn best through an applied approach. The text, from the Manufacturing community (NTMA), will help prepare students for an apprenticeship or career in the technical/manufacturing industry. The topics covered will be those valued by industry; namely measurement, number sense, geometry, trigonometry, and statistics. This course will have an emphasis in the areas of measurement and calculation of wood and metal.

## ***Social Studies Courses***

### **World Cultures - (Grade 9) (Required)**

This course covers the development of the major cultures of the world. The cultural development of man will be followed from early existence through today's technologically advanced world. Emphasis will be placed on differences and similarities of various cultures and their views on politics, religion, and their contribution to today's world.

### **American History III - (Grade 10) (Required)**

This American History course will cover the time period 1945 to Present. The course will study the major themes of that time period (ie. The Cold War) in chronological order. The content will include a study of the political, social and cultural events that took place in that time period. The class will use a combination of lecture, textbook, online access and independent study to master the content.

### **American Government - (Grades 11-12) (Required)**

This course is required for students before they graduate, preferably in 12<sup>th</sup> grade. Students will study government at the local, state and national levels. Students will also study the Judicial, Legislative, and Executive branches of government. There will also be a focus on Pennsylvania's role in the development of our country.

### **Senior Social Studies - (Grades 11-12) (Elective)**

This course is intended to help students prepare for the responsibilities of the adult world from interpersonal relationships through personal finance choices. Senior Social Studies will provide students with practical knowledge and skills dealing in psychology, sociology, and economics.

### **AP Human Geography (11-12) (Elective)**

The Advanced Placement Geography gives students the opportunity to earn college credit in geography while still in high school. More importantly, the content of an AP Geography course helps students develop critical thinking skills through the understanding, application and analysis of the fundamental concepts of geography. Through AP Geography, students are introduced to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface.

Students will employ spatial concepts and landscape analysis to analyze human social organization and its environmental consequences. Students will meet the five college-level goals as determined by the National Geographic Standards. They also learn the methods and tools geographers use in their science and practice. Students who take AP Human Geography can seek college credit and/or advanced placement from institutions of higher learning.

### **Legal Studies (11-12) (Elective)**

This course offers high school students an opportunity to analyze legal careers and the origins/purposes of laws of all types and jurisdictions. This course, in cooperation and accordance with the American Bar Association, covers the Constitution and several of its key amendments, due process, environmental law, voting, structure of the judicial system, jobs within the legal system, intellectual property, human rights, news literacy, and civic involvement. Students will also be required to read, write, and share (both verbally and through writing) on several cases of their personal interest.

### **Current Events - (Grades 9-12) (Elective)**

The Current Events course is based upon a thematic approach, where the students, on an international, national, and local level will investigate several topics. Students are required to analyze and critique various topics and illustrate the relationship/impact that can occur within these three levels. Students will utilize the following resources to examine the predetermined topics: USA TODAY newspaper, TIME Magazine and on-line periodical database. In a given week, approximately two class periods will be spent having students research articles related to the assigned topic. Approximately two additional class periods will be dedicated to the student preparation of the analysis and the presentation. And one class period will be committed to students submitting their final product for that particular topic. Students will be evaluated through a variety of presentation techniques that include, but are not limited to, reports, debates, presentations and models. This course is designed to enhance and provide increased opportunity for student reading, writing, and speaking. Strategies utilized in this course encourage the use of print material, technology and critical thinking skills.

### **Geography - (Grades 9-12) (Elective)**

This course is designed so that, you, the learner will be able to obtain practical geographical information about the world's countries, regions, and cultures. At the end of this course you will understand how to use maps, tools, and technology to report information. You will understand the various types of government and economies throughout the world while being able to explain how humans interact in the world.

## ***Science Courses***

### **Environmental Science**

Environmental Science is a course designed to incorporate ecology into the students' everyday lives and meet the PSSA standards for Environment and Ecology. This course will use unifying themes of science and technology to integrate significant concepts and demonstrate science process skills.

## **Physical Science - (Grades 10-12) (Elective)**

This course is an introduction to the basic principles of physical science. Included in this course are topics such as force and motion, sources and uses of various forms of energy, properties and changes of matter, atomic structure and the elements. The students are introduced to the use of chemical laboratory work and the scientific methods used by people of science.

## **Biology I - (Grade 9) (Required)**

This course is designed to give the student a basic introduction to the vast field of biology (nature). The course develops an awareness of the organisms that comprise our earth and a study is made of the structure and function of those living organisms. The course introduces basic concepts in laboratory skills, cytology, genetics, microbiology, botany, zoology, taxonomy, and ecology.

## **Biology II - (Grades 11-12) (Prerequisite: Biology I)**

This course is provided to offer students interested in pursuing the Health or Biological professions a detailed view of the Biochemical Functions that occur in Living Systems through the completion of a Research Project concerning the Genetic characteristics, behavior, and effects of diet on the learning ability of mice. Students will examine in detail DNA and RNA molecular structure; the processes of Transcription and Translation; the function of Nucleic Acids in Protein Synthesis, as well as the mechanisms of Cellular Respiration, ATP formation, and its effects on animal behavior and health.

## **Physics - (Grades 11-12) (Prerequisite: Trigonometry - can be taken concurrently)**

Physics is a survey of general physical concepts including: kinematics, dynamics, field of force, energy, wave concepts, and particle physics. The course is designed to meet the needs of students who plan to continue science or technical study.

## **Applied Physics - (Grades 11-12)**

Students will learn that in a system any combination of parts will work together to do a specific job. This course will study examples of mechanical, fluid, electrical, and thermal systems. These systems act in similar ways. Basic principles such as force, rate, and resistance all operate across the four systems.

