

WESTERN WAYNE HIGH SCHOOL



COURSE SELECTION GUIDE

2024-25

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*****Courses, course availability and course requirements may be subject to change*****

*****Some content area courses may align with Industry Standards. Through these courses, students will have the option to earn certifications. Certification fees may apply.*****

GUIDANCE

The purpose of the Guidance Program is to help individual students throughout the school year. Since the school is preparing students to take their place in the world of work, or continued education, one major function is to assist students in selecting courses which are best suited to their needs, abilities, and interests. Information is available in the Guidance Office regarding various occupations, part-time and summer jobs, as well as the armed services.

School counselors assist students with course selections and vocational/educational planning. Counselors help students improve their study habits and counsel them regarding personal problems.

Students who need to see their school counselors must make appointments through the guidance secretary. This should not be done during class time unless it is an emergency.

PROMOTION AND GRADUATION

All students MUST select a career path each year and schedule prescribed courses within the program. Students must carry a minimum of 7 credits per year. Students are required to pass 22.5 credits to graduate.

The following courses are required:

English.....	4 credits (including American Literature)
Social Studies	4 credits
Math	3 credits (including a minimum of Algebra I - can be achieved through Algebra A /Algebra B)
Science	3 credits (one of which must be Biology)
Physical Education	4 years
Health	½ credit
*Career Explorations	½ credit
*Personal Finance.....	½ credit
Keystone Exams	Successful completion of Algebra, Biology, and Literature Keystone Exams or satisfying an ACT 158 Pathway

*Students must take this course, but it is not a graduation requirement.

WEIGHTED GRADING

The Western Wayne High School has chosen to reward students for taking more challenging courses. Students who take the following courses will receive a 5% or 3% weighted grade.

Art Department

** 963 – Advanced Studio Art

English Department

** 130A- English 9 Honors
** 140A- American Lit. Honors
** 155A- Multi-Cult. Lit. Honors
** 166A- British Lit. Honors
* 156- AP Eng. Lang. & Comp.
* 165- AP Eng. Lit. & Comp.

Foreign Language Department

*365-AP Spanish Lang. & Cult.

*= 5% Weight

**= 3% Weight

Mathematics Department

**430- Geometry Honors
**440- Algebra II Honors
**453- Statistics
**460- Calculus
*450A- AP Pre-Calculus
*465- AP Calculus

Social Studies Department

**230A- Amer. Cults. II Honors
*240A- AP U.S. History
*255- AP World History
*262- AP Psychology
*265- AP U.S. Govt. & Politics

Science Department

**541A- Inq. Bio.w/Lab Honors
**551A- Chem. w/Lab Honors
**556A- Anat. & Phys. Honors
*563- AP Biology w/Lab
*565- AP Chemistry w/Lab
*570- AP Physics 1:Alg-Based
*571- AP Physics 2:Alg-Based

Technology Department

**754- Auto Tech. III
**772- Manuf. Tech. III

Note: The grade that is represented on the student's report card DOES NOT INCLUDE the attached weight of 5% or 3%. The computer program that runs our grading system will automatically add the 5% or 3% and calculate the WEIGHTED GRADE into the student's cumulative grade point average. EXAMPLE: A student who earns a "97%" in AP Government would have an additional 4.85 points (which is 5% of the grade) added to his or her quarter average. Therefore, a grade of 101.85% would be calculated into the cumulative grade point average.

Keystone Exam/State Graduation Requirements

Western Wayne School District (WWSD)

The purpose of this document is to describe the pathways available for students to meet Keystone Exam/Pennsylvania state graduation requirements as outlined in Act 158 of 2018 while adhering to federal participation requirements outlined in the amended Elementary and Secondary Education Act of 1965. These pathways apply to the graduating Class of 2023 and beyond.

Typical Sequence to Meet Keystone Exam/State Graduation Requirements

Based on the typical course sequencing of high school courses, WWSD will utilize the following process to meet federal participation requirements and ensure access to all options for students to meet state graduation requirements.

- 1] Students will participate in Keystone Exams at the conclusion of trigger courses for the Algebra I, Biology and Literature Keystone Exams.

- 2] Students who pass their Keystone trigger courses but are not proficient on the Keystone Exams may retake the exams during the winter wave of testing.

- 3] At the conclusion of their sophomore year and participation in all three Keystone Exams...students, parents, school counselors and administration will determine the best course of action for individual students to meet the state graduation requirements based on five possible pathways.

Keystone Exam/State Graduation Requirements outlined in Act 158

Described below are the five pathways for meeting state graduation requirements as outlined in Act 158. This information is also located in the following links:

[Act 158: PA State Graduation Requirements](#)

[PA Statewide High School Graduation Requirements](#)

[Act 158 Pathway Graphic](#)

[Pathways to Graduation Guide to Meeting Statewide Requirements for High School Graduation](#)

Keystone Exam State Graduation Pathways

1] Keystone Proficiency Pathway - based on Keystone Exam Scores.

All of the following apply to a student:

- Proficient or Advanced on the Algebra Keystone Exam
- Proficient or Advanced on the Biology Keystone Exam
- Proficient or Advanced on the Literature Keystone Exam

2] Keystone Composite Pathway - based on Keystone Exam Scores.

All of the following apply to a student:

- Composite score of 4452 or higher on all 3 Keystone Exams
- Proficient or Advanced on at least one of the Keystone Exams
- Basic, Proficient or Advanced on all 3 of the Keystone Exams
- C-Proficient (non-numeric), in a Keystone Exam and Achieved a Keystone composite score of 2939 or higher for two Keystone Exams

3] Alternate Assessment Pathway - provides options to demonstrate proficiency through tests such as the SAT, PSAT, ASVAB, AP Exams, IB Exams, college level coursework, PA Dept. of Labor and Industry approved pre-apprenticeship programs, or acceptance into a 4-year non-profit institution of higher education.

All of the following apply to a student:

- Receive a passing grade in the academic course associated with the Keystone Exam for all subjects where the student did not earn proficiency on the Exam.
- Attain the established score on an approved alternate assessment for each subject where the student did not earn proficiency.

OR

- Successfully complete a concurrent enrollment course (dual enrollment & college in the high school) in an academic content area associated with each Keystone Exam in which the student did not achieve proficiency.

OR

- Successfully complete a pre-apprenticeship program that is registered with the Director Apprenticeship and Training Office, PA Dept. Of Labor and Industry. **OR**
- Be accepted in an accredited 4-year nonprofit institution of higher education and have evidence of the ability to enroll in college-level coursework.

Established Scores for the Alternative Assessment Pathway	
SAT	1010
PSAT	970
ACT	21
AP Exam	3
IB (International Baccalaureate) Exam	4
ASVAB (Armed Services Vocational Aptitude Battery)	minimum score to gain admittance to a branch of the armed services in the year the student graduates (31 is current accepted score)

Keystone Exam equivalent AP Courses (score of 3 for Alternative Assessment Pathway)		
Algebra Equivalent	Biology Equivalent	Literature Equivalent
AP Calculus AB	AP Biology	AP English Language and Composition
AP Calculus BC	AP Chemistry	AP English Literature and Composition
AP Computer Science A	AP Environmental Science	
AP Computer Science Principles	AP Physics 1: Algebra-Based	
AP Statistics	AP Physics 2: Algebra-Based	
AP Physics 1: Algebra-Based	AP Physics C: Electricity and Magnetism	

AP Physics 2: Algebra-Based	AP Physics C: Mechanics	
AP Physics C: Electricity and Magnetism		
AP Physics C: Mechanics		
AP Chemistry		

4] Career and Technical Education Pathway - provides an option for students who earned an industry-based competency certification, primarily through full-day CTC programs.

All of the following apply to a student:

- Receive a passing grade in the academic course associated with the Keystone Exam for all subjects where the student did not earn proficiency on the Exam.
- Attain an industry-based competency certification related to the student’s CTE program of study.

OR

- Demonstrate a high likelihood of success on an approved industry-based competency assessment or readiness for continued meaningful engagement in the student’s CTE program of study.

5] Evidence-Based Pathway - provides an option for students to provide multiple pieces of career readiness evidence compiled from their high school career.

All of the following apply to a student:

- Receive a passing grade in the academic course associated with the Keystone Exam for all subjects where the student did not earn proficiency on the Exam.
- At least one piece of evidence from the following:
 - a) Attainment of an established score on an alternative assessment
 - b) Acceptance to an institution of higher education, other than a 4-year accredited non-profit institution of higher education
 - c) Attainment of an industry recognized credential
 - d) Successful completion of concurrent enrollment or post-secondary (dual enrollment & college in the high school) course
- At least two pieces of evidence from the following:
 - a) Service-Learning Project completion
 - b) Proficient or Advanced on a Keystone Exam
 - c) Letter guaranteeing full-time employment
 - d) Internship or Cooperative Education Program
 - e) Compliance with NCAA’s core courses for college-bound athletes by having minimum GPA of 2.0 in approved NCAA core courses

Established Scores for the Evidence-Based Pathway	
ACT WorkKeys	Silver Level
SAT Subject Test	630
AP Exam	3
IB (International Baccalaureate) Exam	3

Students with Disabilities

A student with a disability who satisfactorily completes a special education program developed by an individualized education program (IEP) team under the Individuals with Disabilities Education Act (IDEA) and 22 Pa. Code Ch. 14 (relating to special education services and programs) that does not otherwise meet the requirements of this section shall be granted and issued a regular high school diploma by the student's school entity.

Exceptions

A chief school administrator may grant a waiver of the requirements for demonstrations of proficiency on the Keystone Exams or alternative graduation requirements for a student in grade 12 or to accommodate a student who experiences extenuating circumstances (e.g., serious illness, death in the student's immediate family, family emergency, frequent school transfers, or transfer from out-of-state in grade 12).