## **Anatomy and Physiology - (Grades 11-12) (Prerequisite: Biology I)**

This course is specifically designed to enable students to learn the language of Anatomy and the major Anatomical Structures of the Human Skeletal and Muscular Systems. The pace and conduction of the

course is similar to that as found in most college pre-med courses of study and is designed for students interested in pursuing a career in the Health or Biological professions an opportunity to build a foundational understanding of the Anatomy of the Human body.

### **Medical and Scientific Terminology - (Grades 11-12)**

This course is specifically designed for students interested in pursuing the Health or Biological professions. Students will examine the organization of Latin & Greek prefixes, root words, and suffixes through implementing their daily usage in standard medical and scientific terms.

### **Microbiology - (Grades 11-12) (Prerequisite: Biology I)**

This course is specifically designed for students interested in pursuing the Health or Biological professions. Students are introduced to the historical development of the science of Microbiology; the structure & function of microbial cells; the metabolism & factors affecting growth of bacterial and micro-invertebrate organisms, as well as, microbial ecology and its impact on Human Health and Economics. Through Field Labs, students will develop techniques to identify and evaluate the major populations of bacterial and micro-invertebrate organisms and establish indicator species of microorganisms for assessing aquatic environmental health.

### **Inorganic Chemistry - (Grades 10-12) (Prerequisite: Algebra I)**

This is a college preparatory basic level chemistry course. Fundamentals taught include the review and usage of the metric system, classification of matter, history of the development of atomic structure, the periodic table and its trends, bonding, stoichiometry, equilibrium, the Gas Laws, acid base theory, and organic chemistry. Students are in the laboratory at least 3-4 days every other week executing classical laboratory investigations into chemical reactions.

### **Organic Chemistry - (Grades 11-12) (Prerequisite: Algebra I)**

A large part of Advanced Chemistry will cover concepts of organic chemistry. A portion of this class will cover topics not covered in Chemistry I, such as chemistry of selected elements. Emphasis will be on organic, in labs and lectures.

### **Forensic Chemistry - (Grades 11-12)**

Course Description: This course is intended to give students an educational experience in the realm of Forensic Chemistry. The core curriculum will provide common knowledge, scientific and problem solving skills, and investigations within the Forensic Chemistry discipline. The curriculum is organized around

national and state science standards that promote unifying concepts at each grade level and within the Chemistry discipline.

### **Aeronautics I (Grades 9-10)**

This introductory course will provide the foundation for advanced exploration in the areas of flying and unmanned aircraft systems. Students will learn about the engineering process, problem solving, and the innovations and technological developments that have made today's aviation and aerospace industries possible.

Students will look at the problem-solving processes and innovative leaps that took space exploration from the unimaginable to the common in a single generation. Students will also gain an historical perspective starting from the earliest flying machines to the wide variety of modern aircraft and the integral role they play in making today's world work.

This core aerospace and aviation course provides the foundation for both pathways. It is designed to give students a clear understanding of career opportunities in aviation and aerospace and the critical issues affecting the aviation system. Students will also begin to drill down into the various sectors of aviation and the parts that make up the aviation and aerospace ecosystem. They will discover how advances in aviation created a need for regulation and will learn about the promulgation of civil aviation oversight. Students will explore modern day innovations and will develop their own innovative ideas to address real-world challenges facing the aviation industry. They will be exposed to a variety of career options in aviation and aerospace and take an in-depth look at the opportunities available. For schools offering both pathways, this course will allow students to begin to define their individual interests.

### **Aeronautics II (Grades 10-11)**

This course will introduce students to basic aircraft and UAS structures and their major components, principles of flight, and the fundamental physical laws affecting flight. Students will learn about basic aerodynamics and forces that act on aircraft in flight. This course will also introduce the main systems found on large and small airplanes and UAS.

### **AP Chemistry - (Grades 11-12)**

The AP Chemistry course is designed to be the equivalent of the general chemistry course usually taken during the first college year. For some students, this course enables them to undertake, in their first year, second-year work in the chemistry sequence at their institution or to register in courses in other fields where general chemistry is a prerequisite. For other students, the AP Chemistry course fulfills the laboratory science requirement and frees time for other courses. AP Chemistry should meet the objectives of a good college general chemistry course. Students in such a course should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course should contribute to the development of the students' abilities to think clearly and to express their

ideas, orally and in writing, with clarity and logic. The college course in general chemistry differs qualitatively from the usual first secondary school course in chemistry with respect to the kind of textbook used, the topics covered, the emphasis on chemical calculations and the mathematical formulation of principles, and the kind of laboratory work done by students. Quantitative differences appear in the number of topics treated, the time spent on the course by students, and the nature and the variety of experiments done in the laboratory. Secondary schools that wish to offer an AP Chemistry course must be prepared to provide a laboratory experience equivalent to that of a typical college course.

## **AP Biology - (Grades 11-12)**

This AP Biology course is designed, using the 4 Big Ideas Framework, to help students build a solid foundation in a college-level Biology curriculum. We will use independent readings, class discussions, online resources, and laboratory exercises to develop this foundation. These actions, interwoven with oral, written, group, and individual activities, will foster an atmosphere of inquiry and discovery of the biological world around us. This course is structured around the four big ideas, enduring understandings with these big ideas and the essential knowledge with the enduring understanding.

This course will meet five (5) times weekly for thirty six (36) weeks. We will maintain an alternating schedule of two (2) or three (3) extended periods a week. Regular periods will be forty one (41) minutes long and the extended periods will be sixty six (66) minutes long. This equates to approximately 9630 minutes or 160.5 hours for the year.

## **Agriculture Education I**

The Agriculture Education I course is a one-credit introductory course, which meets one period per semester. The course includes wildlife management, supervised occupational experiences, Future Farmers of America, agriculture mechanics, animal science, plant science, agriculture careers, and safety. All studies lead to skill development for meeting occupation objectives in agriculture. The laboratory facilities of the shop, greenhouse, tree farm, and educational field trips are used. Students put knowledge and skills learned into practice through their supervised occupational experience projects. Students are required to purchase materials to complete agricultural mechanics and supervised occupational experience projects. No prerequisite courses are required.

## **Agriculture Education II, III, IV - (Prerequisite: Agriculture Education I)**

The Advanced Agriculture Course is an advanced elective for students in grades 10, 11, and 12. The class is a one-credit course which meets one period per semester. Advanced Ag. courses will be offered on a 3-year cycle. Topics on agricultural education will be offered on a rotating basis so that, should a student complete the 3-year cycle, they will be exposed to all curriculum offerings for advanced agriculture. Any of the advanced courses may include: units of instruction in forestry, supervised occupational experience, Future Farmers of America, agricultural mechanics, animal science, soil science, farm business management and safety. Supervised occupational experience projects are required. They are to become larger in scope and complexity of management. Students are expected to develop individual and group leadership plans and set a proper example for younger members.



## **SAE - Supervised Agricultural Experience**

SAE/Supervised Agricultural Experience is designed for students who are also enrolled in an Agriculture Education course. Students will be required to have a Supervised Agricultural Experience (SAE) project. This is a project done both in and outside of class time. A record book will be used and regularly updated with the SAE and will also be graded. Students must maintain and submit a record book to get full credit. Students will use the website: <http://www.theaet.com/>. It will be the responsibility of the student to keep accurate records each week and submit these records weekly to the instructor. In the SAE/Supervised Agricultural Experience course students will gain skills in record keeping and managing finances.

## **Agriscience - (Grades 11-12)**

Agriscience is meant to give students an opportunity to study science with an emphasis on the world related to agriculture. The course is an in depth study of soils, plants, and animals as well as the environment, food safety and the future of agriculture. Various careers in the agricultural industry will also be explored.

## ***Elective Courses***

### **Welding And Small Engine Technology**

Welding/Small Gas Engines is designed to introduce students to the fundamentals of agricultural mechanics focusing on welding and small gas engines. Students learn basic terminology used in the agricultural mechanics industry, safe work practices, agricultural tools and metal skills. This is a shop/laboratory oriented course that emphasizes basic knowledge and application of shop safety rules and proper uses of tools and materials. SMAW, MIG, TIG, oxyacetylene welding and cutting skills, and principles of small gas engines are learned. Skill and age-appropriate projects are constructed to give students opportunities to apply agricultural mechanics principles. Welding/Small Gas Engines also includes agricultural leadership and employability skills.

### **Art and Design I - (Beginner) (Grades 9-12)**

This course is designed to meet the needs of students who have an interest in enhancing their creativity, knowledge, and range of skills in art and design. Topics that will be covered are: Commercial Art/Graphic Design, Design and Composition, Color Theory and Painting, 3-Dimensional Design, 20<sup>th</sup> Century Art History and drawing and perspective. Emphasis is placed not only on developing skills, but on producing a quality product, problem-solving, and following directions. Students can expect lessons that are structured but allow for ample creativity.

## **Art and Design II - (Intermediate) (Grade 10-12) (Prerequisite: Art and Design I)**

Second course in Art and Design. Differs from the Beginning Course in that a wider range of materials and media will be used and that a higher level of technical skill is expected. Drawing, painting, and both 2- and 3-dimensional design skills will be stressed. Careers in the visual arts will also be explored.

## **Art and Design III and IV - (Advanced) (Grades 11-12) (Prerequisite: Art I and II)**

This course is for students who have a serious interest or advanced skills and have successfully completed both Beginning and Intermediate courses. Topics such as art styles, media, and technique will be explored. Students will be required to display content as well as skill in their work. Students can expect to produce a large amount of work as a means of discovering personal strengths, style, and career direction.

## **3-Dimensional Art - (Grades 10-12) (Prerequisite: Art 4)**

This course will explore the areas of additive and subtractive sculpture, ceramics, architectural and interior design, and package design. A study of surface, form, and function will provide the basis for problem-solving. Students will create functional and nonfunctional products and structures in 3-Dimensional media.

## **Photography**

This course is for students who have a serious interest in taking quality photographs or in exploring it as a career interest. The course will cover: Basic 35mm camera operation and care, photographic composition, creative control of the camera, special effects, layout and display, careers in photography, and shooting color film. **(This is not a darkroom course)**. Limited to 16 students due to camera availability.

## **Video Productions**

This course will provide students with a basic understanding of the video production process.

In this hands-on, cooperative learning environment students will learn each stage of video production, and will master the skills necessary to work with the equipment and software involved in basic digital video production and basic television broadcast. Students will also explore the elements of media, journalistic integrity, copyright law, and basic Cinematography as they complete various projects for the course. Students will develop these skills through a variety of both group and individual projects.

### **Creative Writing - (Grades 10-12)**

This is an elective course designed for students who wish to develop or enhance their creative writing skills. Students will read and analyze various types of prose and poetry models and write their own prose and poetry incorporating the techniques studied. Through constant practice of various literary techniques, students will develop their own writer's voice.