Each student granted a waiver under this subsection shall complete locally established, grade-based requirements for academic content areas associated with each Keystone Exam.

Pennsylvania Pathways to Graduation

Keystone Proficiency Pathway *Numeric or Non-Numeric Scores*

Algebra I
Proficient or Advanced

Biology
Proficient or Advanced

Literature
Proficient or Advanced

Keystone Composite Pathway *Numeric Scores Only*

At least 1 Keystone Exam scaled score is
1500 or Greater

No Keystone Exam score is
Below Basic

The Keystone Exam 3-score composite is
4452 or Greater
The Keystone Exam 2-score composite is
2939 or Greater
(where eligible under §121.1)

CTE Concentrator

Meet locally established, grade-based requirements for Keystone content in which the student is less than Proficient

CTE Concentrator

1 Artifact from pathway criteria

Alternative Assessment

Meet locally established, grade-based requirements for Keystone content in which the student is less than Proficient

Alternative Assessment

1 Artifact from pathway criteria

Evidence-Based Pathways

Meet locally established, grade-based requirements for Keystone content in which the student is less than Proficient

Evidence-Based

3 Artifacts from pathway criteria

Waiver

A student in 12th grade, or experiencing extenuating circumstances, who meets locally established grade-based requirements for Keystone content area(s) in which the student is less than proficient, and is unable to satisfy the requirements of a graduation pathway may be granted a waiver by the chief school administrator.

Individualized Education Plan

A student with a disability who is unable to satisfy pathway requirements but who satisfactorily completes a special education program is granted a diploma under Title 22 §4.24.

NOTE: Although this infographic displays a sequential progression, students may fulfill criteria under the CTE Concentrator, Alternative Assessment, or Evidence-Based Pathways prior to demonstrating proficiency in Keystone academic content through Keystone Exam scores or locally established grade-based requirements.

Pathway Criteria

CTE Concentrator	Alternative Assessment	Evidence-Based
<p style="text-align: center;">1 Artifact</p>	<p style="text-align: center;">1 Artifact</p>	<p style="text-align: center;">3 Artifacts consistent w/student goals ONE or more from Section One No more than TWO from Section Two</p>
<p>Industry-based competency certification</p> <hr/> <p>Likelihood of industry-based competency assessment success</p> <hr/> <p>Readiness for continued engagement in CTE Concentrator program of study</p>	<p>Attainment of one alternative assessment score or better: ACT (21), ASVAB AFQT (31), PSAT/NMSQT (970), or SAT (1010)</p> <hr/> <p>Attainment of Gold Level or better on ACT WorkKeys</p> <hr/> <p>Attainment of 3 or better on AP Exam(s) related to each Keystone content area in which less than Proficient</p> <hr/> <p>Attainment of 4 or better on IB Exam(s) related to each Keystone content area in which less than Proficient</p> <hr/> <p>Successful completion of concurrent enrollment course(s) related to each Keystone content area in which less than Proficient</p> <hr/> <p>Successful completion of a pre-apprenticeship program</p> <hr/> <p>Acceptance into accredited, non-profit Institution of Higher Education (IHE) 4yr program for college-level coursework</p>	<p style="text-align: center;">Section 1</p> <hr/> <p>Attainment of 630 or better on any SAT Subject Test</p> <hr/> <p>Attainment of Silver Level or better on ACT WorkKeys</p> <hr/> <p>Attainment of 3 or better on any AP Exam</p> <hr/> <p>Attainment of 3 or better on any IB Exam</p> <hr/> <p>Successful completion of any concurrent enrollment or postsecondary course</p> <hr/> <p>Industry-recognized credentialization</p> <hr/> <p>Acceptance into accredited, non-profit Institution of Higher Education (IHE) for college-level coursework in an other-than-4yr program</p> <hr/> <p style="text-align: center;">Section 2</p> <hr/> <p>Attainment of Proficient or Advanced on any Keystone Exam</p> <hr/> <p>Successful completion of a service-learning project</p> <hr/> <p>Letter guaranteeing full-time employment or military enlistment</p> <hr/> <p>Completion of an internship, externship, or cooperative education program</p> <hr/> <p>Compliance with NCAA Division II academic requirements</p>

Career and Technical Education (CTE)

Career and Technical Education (CTE) is a broad term for a course of study that combines academic courses with those focused on developing technical skills and knowledge that are needed in today's labor market. CTE courses are designed to offer students the opportunity to obtain credentials that certify them in real-world, workplace competencies. These credentials make students immediately employable, without having to rely on post-secondary study to join the workforce. Many of the credentials also support student resumes and applications to post-secondary schools, including traditional four-year degree programs. Enrolling in CTE courses may lead to pre-apprenticeship programs, counting as post-secondary school credits or immediate job placement after 12th grade graduation.

In addition to our own Western Wayne High School course offerings, we have the unique and beneficial opportunity of a consortium agreement with Honesdale High School and Wallenpaupack Area High School. This means that a select, specific student with interests in CTE beyond what Western Wayne High School offers, may be accepted as a student in a program offered by the other two high schools at no charge.

Western Wayne is officially launching our very first **CTE course of study in Computer Science and Programming** starting in the 2024/2025 school year. We are proud to be classified as a Cisco Certified Networking Academy, with one of the only Pennsylvania certified Computer Science teachers in the Commonwealth. Our four-year course of study is robust and technically matched with the skills and knowledge required not only for a career in Information technology (IT), Network Administration, Computer Programming, and Cybersecurity, but as credentials for working with technology in just about any career field that exists, today and in the future. There are no prerequisites to take each grade level class. Western Wayne truly believes that we are serving our students, through this program, with the very best, practical, universal CTE programming. A student who participates in all four years of the Computer Science and Programming course of study will have the opportunity to test for more than eight industry recognized credentials. We encourage you to read the course descriptions of these classes and consider the impact they may have on employment, resume building, post-secondary education, and real-world, technology-based skill sets.

Availability in Programs Each school has a predetermined number of seats that will be offered to the other high schools students. Please see the chart below for possible available programs.

Host School	Program
Wallenpaupack	Aviation
Wallenpaupack	Automotive
Wallenpaupack	Building Trades
Wallenpaupack	Child Care
Wallenpaupack	Culinary Arts
Wallenpaupack	Engineering
Wallenpaupack	Exercise Science/Sports Medicine
Wallenpaupack	Protective Services
Honesdale	Welding
Honesdale	Agriculture
Western Wayne	Computer Science

NUMBER**COURSE****CREDIT****WW ART**

920.....	Introduction to Ceramics	1/2
935.....	Art Foundations	1
940.....	Studio Art I	1
943.....	Ceramics I.....	1/2
944.....	Ceramics II	1/2
945.....	Watercolor Painting.....	1/2
946.....	Mixed Media Design.....	1/2
950.....	Studio Art II.....	1
955.....	Digital Photography I	1/2
956.....	Digital Photography II.....	1/2
961.....	Ceramics III	1/2
962.....	Studio Art III	1
963.....	Advanced Studio Art	2

WW BUSINESS

642.....	Introduction to Business	1
643.....	Business and Personal Law	1
651.....	Accounting I	1
654.....	Entrepreneurship.....	1
655.....	Marketing.....	1
657.....	Sports & Entertainment Marketing.....	1/2
659.....	Fashion Marketing	1/2
661.....	Accounting II.....	1
664.....	Business Communications & Procedures.....	1
665.....	Personal Finance.....	1/2

NUMBER**COURSE****CREDIT****ENGLISH**

130.....	English 9.....	1
130A.....	English 9 Honors.....	1
140.....	American Literature.....	1
140A.....	American Literature Honors.....	1
144.....	English as a Second Language.....	1
155.....	Multicultural Literature.....	1
155A.....	Multicultural Literature Honors.....	1
156.....	AP English Language & Composition.....	1
165.....	AP English Literature & Composition.....	1
166.....	British Literature in the Modern World.....	1
166A.....	British Literature Honors.....	1
170.....	Technical Writing.....	1
175.....	Creative Writing.....	½
980.....	SAT Prep Writing and Critical Reading.....	½

**FAMILY & CONSUMER SCIENCE**

821.....	Nutrition & Wellness.....	1
825.....	Career Explorations.....	½
833.....	Introduction to Sewing.....	1
835.....	Basic Foods.....	1
840.....	Culinary Pastry Arts.....	1
843.....	Textile and Design.....	1
844.....	Child Development I.....	1
851.....	Gourmet Foods.....	1
852.....	Family and Consumer Science Lab Technician.....	½
855.....	Child Development II.....	1
861.....	Advanced Cooking.....	1
862.....	Family Development.....	1
863.....	Fashion Exploration.....	1
864.....	Creative Construction.....	1
865.....	Child Development III.....	3

**FOREIGN LANGUAGE**

330.....	French I.....	1
331.....	Spanish I.....	1
332.....	German I.....	1
333.....	German II.....	1
340.....	French II.....	1
341.....	Spanish II.....	1
351.....	Spanish III.....	1
361.....	Spanish IV.....	1
365.....	AP Spanish Language & Culture.....	1

NUMBER**COURSE****CREDIT****WW MATHEMATICS**

430.....	Geometry Honors	1
431.....	Algebra I.....	1
432.....	Algebra (A).....	1
440.....	Algebra II Honors.....	1
441.....	Geometry	1
442.....	Algebra (B).....	1
443.....	Applied Geometry	1
450.....	Pre-Calculus.....	1
450A.....	AP Pre-Calculus	1
451.....	Algebra II.....	1
453.....	Statistics.....	1
460.....	Calculus	1
465.....	AP Calculus	1
975.....	Digital Literacy, IT Essentials & Microsoft Office Specialist ..	1
976.....	Computer Science I	2
977.....	Computer Science II	2
978.....	Computer Science III	3
981.....	SAT Prep Math.....	1/2