### **Photo-Journalism - (Grades 10-12)**

This course is for students to use photography and journalism techniques to create the school newspaper. Students will work to complete various projects that will incorporate writing assignments, layouts, and photographic techniques. Although photography is not a prerequisite, knowledge of photography will greatly enhance the quality of the finished product.

### **Mythology - (Grades 9-12)**

Students will become acquainted with prominent archetypes and themes through stories drawn from around the world. The course is designed to create awareness of other people's cultural bases and increase both respect for others and an appreciation of our own place in the world. In addition, the course will offer experiences in researching and selecting appropriate tales, organizing information, and planning and performing a dramatic presentation.

### **Drama**

Students shall investigate the basic components of the Dramatic Arts. This may include theater history and important playwrights from different historical periods and their works. Technical topics for investigation may include: acting, lighting, scene design, costuming, and make-up. Whenever possible, a hands-on approach will be utilized with students participating in appropriate lab work. Assignments may include the reading of representative scripts of various types. Mini-productions may be rehearsed and performed.

### **Drama II - (Prerequisite: completion of Drama I)**

This class will focus on the production of minor/major productions. Students will be expected to memorize, rehearse, and perform various types of plays. Both onstage and backstage personnel will be needed

## **Movie Study**

Students will recognize classic film characters, plots, themes, actors, and music and understand allusions to these films in other media. Students will understand the basic language of film and the ways it communicates messages to the audience.

## **Public Speaking**

Open to students in grades 10-12, Public Speaking is an introductory course that explores the traditional formal communication process and aims to help students build confidence speaking in front of an audience. Techniques for practical speech writing, anxiety reduction, and visual aid usage are utilized.

## **Chorus**

This class provides a great opportunity for senior high students to study and perform vocal music. The development of vocal skills and musicianship will be the primary focus of the class and the acquired skills will be put into practice in several performances throughout the year. We will use a wide variety of music to achieve the objectives of this class, from classics to contemporary selections.

## **Concert Band**

Students are provided the opportunity to advance their music talents in an instrumental group situation. The class meets daily, all year, for 40 minutes. Weekly group lessons are provided and required. **Students are strongly encouraged to participate in the other instrumental musical organizations (marching band, jazz band, small ensembles) in the school. However, they are not required to do so to be in Senior High Band.** Since this is a performing group, four graded performances, after school hours, are required. Additional graded performances may be added.

## **Music Appreciation**

This course is designed to give high school students a survey of musical topics and skills for the development of a lifetime appreciation of music. Areas that are covered may include, but are not limited to: Technology and music, Guitar instruction, the historical foundations of Rock N' Roll, modern popular

styles of music and performance aspects of those styles. Size and length of the course will play a big part in the topics covered.

## **History of American Music I and II**

The primary focus is developing the listening capacities of the student by exposing him continually to diverse pieces of contemporary music. The majority of this will be what might be called “popular” music such as rock, folk, country-western, and other forms, as yet unlabeled, but existing within and between these three major forms. The area of jazz and jazz-rock will be explored. Lastly, new experimental styles will be studied that have contributed to the direction of the earlier stated forms. In this group we shall include electronic music for therein, computer, synthesizer, and other electronic instruments. Chance music, improvisation, and multimedia music as well as music for television, films and radio will be explored. The recording industry will also be studied to expose to students what is actually necessary to have a “hit” record from the writing of the song to the million dollar contracts for a film or television show. Musical theater will be touched upon in light of the musical appropriateness of different shows. Great concern will always be exerted in an analysis of the meaning of improvisation as listened to in jazz and other forms.

## **Introduction to Guitar I**

Developing the skills for a lifetime of enjoying the guitar! Students will learn the basics of playing melodies, chords and fingerpicking; learn to read standard notation, tablature and chord symbols; begin to develop a repertoire of songs; and receive information on the purchasing and care of guitars and accessories. This is a 1 semester course and receives ½ academic credit. School guitars are available for daily use and practice, or the student may bring their own guitar.

## **Advancing Guitar (2)**

The advanced guitar class will continue where the introductory course leaves off. Students will learn to play in more advanced chord styles; how to use a capo to transpose songs; barre chords; and more. We will investigate more advanced styles and develop a more sophisticated repertoire. This is a 1 semester course and receives ½ academic credit. Admission to this course must be approved by the instructor to ensure that the student has developed adequate skills for this level.

## **Computer Applications - (Generally taken in 9<sup>th</sup> grade) (Required)**

This course is designed to give the student a fairly thorough background in word processing, database management, and spreadsheet usage. The software used, the platform used, and the material presented will depend on the lab where this course is taken. Numerous projects in each component area will be completed to achieve mastery. Additional topics will be covered time permitting.

## **Computer Programming - (Grades 10-12)**

This course is designed to help develop the student's logical thinking and problem solving skills. The concepts introduced in the literacy course will be greatly expanded. The computer language presently used is True BASIC, designed by the same two authors of the original BASIC. The student will write computer programs to solve a variety of problems using If/Then statements, For-Next loops, DO loops, single and double dimension arrays, counters, and sums, as well as various input and output commands. The students will be introduced to Hypercard stacks and will learn navigation using programmed buttons (similar to a link on the web).

## **IOS Applications Development - (Prerequisite: Pass Algebra I with at least a "C" and completion of Intro to Computer Programming)**

IOS App Development using Swift and Xcode introduces students to computer science topics such as problem solving, design and methodologies. By the end of the course, students will have designed and created their own basic apps that can run on an iPhone or iPad. Swift is an open-source, relatively new programming language designed to build IOS and OS X apps that builds on the best of C and Objective-C, without the constraints of C compatibility. The language is much easier to learn than C languages and shares a lot of syntactical similarities with Java language. Xcode is an incredibly productive environment for building amazing apps for Mac, iPhone, and iPad.