WW MUSIC

925.....	Band.....	1
926.....	Chorus.....	1
927.....	Chorus.....	1/2
928.....	Theater Arts	1/2
931.....	Stage Crew.....	1/2
971.....	Music Theory I	1/2
974.....	Music Theory II.....	1/2
979.....	Music Theory III.....	1/2

NUMBER**COURSE****CREDIT****PHYSICAL EDUCATION AND HEALTH**

40.....	Boys 9 Gym	1/2
41.....	Girls 9 Gym.....	1/2
40.....	Boys 10 Gym	1/2
41.....	Girls 10 Gym.....	1/2
60.....	Boys 11 Gym	1/2
61.....	Girls 11 Gym.....	1/2
60.....	Boys 12 Gym	1/2
61.....	Girls 12 Gym.....	1/2
99.....	Advanced Gym	1/2
52.....	Health Education.....	1/2

**SCIENCE**

531.....	General Science 9	1
541.....	Inquiry Biology w/Lab.....	1 1/2
541A.....	Inquiry Biology w/Lab Honors.....	1 1/2
542.....	Applied Biology w/Lab.....	1
551.....	Chemistry I w/Lab	1 1/2
551A.....	Chemistry I w/Lab Honors.....	1 1/2
552.....	Applied Chemistry w/Lab.....	1
556.....	Anatomy & Physiology w/Lab	1
556A.....	Anatomy & Physiology w/Lab Honors.....	1
561.....	Physics w/Lab	1 1/2
562.....	General Keystone Science	1/2
563.....	AP Biology w/Lab	1 1/2
565.....	AP Chemistry w/Lab.....	1 1/2
566.....	Chemistry Lab Technician.....	1/2
567.....	Biology Lab Technician.....	1/2
568.....	General Science Lab Technician	1/2
569.....	Physics Lab Technician	1/2
570.....	AP Physics 1 – Algebra Based.....	1 1/2
571.....	AP Physics 2 – Algebra Based.....	1 1/2

NUMBER**COURSE****CREDIT****WW****SOCIAL STUDIES**

230	American Cultures II	1
230A	American Cultures II Honors	1
240	American Cultures III	1
240A	AP US History	1
250	World Cultures	1
255	AP World History	1
260	American Government/Economics	1
261	Psychology	1/2
262	AP Psychology	1
265	AP United States Government & Politics	1

WW**TECHNOLOGY & ENGINEERING**

720	Vehicle Maintenance	1/2
722	Metal Technologies	1
723	Visual Communications I	1
724	Introduction to Automotive Technology	1
730	Introduction to Manufacturing Technologies	1
732	Engineering	1
734	Auto Technologies I	2
735	Manufacturing Technologies I	2
744	Auto Technologies II	2
745	Construction Trades I	1
754	Auto Technologies III	2
755	Construction Trades II	1
771	Manufacturing Technologies II	2
772	Manufacturing Technologies III	2
782	Video Production	1
786	Video Broadcasting	2

ART DEPARTMENT

Since our Art Department offers a variety of half-credit and full-credit courses that are designed to meet the needs and interests of all students, we encourage each student to select an art course at least once during his/her high school career. Some courses require prerequisites. Please refer to course descriptions.

920 INTRODUCTION TO CERAMICS----- ½ CREDIT

This course is intended for students studying ceramics for the first time and is a comprehensive introduction to the craft of clay working. This course is primarily a studio class, which means we will spend the majority of our time involved in the creative process (making things). In order to augment creative production and discover how the creative process works, we will also be spending time learning techniques, watching demonstrations, reading, discussing, viewing PowerPoints, and critiquing our work. (No prerequisite needed. Open to all students)

943 CERAMICS I----- ½ CREDIT

This course is intended for students who have completed a comprehensive introduction to the craft of clay working. **Ceramics I** is designed to enhance the skills that were previously learned in Introduction to Ceramics. This course is primarily a studio class, which means we will spend the majority of our time involved in the creative process (making things). In order to augment creative production and discover how the creative process works, we will also be spending time learning techniques, watching demonstrations, reading, discussing, viewing PowerPoints, and critiquing our work. [Prerequisite: **920-Introduction to Ceramics**. Open to all students who have taken 920- Introduction to Ceramics]

944 CERAMICS II----- ½ CREDIT

This course is geared to the student who is motivated to undertake very ambitious work in clay and further their understanding of ceramic art as a means of artistic expression. **Ceramics II** is intended as an opportunity for continued growth in art involving clay as a primary medium. This course is primarily a studio class, which means we will spend the majority of our time involved in the creative process (making things). In order to augment creative production and discover how the creative process works, we will also be spending time learning techniques, watching demonstrations, reading, discussing, viewing PowerPoints, and critiquing our work. [Prerequisites: **920-Intro to Ceramics** and **943-Ceramics I**. Open to juniors and seniors]

961 CERAMICS III----- ½ CREDIT

Ceramics III is for seniors who have taken 920- Introduction to Ceramics, 943- Ceramics I, and 944- Ceramics II. This course will build upon prior knowledge and is intended to challenge students as they dive deeper into the history of ceramics and push themselves to further develop their own artistic style. We will focus on creative expression, craftsmanship, technique, and alternative glaze application processes. [Prerequisite: **920-Introduction to Ceramics, 943- Ceramics I, and 944- Ceramics II**

935 ART FOUNDATIONS----- 1 CREDIT

This course is for students who are interested in learning how to draw from life experiences. Designed for first year art students, this course will cover drawing techniques in pencil, charcoal, and pastel. Students will learn how to shade using highlights and shadows and use the grid method for certain projects. Other forms of art will be studied as well. There will be sketchbook assignments and independent projects along with daily in-class projects. This course is for students who love art and want to learn more. This one-credit course is a prerequisite for all other art courses, with the exception of **920-Introduction to Ceramics**.

940 STUDIO ART I----- 1 CREDIT

This full-credit course is available to students who have successfully completed **Art Foundations**. Students who sign up for **Studio Art I** will experience a continued, yet more intense, study of art. This course has been designed to help students strengthen their basic drawing skills, and further challenge them with a variety of two- and three-dimensional media. Aesthetics, art appreciation and color theory will also be studied. [Prerequisite: **935-Art Foundations**]

950 STUDIO ART II ----- 1 CREDIT
This course is open to all students who have taken **935-Art Foundations** and **940-Studio Art I**. The curriculum will cover various media, such as acrylic and colored pencil. The students will sharpen their skills in drawing, painting, and various mixed media techniques. This course is suited for students planning to pursue art as a career as well as students who enjoy art as a hobby. [Prerequisites: **935-Art Foundations** and **940-Studio Art I**]

962 STUDIO ART III----- 1 CREDIT
This course is designed for students who wish to continue their study of art, but do not wish to pursue art as a career. Students will complete numerous two- and three-dimensional studio pieces while developing distinct individual styles. Emphasis will be placed on developing displays for the annual art exhibit. [Prerequisites: **935-Art Foundations**, **940-Studio Art I**, and **950-Studio Art II**]

963 ADVANCED STUDIO ART ----- 2 CREDITS
Advanced Studio Art is a college preparation course for the gifted art student who plans to pursue art as a career. The course is designed to provide students with ample opportunities to develop their creative potential in various media, as well as their understanding of visual communication and appreciation. The course work in the first semester is devoted to preparing a college entrance portfolio. During the second semester, along with continued instruction in a variety of media, each student will complete numerous two- and three-dimensional studio pieces while developing distinct individual styles. Emphasis will be placed on developing senior displays for the annual art exhibit. [Prerequisites: **935-Art Foundations**, **940-Studio Art I**, and **950-Studio Art II**] {**Summer work is required**. Student must have a grade point average of 90 or higher in Art courses}

945 WATERCOLOR PAINTING----- ½ CREDIT
This course will study various techniques in watercolor painting such as flat washes, wet on wet, blended washes, and dry brushing. The students are required to take ART FOUNDATIONS before taking this course to allow the concentration to stay primarily on painting and not on drawing skills. The projects will include landscapes, portraits, and still life paintings. [Prerequisites: **935-Art Foundations**. Open to sophomores, juniors, and seniors]

946 MIXED MEDIA DESIGN ----- ½ CREDIT
This course will study various forms of Mixed Media through the use of collage material such as paper, felt, wood, plastic, and metal. This course will also emphasize the making of 3-D Design through additive and subtractive processes as an ongoing endeavor, involving the student in informed critical and creative decision making. The students will learn how to incorporate photo transfers and photo lifts into their artwork. Issues of craftsmanship as well as narrative and formal content will be addressed. Students will be encouraged to investigate and experiment with the physical and aesthetic possibilities and limitations of a range of media and materials. Sculptural issues will be explored through the solution of design problems. This course will also include the study of famous mixed media artists. [Prerequisites: **935-Art Foundations**. Open to sophomores, juniors, and seniors]

955 DIGITAL PHOTOGRAPHY I ----- ½ CREDIT
In this course, students will learn the basics of photography as you capture moments and create visual stories. Students will acquire a strong understanding of light as they manipulate the camera to create their imagery. Post-editing opportunities will be explored as students reach their desired photographic results. Students will walk away from this course with a comprehensive portfolio of studio work. **A digital SLR camera with a lens is a requirement for this course**. This is a fine art photography course, so the digital SLR camera is a critical piece of equipment. Students cannot take the course simply with the use of a phone or tablet.

956 DIGITAL PHOTOGRAPHY II ----- ½ CREDIT
This intermediate level course is designed to expand the knowledge and abilities of motivated students who have completed 955-Digital Photography I. Basic photographic and post-process skills learned in 955 will be refined as students work with Adobe Lightroom and Photoshop as they develop a personal photographic vision. Each student will be challenged visually and intellectually as they explore several major photographic themes. The class includes detailed demonstrations, hands-on exercises, and constructive critiques. Students will continue adding unique photographs to their on-going portfolio. Students entering the course must have a digital camera with aperture and shutter priority. Students are also responsible for a digital storage device such as a flash drive. [Prerequisite: **955-Digital Photography I**]

BUSINESS DEPARTMENT

In today's world, technology is everywhere and affects everyone. Therefore, the business curriculum offers a variety of courses which enable students to get a job and/or to become better prepared to survive as consumers and citizens.

- 642 INTRODUCTION TO BUSINESS**----- 1 CREDIT
This is an introductory course which allows for discovering how a business works and how it impacts life on a daily basis. Introduction to Business familiarizes students to the world of business and assists in preparing them for the economic roles of consumers, workers, and citizens. The course provides instruction in business concepts and skills students need in today's competitive environment. Business concepts such as finance, marketing, and operations and management are covered. Students will also gain valuable information and skills for the workplace.
- 643 BUSINESS & PERSONAL LAW**----- 1 CREDIT
Students will be introduced to the laws that affect their daily lives. The course will focus on criminal and civil law and the court systems that enforce the laws. Other topics to be covered include contracts, employment law, corporate law, and consumer protection. (Open to sophomores, juniors, and seniors)
- 651 ACCOUNTING I**----- 1 CREDIT
Accounting I, as a one-year course for 10th, 11th, and 12th grade students, offers students an opportunity to learn the language of business, analyze business transactions, maintain journals and ledgers, and prepare financial reports. Students will also have the opportunity to learn about several aspects of personal financial planning. [Students may earn college credit through arrangements with Lackawanna College] (Accounting I can serve as a math credit as long as it is beyond the minimum 3 credit math requirement.)
- 654 ENTREPRENEURSHIP**----- 1 CREDIT
This course seeks to prepare students to be responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers. Students will study the attitudes and skills that characterize entrepreneurs. They will learn enterprising skills related to creativity, initiative, problem solving, flexibility, and adaptability. This course will also provide a framework for understanding the entrepreneurial process and expose the student to challenges, problems and issues faced by entrepreneurs who start new ventures. (Open to juniors and seniors)
- 655 MARKETING**----- 1 CREDIT
Marketing introduces the theory and practice of marketing and explains the core functions of marketing. Topics such as economics, business, and international marketing, selling, and promotion will be discussed in this course.
- 657 SPORTS & ENTERTAINMENT MARKETING**----- ½ CREDIT
Sports and Entertainment Marketing is a ½ credit business course designed to prepare students for marketing occupations. This course will focus on the two main aspects: 1) The marketing of sports and entertainment, and 2) the marketing of non-sports products and services through sports. You will discover why companies pay to be associated with a team or entertainer; how to develop ticket plans to fill seats in an arena; why targeting your marketing efforts is so important; and more. (Open to juniors and seniors)
- 659 FASHION MARKETING**----- ½ CREDIT
Fashion Marketing covers the marketing curriculum using the fashion industry as the learning vehicle. Topics such as fashion cycle, fashion economics, promoting a fashion image, and technology in fashion marketing will be discussed. This course will give students a perspective on how marketing shapes the future of the fashion industry and possible career opportunities in that industry. (Open to juniors and seniors)

661 ACCOUNTING II ----- 1 CREDIT
A review of the principles of accounting is followed by an emphasis on such areas as payroll systems, special journals, sales tax, uncollectible accounts, depreciation, partnerships, and corporation accounting. [Prerequisite: **651-Accounting I**] (**Accounting II** can serve as a math credit as long as it is beyond the minimum 3 credit math requirement)

664 BUSINESS COMMUNICATIONS & PROCEDURES ----- 1 CREDIT
In this one-credit course for juniors and seniors, the focus will be on developing effective oral and written communication skills, as well as a focus on customer service, files, management and answering telephones properly. An integral part of the course is the career unit in which students prepare their resumes and letters of application, complete job application forms, and participate in mock interviews. Students will also complete various Internet-related projects, slide presentations, etc. These activities are aimed at preparing students for the world of work and/or postsecondary education.

665 PERSONAL FINANCE ----- ½ CREDIT
Personal Finance is designed to show our students how strategic financial decisions will impact their financial future. Students will learn about budgeting and career planning, saving and investing, credit, banking services, planning for retirement, the power of compound interest, transportation issues, housing issues, and risk protection. This course highlights the importance of financial literacy which is essential in becoming a successful member of the working economy. (Required in Grade 10)

ENGLISH DEPARTMENT

The English Department offers a varied program in all areas of communication skills, with special attention to research, writing skills, and literature. Course content focuses on research and problem-solving skills. Four credits of English are required for graduation.

130 ENGLISH 9-----1 CREDIT

A literature-based course, **English 9** introduces students to various literary genres typically required by colleges. Students will learn the basics of research, including library usage techniques, note-taking, outlining, use of technology in research, alternative research strategies, and writing in accordance with the writing process. Students will experience various genres of classical and contemporary literature. They will complete applicable group activities and individual projects. In addition to narrative, persuasive, and expository writing, each student will be expected to write a serious, in-depth research report. The course will include reading instruction, study skills and vocabulary/grammar review as needed.

130A ENGLISH 9 HONORS-----1 CREDIT

A literature-based course, **English 9 Honors** introduces students to various literary genres typically required by colleges. Student will read various genres of classical and contemporary literature with a strong focus on literary analysis. Students will learn and apply the research skills by completing at least one formal research paper. Writing skills will be sharpened through students' compositions. **Summer reading and writing assignments are required.** Enrollment will be based on teacher recommendation and the student should have earned at least a 95% in 8th Grade Language Arts.

140 AMERICAN LITERATURE-----1 CREDIT

The course is designed to improve students' reading comprehension and analytical skills through exploration of American texts and writers with consideration of U.S. history and culture. Students will discuss and write about literature and display an understanding of the application of literary elements. Students will continue to develop writing process techniques. This course prepares students to take the Keystone Literature exam.

140A AMERICAN LITERATURE HONORS ----- 1 CREDIT

Students will analyze literary themes and elements with a correlation to American history and culture. Students will read various genres of classical and contemporary literature with a strong focus on literary analysis. Writing skills will be sharpened through students' compositions. **Summer reading, written analysis, and other assessments are required.** This course also prepares students to take the Keystone Literature exam. Enrollment will be based on teacher recommendation and the student should have earned at least a 95% in English 9. [Prerequisite: **130A-English 9 Honors** or **130-English 9**].

144 ENGLISH AS A SECOND LANGUAGE----- 1 CREDIT

The purpose of this course is to provide students whose primary language is not English with support in content-area classes and English instruction, when deemed necessary by the student's entry-level skills in English. Instruction will be administered in group and individual settings at a time determined by classroom availability and time constraints. Students will be evaluated by their progress in oral and written communication, as well as progress in their content-area classes.

155 MULTICULTURAL LITERATURE ----- 1 CREDIT

This course is a rich mix of classic, contemporary and multicultural literature that explores a range of ideas and experiences. It presents students with opportunities to analyze and interpret written works. The process of literacy is stressed. Literary study through written and spoken responses will help students develop strong reading/writing and public speaking skills. Students will complete a career research paper or public speaking project. Students will complete the college/personal essay. (Open to juniors)

155A MULTICULTURAL LITERATURE HONORS----- 1 CREDIT
In this course designed for those college bound and set at an accelerated pace, students will analyze literary selections that explore a range of ideas and experiences. Writing skills will be sharpened through students' compositions including a career research paper. **Summer reading, written analysis, and other assignments are required.** This course prepares students for college and will include SAT Prep. Students will complete the college/personal essay. Enrollment will be based on teacher recommendation and the student must have earned at least a 95% in American Literature. [Prerequisite: **140-American Literature** or **140A- American Literature Honors**].

156 ADVANCED PLACEMENT ENGLISH LANGUAGE AND COMPOSITION----- 1 CREDIT
AP Language and Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. To reflect the increasing importance of graphics and visual images in text published in print and electronic media, students will analyze how such images both relate to written texts and serve as alternative forms of texts themselves. In addition, the informed use of research materials in a researched argument paper and the ability to synthesize varied sources—to evaluate, use, and cite sources - are integral parts of the course. Students will become skilled writers who compose for a variety of purposes. Students will be expected to move beyond such programmatic responses as the five-paragraph essay, placing their emphasis on content, purpose, and audience and allowing this focus to guide the organization of their writing. They will use grammatical conventions appropriately and develop stylistic maturity in their prose. **Summer reading and writing assignments are required.** This course prepares students to take the AP exam in May, which may result in college credit. [Open to juniors and seniors; recommended prerequisite: 95% average in English courses, PSAT or SAT Reading & Writing score of 500+, self-discipline, motivation and teacher recommendation].

165 ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION----- 1 CREDIT
The **AP Literature** course emphasizes the study of literature from various genres (poetry, short story, novel, and drama) and periods, concentrating on works of recognized literary merit. A work's structure, style and themes, as well as literary conventions such as the use of figurative language, imagery, symbolism, and tone are studied. Frequent writing will emphasize the student's ability to understand, explain, and evaluate a literary work. Readings will include works by British and American writers from the sixteenth century to contemporary times. **Summer reading and writing assignments are required.** This course prepares students to take the AP Exam in May, which may result in students earning college credit. More details are available in the AP pamphlet available from the Guidance Department. [Open to seniors who have passed AP English Language; recommended prerequisites: 95% average in English courses, PSAT or SAT Reading & Writing score of 500+, self-discipline, motivation and teacher recommendation].