## **AP Computer Science - (Prerequisite: Pass Algebra I with at least a "C" and completion of Intro to Computer Programming)**

AP Computer Science A is equivalent to a first-semester, college level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object oriented imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science course curriculum is compatible with many CS1 courses in colleges and universities.

## **Keyboarding I - (Grades 9-12)**

Keyboarding is intended for all high school students, grades 9-12. This introductory course is designed to develop the student's skills developed in 7<sup>th</sup> Grade Keyboarding. Students improve their ability to do touch typing for personal and business use. Emphasis is on improving keyboarding speed and accuracy,

as well as developing skills in formatting various business documents. Students will also encounter proofreading, language arts, and decision-making activities.

### **Keyboarding II - (Grade 10-12) (Prerequisite: Keyboarding I)**

Keyboarding II is intended for those students in grades 10-12 to review the basic keyboard reaches and function keys to reinforce correct typewriting posture and habits, to attain a higher degree of straight copy and statistical typewriting skill, and to be introduced to more sophisticated formats, documents and column layouts.

### **Accounting I - (Grades 10-12)**

Accounting is intended for all high school students. The how and why of the accounting process and business finances are covered. The keeping of records for a service business and a merchandising business are emphasized. Accounting I is taught to prepare a student for employment, post-graduate study, or personal use.

### **Accounting II - (Grades 10-12) (Prerequisite: Accounting I)**

Accounting II is intended for those students who wish to further their accounting skills. Accounting II is a vocational and career-oriented course for the student who wishes to make a career in an area requiring bookkeeping and accounting. As a future proprietor or manager, the student learns more about business procedures and business records so he/she can maintain, direct, or interpret financial data.

### **Business and Marketing - (Grades 10-12)**

This course is designed to introduce students to the tools used in sales and marketing to attract and maintain customers. Emphasis is on hands-on activities involving the sports, entertainment, automotive, and recreation industries. Some of the concepts learned will be the importance of branding, promoting, selling, and supporting products to meet customer needs. Students will learn how sales and marketing work together to improve customer satisfaction and increase profits.

### **Drafting Technology I**

Drafting is designed to accelerate student learning in order to keep pace with the expansion of subject matter in the drafting field. A broad foundation of the subject matter is stressed. Areas of study include career planning, lettering, measuring, sketching, use and care of instruments, projection, auxiliary views, sectional views, pictorial drawings, surface developments and computer-assisted drafting.

## **Drafting Technology II (Prerequisite: Drafting I)**

Drafting II is designed to stimulate the student's thinking and problem-solving ability. Problems are arranged in a sequence according to level of difficulty. Areas of study include those of Drafting Technology I, plus assembly drawings, dimensioning, fasteners, technical illustration, and computer-aided design and drafting.

## **Pre-Engineering**

A relationship exists between design and engineering. The critical thinking, problem solving, and decision-making of engineering first requires creative thinking and the use of technology to design innovative solutions.

## **Diversified Technologies - (Grade 9)**

The student will be exposed to a variety of technology experiences in the manufacturing and communication areas. The introduction of manufacturing systems will involve the students in the different aspects necessary to understand how the manufacturing process works in the development of new products. Knowledge about materials, processes, management, automation and business organization will be covered in the manufacturing portion. In communications, students will be involved in the use of current drafting technologies and how it relates to manufacturing and construction methods.

## **Power and Structure I - (Grades 10-12)**

Students will combine prior knowledge and experiences with new exposure to machine woodworking operations and methods. Students will be assigned projects with specific size and limitations. The student will be involved in the entire manufacturing process: research, design, drawing, planning, and construction of his/her own individualized project. With this approach, the student has a chance to progress at his/her own rate and to exercise his/her own desires.

Students will be expected to pay for a portion of their total project prior to beginning of the project. The balance of payment for the project will be due upon completion and removal of the project from school property.

## **Power and Structure II - (Grades 11-12) (Prerequisite: Wood I)**

Course content will be the same as Wood Technology I, since these courses are taught in a combined class. The students at this level will be given more responsibilities and will be expected to perform at a higher level of proficiency. Students will combine prior knowledge and experiences with new exposure to machine woodworking operations and methods. The student will be involved in the entire manufacturing



process: research, design, drawing, planning, and construction of his/her own individualized project. With this approach, the student has a chance to progress at his/her own rate and to exercise his/her own desires.

Students will be expected to pay for a portion of their total project fee prior to the beginning of the project. The balance of payment for the total project will be due upon completion and removal of the project from school property.

### **Power and Structure III - (Prerequisite: Wood II with a 73%)**

Course content will be the same as Wood Technology II, since these courses are taught in a combined class. The students at this level will be given more responsibilities and will be expected to perform at a higher level of proficiency. Students will combine prior knowledge and experiences with new exposure to machine woodworking operations and methods. The student will be involved in the entire manufacturing process: research, design, drawing, planning, and construction of his/her own individualized project. With this approach, the student has a chance to progress at his/her own rate and to exercise his/her own desires.

Students will be expected to pay for a portion of their total project fee prior to the beginning of the project. The balance of payment for the total project will be due upon completion and removal of the project from school property.

### **Manufacturing**

Exploring Manufacturing is designed for a first course in manufacturing. The text describes the types of materials from which manufactured products are made, and explains management activities and responsibilities in the manufacturing industry. Detailed explained of the secondary manufacturing processes of casting and molding, forming, separating, conditioning, assembling, and finishing. Topics include designing and engineering products, developing production systems, marketing products, performing financial activities, career opportunities and more.