166 BRITISH LITERATURE IN THE MODERN WORLD----- 1 CREDIT
British Literature includes the study of novels, short stories, drama, and poetry. The nonfiction aspect of this course focuses on global, cross – cultural nonfiction. Here students will research, read, present, and discuss nonfiction writing which includes essays, letters, debates, biographies, and autobiographies. Emphasis is placed on reading, writing, and interpreting poetry. Course work will emphasize the student's ability to understand, explain, and evaluate a literary work. Students will be exposed to 21st century learning and writing skills through project-based assessments utilizing modern technology and skills. [Open to seniors only]

166A BRITISH LITERATURE HONORS----- 1 CREDIT
In this course designed for the college bound and set at an accelerated pace, students will study various selections including novels, short stories, drama and poetry. Students will read both fiction and nonfiction writing such as essays, letters, debates, biographies and autobiographies. Emphasis is placed upon reading, writing and analyzing poetry. Students will be exposed to 21st century learning and writing skills through project-based assessments and will write a formal research paper. **Summer reading, written analysis, and other assignments are required.** Enrollment will be based on teacher recommendation and the student must have earned at least a 95% in junior level English. [Prerequisite: **155-Multicultural Literature** or **156-Advanced Placement English Language and Composition**].

170 TECHNICAL WRITING ----- 1 CREDIT
Designed to focus on the needs of students pursuing technical careers. This course will address technical writing from a practical perspective: what it is, who reads it, and how to achieve success with it. Students will develop skills in technical reading and writing. Guest speakers from representative businesses will address the students and provide awareness of important workplace competencies. An active workshop learning environment will prompt students to write and read resumes, progress reports, recommendations, memos, controlled data reports, various types of presentations, and other common documentation. Students will write an informal proposal for a career-related project and develop a professional employment portfolio containing sample technical documents. [Prerequisite two credits of English] [Open to seniors **only**].

175 CREATIVE WRITING----- ½ CREDIT
This course will focus on expressive writing in many different forms. Students will have the opportunity to explore several different types of poetry and prose styles, as well as responding to literature, art mediums, quotes, and music. Originality and writing that shows thought will be emphasized. Strategies to avoid writer's block and new ways to uncover ideas for writing will be studied. Peer reviews and sharing ideas are essential elements to this course. Students will explore and create different types of writing that express creativity. [Open to grades 9-12]

980 SAT PREP WRITING & CRITICAL READING----- ½ CREDIT
The **SAT Writing and Critical Reading** course is designed to strengthen the problem-solving and testing skills of students who are preparing for the writing and critical reading sections of the Scholastic Aptitude Test (SAT) and SAT II. It is taught concurrently with **981-SAT Prep Math**. [Prerequisite: 1 credit in English]

FAMILY AND CONSUMER SCIENCE DEPARTMENT

Family and Consumer Science courses will introduce our students to a gainful and useful background in various aspects of life, including the physical, social, and economical aspects of everyday living.

- 821 NUTRITION & WELLNESS** ----- 1 CREDIT
The course is designed to help students understand and value the importance of wellness and its components through lifetime nutrition, exercise choice and disease prevention. The course is a personal reflection of their current health practices with further education on future change. This class is taught as an applied science with both lecture, labs, and taste testing formats. The students will be analyzing their diets, evaluating nutrition claims and research, developing meal plans based on macro and micronutrients, exploring nutrients and how it affects the body, and creating an educational campaign for Nutrition month. The class is helpful for students pursuing a degree in the medical, athletic, or culinary field. **This is not a cooking class but cooking labs and taste testing are done weekly.** [Pre-requisite: Honors or AP Science class]
- 825 CAREER EXPLORATIONS** ----- ½ CREDIT
Students will identify their skills, abilities, goals, and interests in preparation for further education and career choice. Career education and work standards in the areas of career awareness, preparation, acquisition, retention, advancement, and entrepreneurship are the focus. The career exploration process involves learning more about yourself, researching your options, trying new experiences, and creating a strategic plan to reach your professional goals. Students will explore courses of study, and determine possible careers, internships, or program searches; developing on-the-job skills (soft skills or technical skills); modeling behavior, attitudes, or skills in the workplace. (Required in Grade 9 & 10 for 2024-25 school year)
- 835 BASIC FOODS** ----- 1 CREDIT
In this course, students will apply fundamental culinary techniques. Topics covered include knife handling skills, recognition, selection and proper use of tools and equipment. An emphasis will be placed on sanitation, standard recipe conversion techniques, mise en place, time management and cooking workplans. Students will have the opportunity to be ServSafe certified. (Open to Grades 9-10)
- 851 GOURMET FOODS** ----- 1 CREDIT
This course is designed to acquaint students to the art of gourmet cooking using second level food production skills. Students will experience advanced knife skills, hors d'oeuvre production, candy and confection making, planning and execution of a gourmet Thanksgiving Dinner, food marketing and packaging. Students will compare various aspects of international cuisines and explore culturally noteworthy ingredients and cooking methods. Students will examine the issues and conditions that affect the availability and quality of food in the global market. Students will have the opportunity to be ServSafe certified in Food Handler & Allergen. [Prerequisite: **835- Basic Foods**]
- 840 CULINARY PASTRY ARTS** ----- 1 CREDIT
This course is an in-depth study of pastry arts. Labs will include specialty pie production, piping skills, fillings, frostings, icings, layer cake construction, laminated doughs, and yeast bread production. This course is designed to mirror a student's first year in a culinary baking and pastry course. Students will have the opportunity to be ServSafe certified. [Prerequisite: **835- Basic Foods and 851- Gourmet Foods**] (Open to Grades 11-12)
- 861 ADVANCED COOKING** ----- 1 CREDIT
This program is designed to acquaint the student with the fundamental aspects of commercial cookery, quality customer service in the dining experience, hospitality industry safety and sanitation principles in HACCP applications. This course provides continued training for entry-level kitchen positions or for those interested in pursuing further education in the culinary field. Students will have the opportunity to be ServSafe certified. [Prerequisite: Students in 12th grade who have had at least two cooking classes prior to taking this course.]

833 INTRODUCTION TO SEWING-----1 CREDIT
This is an introductory course designed to provide a more in-depth look at sewing and expose students to the textile/fashion industry. Students will learn hand sewing techniques, pattern reading, equipment and sewing terminology and gain a deep understanding of the sewing machine. Projects will involve basic sewing skills, crafting, quilting, and visual merchandising. (Open to Grades 9-12)

843 TEXTILE AND DESIGN ----- 1 CREDIT
This course is designed as an introduction to garment construction and design. Students will be exploring the influences of clothing choice, fashion history, fashion styling, upcycling, the characteristics of fabric and fabric care. The students will continue to increase their sewing machine knowledge and pattern reading with construction of totes, Pi shorts, skirts, dresses, and upcycling projects using commercial patterns. In addition to construction students will explore fashion sketching and peer critiquing. Skills such as various zipper placements, webbing application, waistbands, linings, and hemming will be the focus of construction. Participation in the CATWALK Fashion show is mandatory. [Prerequisite: **833- Introduction to Sewing** (Open to Grades 10-12)]

863 FASHION EXPLORATION ----- 1 CREDIT
This course is designed to further develop students in fashion design and apparel construction. Students learn fashion theories, explore fashion designers, implement elements and principles of design, perform market research, investigate sustainable fashion, and continue fashion illustration. This course provides an opportunity to expand on fashion portfolios and other aspects of the fashion industry. Projects include dresses, skirts, pants, jackets, hats, and upcycling for specific skill building. Participation and modeling in the CATWALK Fashion Show is mandatory. [Prerequisite: **833- Introduction to Sewing, 843- Textile and Design**] (Open to Grades 11-12)

864 CREATIVE CONSTRUCTION----- 1 CREDIT
This is a senior level course designed to examine a more in- depth study of the garment and fashion industry while expanding their portfolio knowledge and career exploration. Students are expected to design and construct their own clothing line using self-expression, skills learned, pattern development, draping, sketching and fabric knowledge. Maintaining a binder with all measurements, patterns, drapes, fabric selections, sketches and cost are the primary assessment points in addition to the finished clothing line and competitive pieces. Students will also create a collection title, mission, and logo using graphic design. Lead the CATWALK Fashion Show, model collection, and create a senior display. [Prerequisite: **863- Fashion Exploration**] (Open to Grade 12)

844 CHILD DEVELOPMENT I ----- 1 CREDIT
This is the introductory course, offering students an opportunity to develop skills for working with children. The focus of the course is on prenatal development to preschool aged children. This course includes units on prenatal development, infant care, parenting skills, child development theory, and understanding the areas and sequences of growth and development. Safety and caring for a child are essential aspects of this course; as well as the opportunity to use Real Care Infant Simulators. The course will emphasize parenting and child rearing skills, as well as, exploring the physical, cognitive, social and emotional growth of children. The course will also include the opportunity to earn Industry Recognized Credentials from the Penn State Extension. (Open to students Grades 10-12)

855 CHILD DEVELOPMENT II----- 1 CREDIT
This course follows the successful completion of **Child Development I**. Many of the growing careers of the present relate to working with children. To be successful in these careers, it takes much skill and knowledge that focus on all aspects of working with children. This course allows the student to learn concepts needed to work with children in various aspects, including required training and skill, child development theories and practices, lesson and curriculum planning, preparing the learning environment and managing an ECE setting. (Includes monthly elementary school observations) The course will also include the opportunity to earn Industry Recognized Credentials for the University of Pittsburgh Act 31-Mandatory Reporter training and from the Penn State Extension. [Prerequisite: **844-Child Development I**]

865 CHILD DEVELOPMENT III ----- 1 CREDIT
Child Development III will expand upon concepts studied in its prerequisites Child Development I & II. Students will work with elementary and special education students within our school district. Students will create and deliver age-appropriate lesson plans and apply learning outcomes and standards within the lessons. Students will learn and apply classroom management skills, organizational skills, and preparation skills which are needed to be an effective teacher. The Child Development III students will engage in positive relationships with classroom teachers and students by engaging in socially responsible and ethical behaviors which are needed in the workforce. Students will build upon time management skills to meet workforce style deadlines and initiatives as this is a hands-on, project-oriented course with the creation of a portfolio/professional binder. The course will also include the opportunities to earn additional Industry Recognized Credentials and training from the Penn State Extension and Allergen Certification. Upon successful completion of Child Development I, II, & III embedded Industry Recognized Credentials students will fulfill Act 158 graduation requirements for CIP 19.0708 Child Care & Support Services Management. [**Prerequisites: 844-Child Development I, 855-Child Development II**]

852 FAMILY AND CONSUMER SCIENCE LAB TECHNICIAN----- ½ CREDIT
This is an independent study course in which students are responsible for cooking and sewing laboratory preparations. Students will need knowledge of basic cooking and/or sewing skills and be able to implement all safety and sanitation rules. Students may be required to help other students in class, operate and tear down the dishwasher, and locate equipment and supplies. Students will need to be responsible, self-motivated, and be able to follow written and oral instructions with multiple steps. [**Prerequisites: 835-Basic Food Prep and either 840-Baking and Pastry or 851-Gourmet Foods or 833-Introduction to Sewing**; written FCS teacher approval and minimum grade of 85%]

862 FAMILY DEVELOPMENT -----1 CREDIT
Today's families face many challenges as they grow and develop. It is important for individuals to have the knowledge, resources, and skills that create strong families and citizens. This course will address techniques, research and exercises that create a better understanding of how to build and maintain a healthy relationship with the family unit and within various units of society. The Family Development curriculum takes a close look at family throughout various stages of the human life cycle. Emphasis will take place on community resources and current trends that affect families today.

FOREIGN LANGUAGE DEPARTMENT

The Foreign Language Department strives to instill in each student an appreciation for and awareness of the language, history, mores, and customs of other countries.

- 330 FRENCH I – Western Wayne Virtual Academy** ----- 1 CREDIT
At this level, students are introduced to the basic elements of French as they move through the early stages of language acquisition. They study major vocabulary categories, verb tenses, and other fundamental components of French grammar. The main purpose is to help students communicate in French at a basic level, appreciate the French-speaking world, and develop cultural awareness. **This course is an on-line class offered during the school day.**
- 331 SPANISH I** ----- 1 CREDIT
For the beginning student, **Spanish I** offers short, lively dialogues, related vocabulary supplements and exercises, imaginative structural drills, and increased reading and writing materials. Students are also introduced to the culture and geography of Spain and Latin America. Spanish culture in the United States is emphasized.
- 332 GERMAN I – Western Wayne Virtual Academy** ----- 1 CREDIT
At this level, students are introduced to the basic elements of German as they move through the early stages of language acquisition. They study major vocabulary categories, verb tenses, and other fundamental components of German grammar. The main purpose is to help students communicate in German at a basic level, appreciate the German-speaking world, and develop cultural awareness. **This course is an on-line class offered during the school day.**
- 333 GERMAN II - Western Wayne Virtual Academy**----- 1 CREDIT
At this level, students review the basic elements of German grammar acquired in **German I** and expand their communicative abilities. They advance their knowledge of German grammar and learn additional vocabulary. Their language skills increase to the point where they can participate more fully in general conversations, read more sophisticated passages, and write with a firmer command of syntactical structures. Cultural awareness is further developed. **This course is an on-line class offered during the school day.** [Prerequisite: **330-German I**]
- 340 FRENCH II- Western Wayne Virtual Academy** ----- 1 CREDIT
At this level, students review the basic elements of French grammar acquired in **French I** and expand their communicative abilities. They advance their knowledge of French grammar and learn additional vocabulary. Their language skills increase to the point where they can participate more fully in general conversations, read more sophisticated passages, and write with a firmer command of syntactical structures. Cultural awareness is further developed. **This course is an on-line class offered during the school day.** [Prerequisite: **330-French I**]
- 341 SPANISH II** ----- 1 CREDIT
This course is devoted to the discussion and mastery of the grammatical and fundamentals of the Spanish language. The concepts which are utilized allow the student to converse at the level of an elementary age native speaker. Slang terms and practical idiomatic expressions challenge English speaking students who are learning Spanish as a second language and Eres Tu' Maria Video Series. Eres Tu' Maria provides a motivating experience with Spanish using a storyline. Students will improve listening and reading comprehension as a result of watching and completing the correlating activities. Periodic discussions of the history, culture, and literature of Spain, Mexico, and Latin America are also presented. [Prerequisite: **331-Spanish I**]
- 351 SPANISH III** ----- 1 CREDIT
Spanish III is a course in refinement of oral language skills and the introduction of written and grammatical language skills by using a variety of short dialogues, stories, and histories to increase the student's vocabulary, confidence, and writing ability. Students will be able to speak, read, write, and interpret Spanish in multiple tenses by the end of this course. [Prerequisite: **341-Spanish II** with an average of 80% or above or teacher recommendation.]

361 SPANISH IV ----- 1 CREDIT
After a brief review of all tenses presented in previous levels, the Spanish IV student will gain confidence by mastering oral and written skills through topical theme discussions, and conversations. The art, music, cuisine and history of Spanish-speaking nations will be highlighted. Students will also be introduced to authentic literature including selections from Jorge Cortazar, Emilia Pardo Bazán, and Carlos Fuentes. [Prerequisite: **351-Spanish III** with an average of 88% or above]

365 ADVANCED PLACEMENT SPANISH LANGUAGE & CULTURE ----- 1 CREDIT
The AP Spanish Language course should help prepare students to demonstrate their level of Spanish proficiency across three communicative modes (Interpersonal [Interactive communication], Interpretive [Receptive communication], and Presentational [Productive communication]). This course will align with the National Standards for Foreign Language which includes communication, cultures, connections, comparisons, and communities. This course promotes an awareness and appreciation of cultural products, both tangible (tools, books, music) and intangible (laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspective (values, attitudes, and assumptions that underlie both practices and products). This course should be comparable to college and university courses that focus on speaking and writing in the target language at an advanced level. Students may take the AP Spanish exam. [Prerequisite: 90% average or better in **Spanish I, II, III, and IV**]

MATHEMATICS DEPARTMENT

Success in a high school mathematics course requires, among other factors, a proficiency in basic math, and the proper background in mathematical concepts. Many of the courses offered build upon previously-learned material and, therefore, have one or more prerequisites.

A student who wants to take more than one mathematics credit in a year is urged to discuss the possibilities with his or her guidance counselor and mathematics teacher.

Three (3) credits in mathematics are required for graduation. Accounting I & II cannot be used for these 3 credits. Accounting I and II will be counted as additional math credits beyond the required 3 for graduation.

430 GEOMETRY HONORS ----- 1 CREDIT
Geometry Honors enables students to acquire information about geometric figures using intuition, deductive and inductive thinking, formal proofs, constructions, and Algebra. Included is a thorough study of 5 Big Ideas: angle pairs, triangles, quadrilaterals, circles, and surface area/volume. **Summer work is required.** [Prerequisite: Enrollment will be based on teacher recommendation and Algebra I grade.]

431 ALGEBRA I ----- 1 CREDIT
Algebra is a branch of mathematics in which a system of numbers, variables, and operations are utilized to represent quantities. Problem solving will require critical thinking and a systematic approach. The big ideas to be explored are Solving Equations and Inequalities, Functions, Linear Equations and Inequalities, Systems of Equations and Inequalities, Laws of Exponents, and Polynomials.

432 ALGEBRA (A) ----- 1 CREDIT
Algebra is a branch of mathematics in which a system of numbers, variables, and operations are utilized to represent quantities. Problem solving will require critical thinking and a systematic approach. Algebra A is the first half of a two-year algebra course. The second course is Algebra B. The topics to be explored in Algebra A are as follows: Solving Equations and Inequalities, Functions, and Linear Equations. [Teacher or guidance recommendation. Note 432-Algebra A plus 442 Algebra B is equivalent to one year of 431 Algebra 1]

440 ALGEBRA II HONORS ----- 1 CREDIT
Algebra II Honors is a rigorous, fast paced course designed for highly motivated mathematics students. Students will study the common core concepts represented in the five big ideas: simplifying expressions, solving equations and inequalities, graphing analysis of functions, application of functions and data analysis. These five ideas will focus around seven functions (linear, quadratic, exponential, logarithmic, polynomial, radical and rational). **Summer work is required.** Prerequisites: **431-Algebra I** and **430-Geometry Honors** with at least an 85% combined average. Teacher recommendation is also a possibility for enrollment in this course.

441 GEOMETRY ----- 1 CREDIT
Geometry enables students to acquire information about geometric figures using intuition, deductive and inductive thinking, formal proofs, constructions, and Algebra. Included is a thorough study of 5 Big Ideas: angle pairs, triangles, quadrilaterals, circles, and surface area/volume. [Prerequisite: **431-Algebra I**]

442 ALGEBRA (B)----- 1 CREDIT
Algebra is a branch of mathematics in which a system of numbers, variables, and operations are utilized to represent quantities. Problem solving will require critical thinking and a systematic approach. Algebra B is the second half of a two-year algebra course. The first course is Algebra A. The topics to be explored in Algebra B are as follows: Linear Equations and Inequalities, Systems of Equations and Inequalities, Laws of Exponents, and Polynomials. [Prerequisite: **432-Algebra A**. Note: 432-Algebra A plus 442 Algebra B is equivalent to one year of 431 Algebra 1]

443 APPLIED GEOMETRY ----- 1 CREDIT
Geometry enables students to acquire information about geometric figures using intuition, deductive and inductive thinking, formal proofs, constructions, and Algebra. Included is a thorough study of 5 Big Ideas: angle pairs, triangles, quadrilaterals, surface area and volume. [Prerequisites: **Algebra A**, **Algebra B**, and teacher recommendation]

450 PRE-CALCULUS----- 1 CREDIT
This course concentrates on the areas that provide a solid foundation for the formal study of Calculus and further develops the concepts learned in Algebra II. Topics include: Equations, Functions and their graphs, Polynomials, Exponential and Logarithmic Functions, and Trigonometry. [Prerequisites: **431-Algebra 1**, **441-Geometry** and **451-Algebra II** or higher. The student must have a combined average of at least an 85% or teacher recommendation.]