### **Welding/Small Engines - (Grades 11-12)**

Welding/Small Gas Engines is designed to introduce students to the fundamentals of agricultural mechanics focusing on welding and small gas engines. Students learn basic terminology used in the agricultural mechanics industry, safe work practices, agricultural tools and metal skills.

Welding/Small Gas Engines is a shop/laboratory oriented course that emphasizes basic knowledge and application of shop safety rules and proper use of tools and materials. SMAW, MIG, TIG, oxyacetylene welding and cutting skills, and principles of small gas engines are learned. Skill and age-appropriate projects are constructed to give students opportunities to apply agricultural mechanics principles. Welding/Small Gas Engines also includes agricultural leadership and employability skills.

## **Family and Consumer Science - (Grades 9-10)**

Increase student knowledge of the four content areas of FACS curriculum. Balancing Family, Work, and Community; Financial and Residence Management; Child Development; Food Science and Nutrition. Students will be able to demonstrate and develop the skills necessary for the 21<sup>st</sup> century by integrating math, science and language arts through hands-on activities which reinforce through application.

## **Consumer Education - (Grade 10-12)**

Comprehensive course for grades 9 to 12. Topics to be covered will be: building a foundation for life, improving relationship skills, enhancing personal well-being, using consumer skills, making food choices and foreign foods. Students will understand the economy, manage personal and family finances and make informed buying decisions. Demonstrate knowledge of issues of credit use; on-line banking; bill payments and banking basics; identity theft and investment options.

## **Culinary Arts I - (Grades 11-12)**

Culinary Arts is offered for students who are looking towards a career in the food service industry. Lab experiences will be a critical part of the course. Students will explore basic professional cooking principals, management techniques and procedures used in restaurants and food service facilities.

## **Culinary Arts II - (Grades 11-12)**

Students will increase their understanding in the areas of food choices and nutrition and meal planning; focus on food preparation and kitchen basics including kitchen tools, food safety, and sanitation; understand the relationship between geographic location and history of a region to the cuisine of various cultures; demonstrate competency in a variety of food preparation areas; and participate in hands-on food labs and unit projects.

## **Baking & Pastry Arts - (Grade 12) (Prerequisite: Culinary Arts I with a grade of 73%)**

This course is designed to provide students a foundation for the successful understanding and execution of baking recipes and techniques. It will build upon prior knowledge and serve as an inspiration for new ideas and challenges.

Students will learn the basics of mixing, shaping and baking for several baked goods including quick breads, yeast breads, cakes, pastry doughs, mousses, sauces, glazes, cookies, candies and confections.

Additionally, the opportunity to obtain the Serv Safe Food Handler certification will form the basis for safe food handling and give students an industry-wide certification.

## **Child Development - (Grades 11-12)**

Increase student knowledge in the areas of physical, emotional, social and intellectual development at the various stages of child development; describe the decisions and preparations parents must make for the needs of their children; describe the changes that affect a woman and fetus during pregnancy; and outline the causes, symptoms, and treatments of various childhood illnesses. Students must be 16 years old (a Pre-K Counts requirement), have a current physical and TB test, and 2 letters of recommendation. For 18 year olds, Criminal History and State Police clearances are also required.

### **Personal Finance - (Grades 11-12)**

Students will apply financial goals to personal life; create a spending plan/budget; provide realistic insight into cost of living as associated with spending plans process; incorporate use of decision making into daily life; demonstrate the relationship between income and education.

### **Textiles - (Prerequisite: Family & Consumer Science)**

Students will combine prior knowledge and experiences with new exposure to the textile industry. Students will be assigned projects with specific sizes and limitations. The student will analyze and evaluate the characteristics of textile components, utilize the elements and principles of design in designing, construction, and/or altering textiles, fashion, and apparel, explain the roles and functions of individuals engaged in textiles, fashion, and apparel careers, and analyze opportunities for employment and entrepreneurial endeavors. Students will be involved in the entire manufacturing process: research, design, drawing, planning, and construction of his/her own individualized projects.

### **Spanish I**

Spanish I is an introduction of the Spanish language and the Hispanic culture. Mastery of basic vocabulary and structures are acquired through example and actual use. Emphasis is on communicating in Spanish in real-life situations. All four language skills (listening, speaking, reading, and writing) are practiced. As the year progresses, Spanish is increasingly used as the language of instruction.

### **Spanish II - (Prerequisite: Spanish I)**

Spanish II continues Spanish I's objective of developing a basic grasp of the language for real-life circumstances. All four language skills are practiced. Most classroom communication will be in Spanish, with English used for occasional clarification. Emphasis remains on actual communication, along with vocabulary and further investigation of the Hispanic culture.

### **Spanish III - (Prerequisite: Spanish II)**

The goal at this level is to further increase fluency in Spanish, using the “Target Language” as much as possible. Discussions and instruction will be almost exclusively in Spanish. All four language skills are practiced. Students will become more familiar with the culture of Spanish-speaking countries.

### **Spanish IV - (Prerequisite: Spanish III)**

Students’ functional level of fluency allows them to communicate almost entirely in Spanish. There will be a concentration on longer, more complex pieces of literature, songs, and video arts to practice language skills and deepen their understanding of Hispanic culture and history.

### **German I**

This course introduces the German speech sounds and vowel combinations. Sentence structure patterns are introduced in sequence through oral exercises and dialogues. Oral and written drills on vocabulary and basic speech patterns move in progression toward mastery of basic grammatical concepts. The emphasis in this course involves oral comprehension, speech, and basic writing skills of the target language. Culture is discussed on an ongoing basis—each chapter contains a culture section. Maps, posters, film strips, and any authentic German articles are used to enrich the learning environment.