450A ADVANCED PLACEMENT PRE-CALCULUS ----- 1 CREDIT
In AP Pre-Calculus, students build deep mastery of modeling and functions, and examine scenarios through multiple representations. They will learn how to observe, explore, and build mathematical meaning from dynamic systems. The framework delineates content and skills common to college pre-calculus courses that are foundational for careers in mathematics, physics, biology, health science, social science, and data science. [Prerequisites: Success in **440-Algebra II Honors** with at least an 85% combined average.]

451 ALGEBRA II ----- 1 CREDIT
Algebra II reviews and further develops the topics covered in **431-Algebra I** and increases the student's knowledge of such topics as quadratic equations, rational functions, and logarithms. [Prerequisites: **441-Geometry & 431-Algebra I**]

453 STATISTICS ----- 1 CREDIT
This is a statistics course for beginners. Topics will be chosen from both descriptive statistics and inferential statistics. Also, topics in probability will be studied. [Prerequisite: **Algebra II**]

460 CALCULUS----- 1 CREDIT
Calculus includes these topics: limits, derivatives, and integrals of functions and their applications. [Prerequisites: 85% final average or teacher recommendation in **450-Pre-Calculus** or **450A-Pre-Calculus Honors**]

465 ADVANCED PLACEMENT CALCULUS ----- 1 CREDIT
AP Calculus is a college level course that students can use to prepare for the AP Exam. To take the AP exam the student must have a 90% or better in the course. Topics includes: limits, derivatives, and integrals of functions and their applications. **Summer work is required.** [Prerequisites: 90% final average or teacher recommendation in **450A-Pre-Calculus Honors**]

975 DIGITAL LITERACY, IT ESSENTIALS & MICROSOFT OFFICE SPECIALIST----- 1 CREDIT
This course provides students with an introduction to the Internet and experiment with various social networking sites. Students will gain essential skills such as using a computer, connecting devices, and access search, email, and social media. Additionally, students will develop skills for entry-level technical support such computer, mobile device, and software installation, configuration, and troubleshooting. Additionally, students will be prepared to become certified Microsoft Office Specialists (MOS) in the following Microsoft Office Applications: PowerPoint, Outlook, Word, and Excel. MOS is the premier credential chosen by individuals seeking to validate their skills and advance their careers. Students will be able to take the industry recognized credential certification exam at the end of the course.

976 COMPUTER SCIENCE I: NETWORKING ESSENTIALS, CISCO SUPPORT TECHNICIAN CYBERSECURITY/NETWORKING BASIC PROGRAMMING IN PYTHON/C+-----2 CREDITS
This is the first of three years of a Career Technology Education program in Computer Science. This course of study is intended for students who wish to receive preparation and credentials to join the field of Information Technology (IT) immediately after high school graduation or following post-secondary training.

This double block of courses focuses on two threads of Computer Science study: Basic Networking and Basic Programming.

Basic Networking provides students with a broad foundational understanding of high-level network architecture and how a network operates. This thread of instruction prepares and credentials students for entry level jobs, apprenticeship, and internship roles such as Network Support Technician, Entry-level Help Desk Technician, and IT Support Specialist.

Basic Programming will focus on the languages of Python and C+. Python, a user-friendly, easy-to-read code that is used by tech giants and startups like Google, Facebook, and Netflix, to create large- and small-scale software projects. Students will have the opportunity to explore careers in computer programming, and acquire knowledge about data, variables, control flow, functions. Students will design, develop, and improve multi-module computer applications, analyze, and model real-life problems in Object-Oriented Programming categories, and develop and create a programming portfolio. Students will prepare for CLA certification exam. This thread of instruction is designed to prepare and credential students in the fields of software development, network engineering, and system administration.

977 COMPUTER SCIENCE II: ADVANCED PROGRAMMING JAVASCRIPT & C++ ---2 CREDITS

This is the second of three years of a Career Technology Education program in Computer Science. This course of study is intended for students who wish to receive preparation and credentials to join the field of Information Technology (IT) immediately after high school graduation or following post-secondary training.

This double block of courses focuses on Advanced Programming.

Students will build a solid foundation in JavaScript, a gateway language, used to create web and mobile applications. Students will design, write, debug, and run their own programs. Students will prepare to take their JSE certification exam and to develop more specialized skills in networking and software development.

Students will deepen their computer programming skills in the C++ language and the fundamental notions and techniques used in object-oriented programming. Students will learn C++ template mechanism, understanding, and using property template classes and methods. Students will prepare for the CPA and CCP certification exams. This thread of instruction is designed to prepare and credential students in the fields of software development, network engineering, and system administration.

978 COMPUTER SCIENCE III: CISCO CERTIFIED NETWORK ADMINISTRATOR TRAINING PROGRAM -----3 CREDITS

This is the third of three years of a Career Technology Education program in Computer Science. This course of study is intended for students who wish to receive preparation and credentials to join the field of Information Technology (IT) immediately after high school graduation or following post-secondary training.

This triple block of courses focuses on preparing students for taking and passing their Cisco Certified Network Administrator (CCNA) exam as well as a full battery of Cybersecurity training and preparation leading to a Cisco Certified Support Technician Certification (CCST).

There are three levels of CCNA preparation:

- CCNA: Introduction to Networks (ITN)
- CCNA: Switching, Routing, and Wireless Essentials (SRWE)
- CCNA: Enterprise Networking, Security, and Automation (ENSA)

There are several layers to the Cybersecurity course of study, which will prepare students for entry level positions security operations center (SOC) jobs:

- Basics and Essentials
- Endpoint Security
- Network Defense
- Cyber Threat Management
- CyberOps Associate (CyberOps Associate certification)
- Ethical Hacker

981 SAT PREP MATH----- ½ CREDIT

This course reinforces concepts taught in General Math, Algebra, and Geometry in order to better prepare the student to take the Scholastic Aptitude Test. Students take placement exams on Khan Academy or use CollegeBoard results to work on concepts that need improvement. Testing strategies are also emphasized for students. It is taught concurrently with the **980-SAT Prep Writing & Critical Reading**.

MUSIC DEPARTMENT

The Music Department offers several exciting performing groups. Special ensembles such as Jazz Band, Select Chorus, and others will be offered to members of the ensemble classes Band and Chorus. All instrumental ensembles are outgrowths of the basic course in playing techniques called Band. All vocal ensembles are outgrowths of the basic course in vocal technique called Chorus. Anyone considering a career in the musical arts should take both instrumental and vocal training.

925 BAND----- 1 CREDIT

The Band program at Western Wayne has come to be known as one of the finest in Northeast Pennsylvania, having great success over the last 25 years.

Within the Band program there are multiple ensembles such as Concert Band, Marching Band (“The PRIDE of Western Wayne”), Jazz Band, Brass and Woodwind Ensembles. **Band Class** is the backbone of the instrumental music program and rehearses during the scheduled **Band** period. All students in **Band** class are automatically accepted as members of the Concert and Marching Bands. Selection to Jazz Band, Brass and Woodwind Ensembles and other special performing groups will be established by the Band Director.

The Band performs two formal concerts annually. These are traditionally a holiday concert and a spring concert. The Band also performs for special school functions, such as assemblies, graduation, and pep rallies. The Band performs at football games and in parades, cavalcades, and community events. Transportation costs associated with all away football games and up to 5 (five) community events will be the responsibility of the District; travel costs for other band events is subject to transportation funding rules, whatever they may be at the time. An annual schedule of performances will be provided to students and their families on the WWBAND Google Classroom and in print if requested. Additional performances may be added during the year, but students will be given notice of performances well in advance or they will not be expected to perform.

Performance and Rehearsal Schedule and Requirements for Band Class.

1. The marching band will rehearse after school one day a week and also the day of any Friday football game. All rehearsals are considered part of the class participation grade. WW Varsity Sports students will be excused from these rehearsals early to allow students to participate in both the Band and sports.
2. All performances are graded and will be treated as tests. As such, a student will have the opportunity to make up any missed performance by completion of a test or assignment assigned by the band director. This make-up will only be offered if the absence is excusable by school attendance policy.

926 CHORUS----- 1 or ½ CREDIT

OR **Chorus** is offered as either a one-credit or ½-credit course. This course is designed to give students an opportunity to improve vocal technique and musicianship through choral singing. From the hesitant music learner to the highly skilled, gifted musician, we will learn and perform together to create beautiful choral music.

927 Students planning a career in music are encouraged to take chorus. Chorus provides an opportunity to sing without the pressure of performing alone. Students will work as a group to develop Vocal Music for various performances. Advanced vocalists that enjoy competing are encouraged to audition for PMEA festivals where qualifying students have an opportunity to perform with various students from other school districts.

Performance Requirements: The Chorus will perform in two formal concerts annually, a traditional holiday performance and a spring performance. Other performance opportunities include small ensembles, vocal solo work (student choice), as well as special school functions and community services.

Concert Attire The attire for the chorus is a formal attire of black and white. Solid White Dress Shirt with a Collar & Sleeves, Solid Black Pants/Skirt (Skirts should fall between the ankle & knee or floor length), and Solid Black Shoes

928 THEATER ARTS ----- ½ CREDIT

This course studies several aspects of theater arts, including:

1. Intermediate acting, movement, and vocal techniques
2. History of the theater and its cultural purposes
3. Anatomy of a production
4. Understanding of theater as students will explore basic acting skills including pantomime and improvisation, create and perform plays, and critique performances.