### **German II - (Prerequisite: German I)**

This course is a continuation of German I. More emphasis is placed on culture.

### **German III - (Prerequisite: German II)**

German III is a continuation of materials from German II. Students are expected to increase proficiency in oral comprehension as well as the ability to speak the German language. Cultural information includes more information on German history, as well as short articles written by German authors. Information is given on different dialects spoken. Current events as they occur are related and discussed, i.e., the deployment of Pershing and cruise missiles in West Germany, German reunification, and economic reforms as they relate to the 90’s.

### **German IV - (Prerequisite: German III)**

This course is a continuation of German III. This entire course is taught in the target language. This includes the review at the beginning of the semester. Emphasis is placed on vocabulary expansion (including idiomatic expressions); historical personalities from the areas of politics, art, music, and sports; and contemporary individuals. Discussions compare and contrast various aspects of German/American life.

### **Physical Education - (1/2 credit in grades 9 and 11, full credit during 10<sup>th</sup> grade and 12<sup>th</sup> grade)**

The students will receive instruction in the areas of team, individual and life-time sports. They are encouraged to participate in group activities which help to enhance their physical development and coordination ability.

### **Health Education - (1/2 credit in grades 9 and 11)**

This course is designed to aid students in evaluating their own health knowledge and behavior so they are better equipped to face the critical health issues of today. Students will look closely at their own lifestyles, learn skills to change negative behavior, and set goals for improving their well being. Students will participate in simple experiments, self-inventories, and projects related to topic areas.

### **EMT - (Grade 11-12)**

This course is designed to introduce students to the information and skills required of an EMR or EMT-Basic. After successful completion of this program, the student should be able to perform the following functions:

1. Recognize the nature and seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care.
2. Suggest how to administer appropriate emergency medical care based on assessment findings of the patient's condition.
3. Demonstrate how to lift, move, position and otherwise handle the patient to minimize discomfort and prevent further injury.

Once the student completes this course, he/she will have been exposed to the knowledge and skills that are required to enroll in an emergency medical technician (EMT) or emergency medical responder (EMR) course taught by a certified instructor. This course **does not** qualify you to take a certification exam or apply for a state licensure.

## **CRAWFORD COUNTY CAREER AND TECHNICAL SCHOOL OFFERINGS**

### **Auto Collision Technology (3)**

This course includes instruction in the removal of dents, repair of rusted or damaged panels, Replacement and installation of parts and accessories, preparation and refinishing of spot repairs, complete auto painting and refinishing, straightening of frame structures.

### **Automotive Technology (3)**

This NATEF certified course provides instruction in the diagnosis, repair and adjustment of problems related to gasoline powered motor vehicles.

The Automotive Technician must determine what tools and parts are necessary to repair the car, estimate the cost of repair, and discuss the entire situation with the customer before finally making the appropriate repairs.

### **Carpentry (2)**

Carpenters make up one of the largest groups of skilled workers in the nation's labor force. They deal with the construction of buildings, using assorted materials such as metal, wood, stone, brick, glass, or concrete. Instruction is provided in the basic skills of carpentry, masonry, and a variety of activities associated with building construction, such as cost estimating, cutting, fitting, fastening, and finishing various materials. Students will use a variety of hand powered tools, learn print reading, follow technical specifications, and acquire knowledge concerning the physical properties of materials.

### **Commercial Art (2)**

The Commercial Art program at the Crawford County Career and Technical Center is a 2 year program that seeks to provide area students with the foundational skills that are required for dozens of occupations within the communication arts. It is now a requirement for future commercial designers to obtain a college degree within their chosen discipline. While it may be assumed that computer and technology skills are most important, this is actually anything but the truth.

Having a solid foundation in visual acuity as evidenced through drawing skills is what is most highly sought after by design schools and employers. The program focuses on attaining mastery in drawing, value study, composition, color theory, and creative thinking over dabbling in computer art. While students will gain valuable computer skills, often on a higher level than is taught at State University programs, the philosophy of our program is that computer skills are meaningless without the student approaching these tools as an artist.

Our success speaks for itself. Please take the time to look through the CA website and see if you don't agree that 2 years in this program is an uncommon opportunity for you to launch a career as visual communicator.

### **Computer Information Sciences (3)**

Computer and Information Sciences program is designed to prepare students to repair & maintain computers and to achieve their CompTIA IT Fundamentals and CompTIA A+ certifications. These nationally known certifications are vendor neutral and are recognized by major companies worldwide. Their focus is on PC hardware and software repair, and networking. The students will gain knowledge of how to perform tasks such as installations, configuration, diagnostics, and preventative maintenance of a PC. Students learn the skills through hands on activities, research projects, and textbook assignments. The network portion focuses on the features and functions of networking components, and installing, configuring and troubleshooting basic networking hardware and services.

### **Cooperative Education (2)**

Cooperative Education (Co-op) is a method of training whereby the student combines classroom instruction with on-the-job training in a career area of his/her choice. It is a unique plan of education designed to integrate classroom study with planned, supervised, practical work experience. "Learning by doing" is the key to Cooperative Education. The program helps students relate schoolwork to actual "real world" employment.

### **Cosmetology (3)**

Is a career in Cosmetology for you? Consider these vital characteristics:

- Are you creative?
- Do you enjoy working with your hands?
- Do you place a value on things like attractive appearance, stylish hair, neat fingernails?
- Are you always striving for improvement?
- Do you want a career with a future but do not plan to attend a 4 year college?
- Do you ever dream of owning your own business?

If your answer is yes to most of these questions, then Cosmetology could be for you.

### **Culinary Arts and Restaurant Management (3)**

The Culinary Arts & Restaurant Management course provides theory and practice for food preparation and service required for success in the food service industry. Students learn how to operate and care for kitchen equipment, prepare and serve food, plan menus and a variety of skills required to operate and maintain a restaurant. Students practice their serving techniques at the on-site restaurant. Participants have the opportunity to achieve multiple national certifications.

### **Diesel Technology (3)**

The Diesel Technology course prepares students for the future by including the study of small engine technology along with the training in diesel service and maintenance. The course offers training in all areas of mechanics including diagnosis, overhaul and maintenance for automotive, agricultural, trucking and recreational vehicles. Students are able to train, test and qualify for the PA State Inspection License. All this adds up to an exciting and valuable training opportunity for the future mechanical technician.

### **Diversified Occupations - CO-OP (senior)**

This is a unique educational program designed to integrate classroom study in employability and life skills with planned, supervised and practical work experience. Students are supervised by the CTC Co-Op coordinator. Students must work at least 15 hours during the work week and can earn up to 4 credits.

### **Drafting and Design Technology (3)**

Drafting & Design provides students with a thorough technical knowledge of the principle methods by which CADD operators, draftspersons, technicians, and designers communicate with those who fabricate material. The course stresses the relationship between theory and practice. The student learns application of principles that provide entry level skills and "hands-on" experiences on the drafting board and CADD. The course concentrates on communication, leadership skills, positive work attitude, self-discipline and safety. All this aids the students' transition to the world of work or college. Articulation agreements with area colleges provide proficient students with advanced placement credits.

### **Early Childhood Education (2)**

Child care workers look after young children when parents are at work or cannot be with their children for other reasons. They do many of the things parents do. Those caring for infants and toddlers follow a routine of basic care; feeding, bathing, diapering, play and comfort. Those working with older preschool children take care of their basic needs and also plan and carry out programs which stimulate their physical, emotional, intellectual and social growth. Child care workers ensure that the children's basic physical, psychological, social and emotional needs are met. They are also concerned about children's health and nutrition.

### **Electrical Occupations (2)**



Electrical equipment is increasingly important in our high-tech society. There are numerous opportunities for individuals who would like to enter the electrical field. Electrical equipment technicians install, maintain, and repair the equipment found in factories, business offices, hospitals, schools, stores, and homes. The Electrical Occupations course will provide an opportunity for students to obtain an understanding of the many careers that involve electricity and electrical theory.

### **Electronic Technology (3)**

Trained personnel in the Electronics Industry design, develop, fabricate, install and service electronic equipment. The classroom, along with related laboratory experiences, form a trained foundation for personnel in Electronics. Electronic personnel usually specialize in one type of equipment or one area of industry. Some of these specialties are: Radio and TV broadcasting, aviation navigation & instrumentation, telephone equipment, medical monitoring and measurement, industrial process control & automation, communications equipment, computers and radar.

### **Health Occupations (2)**

The Health Occupations Program is designed to offer the foundation of knowledge and skills necessary for a career in the health field. A combination of classroom instruction and hands-on application prepares students for employment in this field. Students also learn clinical skills that are applicable toward the state-tested nurse aide exam. In addition, they receive education on the characteristics and expectations of a health care worker.

### **Landscape and Turf Grass Management (2)**

Our Horticulture based curriculum is structured to provide students with an entry-level background in plant, soil, and environmental sciences. In addition, we provide basic training in landscape and hardscape design, shop practices, greenhouse production, turf management and pesticide safety. Students will learn how to put their knowledge and skills together to create landscapes, gardens, ponds, patios, greenhouse products and more. This acquired knowledge, coupled with the mastery of many hands-on skills, prepares them for a lifelong career and passionate future in the green industry.

### **Precision Machining (3)**

Precision Machinists are highly skilled workers who provide tools, molds and special guiding and holding devices that are used to mass-produce a variety of metal and plastic parts. Machinists set up and operate all types of basic and advanced machine tools using precision measuring instruments. Through our program, students gain a basic understanding of machine tools, measuring instruments, metals and blueprint reading to prepare them for entry level positions in manufacturing. Their desire for continuing education and willingness to learn puts them at a distinct advantage in this rapidly evolving industry.

### **Welding (3)**

Today's Welders must be able to do many kinds of welding. Students in the welding program gain a solid background in the theory and "hands-on" experience which meet today's employers' needs. Students learn through a competency based program which includes theory and blueprint reading. Safety is

stressed in all areas of welding. Fabrication skills are experienced by completion of projects and related school work-orders.

## Dual Enrollment Opportunities

**Dual Enrollment** courses can be taken for college credit and CASH elective credits. They will appear on the high school transcript. University transcripts are provided from the colleges for students to use with their future academic institutions.

**Allegheny College** offers an Early Access Program for academic seniors with a GPA of 3.5 or higher. Interested students attend a meeting at CASH with the Allegheny admissions representative and complete an application in the spring of Junior year. After being accepted, they are offered course choices at the end of the summer based on availability. They attend courses on the college campus. Transportation is not provided by the district. Students' CASH schedules are built around the time that they are at the college. This program has no tuition cost.

**RCI (Rural College Initiative)** - Offers college courses at the Crawford County Career and Technical Center. Courses will be taught by professors from either Gannon or Edinboro University. Course offerings vary each semester. Juniors and Seniors can meet with a Counselor to fill out an application and discuss the current course offerings. Students can take one or two courses per semester. Transportation is provided. This program is at a discounted tuition rate.