The purpose of this year long, repeatable course is to give the student an increased appreciation of an additional experience in theater as an art form. Students taking the course for a 2nd, 3rd, or 4th year will review previous aspects of theater arts and will be offered more intensive and highly individualized instruction in acting, with rigorous, performance-oriented training in singing and acting techniques, with a secondary emphasis on dance. Students continuing training in theater arts will also be offered a study of stage technology and theatrical design. This course has been crafted for the beginning theater art student or the student who is seriously interested in pursuing the theatrical arts as a major or minor at the university level. (Open to all)

Performance Requirements – Students are required to perform in a formal theatrical production during the school year. (School Production or Community Production)

931 STAGE CREW ----- ½ CREDIT

This is an introductory course for students interested in the technical aspect of theater. Units of study include: Safety, Professionalism, Theater Electricity, Lighting Design, Sound Design, and Basics of Theater. This course requires after-school hours as part of the student’s grade. Students who elect this course will be required to work the spring musical. (Open to students in grades 9, 10, 11, and 12 with teacher approval)

971 MUSIC THEORY I ----- ½ CREDIT

Music Theory I is offered to all students with basic music skills. This course will explore the foundational elements for writing music, including but not limited to: Music Notation, Music Terms, ear training/dictation, sight singing, improvisation, and composition. [Experience on an instrument or voice, as well as basic note-reading skills are required.]

974 MUSIC THEORY II ----- ½ CREDIT

Music Theory II is offered to all students who have completed Music Theory I or who have passed a proficiency exam with the teacher. This class will explore advanced written music notation, music terms, scale structure, ear training/dictation, sign singing, and composition. [Experience on an instrument or voice, as well as basic note-reading skills are required.] [Prerequisite: **971-Music Theory I** or teacher permission]

979 MUSIC THEORY III----- ½ CREDIT

Music Theory III is offered to all students who have completed Music Theory II or who have passed a proficiency exam with the teacher. This course will explore advanced written harmony, keyboard harmony, ear training/dictation, sight singing, Chord Structure, music forms and composition. All students will be required to write an arrangement suitable for performance. [Experience on an instrument or voice, as well as, basic note-reading skills are required.] [Prerequisite: **971-Music Theory II** or teacher permission]

PHYSICAL EDUCATION DEPARTMENT

The objective of the Physical Education curriculum is to provide the student with skills and knowledge for active participation in and enjoyment of physical activity. We believe that physical education should prepare our students for a healthy lifestyle with the knowledge of wellness, fitness, and physical activity. Our program emphasizes an understanding of the reasons why it is physiologically important to maintain a healthy body. Activities include team sports, lifetime sports, rhythmic, and personal fitness.

- 40 BOYS 9 GYM/GIRLS 9 GYM**----- ½ CREDIT
Ninth grade physical education introduces the student to weightlifting techniques, muscles involved in the various lifts, and an understanding of the target heart rate. It is also a basic course in team sports combined with an understanding of rules, concepts and strategies, and low-level team play. Students are also introduced to individual and dual racquet sports with a strong emphasis on skill development. [Required]
- 41**
- 40 BOYS 10 GYM/GIRLS 10 GYM**----- ½ CREDIT
Tenth grade physical education is a continuation of the ninth-grade philosophy with a greater emphasis on individual skill development, increased awareness of team concept play, and an understanding of the enjoyment derived from these activities, as well as a continuation of strength, core, and cardiovascular development. [Required]
- 41**
- 60 BOYS 11 GYM/GIRLS 11 GYM**----- ½ CREDIT
Eleventh grade physical education emphasizes the aforementioned goals, with greater appreciation for lifetime leisure enjoyment through individual and some team-oriented physical activities and an understanding of the “good sportsmanship” attitude. [Required]
- 61**
- 60 BOYS 12 GYM/GIRLS 12 GYM**----- ½ CREDIT
Twelfth grade physical education is the culmination of skill development, team concept, shared goals, appreciation for the spirit of the competition and not necessarily the “win-at-all-costs” philosophy. The course addresses an overall attitude to be carried into all aspects of life. It also emphasizes lifetime activities and gives students more opportunities to develop a personal development program. [Required]
- 61**
- 99 ADVANCED GYM**----- ½ CREDIT
The purpose of this course is to give students who play two or more interscholastic sports the opportunity to participate in a safe, yet challenging, strength training program. Students will learn to design and maintain a sport-specific weight training routine which will help prepare them for competition and encourage them to develop a lifetime commitment to physical fitness. This course is graded on participation and effort; therefore, athletes enrolled are expected to show self-motivation. Once the school year begins, no student is permitted to switch Gym classes. Advanced Gym will serve as the student’s gym class. Students can also take a regular gym class if they choose. [Admittance to class must meet with the PE teacher’s approval and with two different sports coaches’ signatures – Grades 9-12]

52 HEALTH EDUCATION ----- ½ CREDIT

Health education is the process by which individuals and groups of people learn to behave in a manner that is conducive to the promotion, maintenance, and restoration of health. The health education course is designed to supplement and enhance previously learned health knowledge. Through a conceptual approach, the students will be provided with a wide scope of general health and health related issues. The health education field is ever changing. It is very important for students to be aware of the most current health trends and issues. Several class periods throughout the school year will be devoted to current health topics. (Required in Grade 11)

Areas to be studied throughout the school year include:

- First Aid and CPR
- Non-communicable Diseases
- Nutrition and Digestive System
- Reproductive Health
- Communicable Diseases

CPR Certification:

All health education students will have the opportunity to earn their adult, child and infant CPR certification through The American Safety and Health Institute (ASHI). ASHI is an association of professional safety and health educators providing nationally recognized training program across the United States and in several foreign countries. ASHI's mission is to continually improve safety and health education by promoting high standards for members, principles of sound research for curriculum development, and the professional development of safety and health instructors worldwide.

ELECTIVE CREDIT

The Western Wayne School District has an agreement with the local fire companies to provide elective credit for the following courses sponsored by the fire companies:

1. Firefighting I
2. Emergency Medical Technician

The following criteria must be met for this elective credit to be awarded:

1. Proof of membership in the fire company
2. Description of their course
3. Number of hours of instruction
4. Copy of certificate of completion

Upon receipt of this information, one elective credit per course will be entered on the student's transcript with and indication of a "P" (passing) grade. This grade will not be part of the computed grade point average.

SCIENCE DEPARTMENT

The science courses described below have been designed to meet the needs of a diverse student population – college-bound, career-bound, or domestic-bound. Students should be able to find success in one of the career paths available to them. Outstanding student performance can be converted to college credit through an Advanced Placement Chemistry, Advanced Placement Biology, or Advanced Placement Physics course.

531 GENERAL SCIENCE 9----- 1 CREDIT

This course is designed to provide an opportunity to investigate areas of ecological and environmental sciences, as well as biochemistry and how they are an integral part of everyday life. We will investigate the composition, diversity and how living things are connected to earth. The fundamental concept of evolution will lead to investigations into explorations of the living world, the physical environment, and the interactions that occur in and between ecosystems. Biochemistry will involve the study of the molecular composition of living cells, the organization of biological molecules within the cell, and the structure and function of these biological molecules. Students will engage in investigations to understand and explain the behavior of living things in a variety of scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications.

541 INQUIRY BIOLOGY W/LAB----- 1½ CREDIT

This biology will cover topics such as ecology, biochemistry, cell biology, photosynthesis and respiration, molecular and Mendelian genetics, evolution, and diversity of life. The course uses lecture and laboratory methods and is designed for the student with a strong interest in the sciences. Laboratory activities are used extensively throughout this course. [Restrictions: Students earning a credit in **542-Applied Biology** or **541A Inquiry Biology w/Lab Honors** may not take this course for credit]. [Prerequisites: Successful completion of **531-General Science 9**]

541A INQUIRY BIOLOGY W/LAB HONORS----- 1½ CREDIT

This course covers the topics presented in biology at a faster pace and in more detail. The lecture portion of the class will cover topics such as ecology, biochemistry, cell biology, photosynthesis and respiration, molecular and Mendelian genetics, evolution, and diversity of life. Laboratory classes are designed to stimulate student interest and encourage problem solving and discovery. This course is designed for highly motivated academic students of exceptional ability who have a strong interest in science and are willing to investigate biology at a deeper level. Students wishing to take **563-AP Biology** must take this course. Summer work is required. [Prerequisites: Successful completion of **431-Algebra I** (may be taken simultaneously). Proficient or Advanced on the 8th Grade Science PSSA and Reading PSSA or successful completion of General Science 9 with a grade of 90% or better.]

542 APPLIED BIOLOGY W/LAB----- 1 CREDIT

This course in general biology will cover topics such as ecology, biochemistry, cell biology, photosynthesis and respiration, molecular and Mendelian genetics, evolution, and diversity of life. Students are expected to conduct experiments and explorations on a regular basis. [Prerequisites: Successful completion of **531-General Science 9**]

551 CHEMISTRY I W/LAB----- 1½ CREDITS
This is a first-year course in modern chemistry designed to provide the student with basic knowledge of concepts including atomic structure, quantum mechanics, bonding, behavior of gases, chemical reactions, and an understanding of the “mole” concept. This course has a strong emphasis on the application of mathematical concepts in a scientific setting. Students will learn how to utilize the scientific method coupled with dimensional analysis to solve scientific problems. At the end of the course, students should be creative and competent problem solvers. [Prerequisite: **431-Algebra I, 441-Geometry** or **430-Geometry Honors** (may be taken simultaneously), **541-Inquiry Biology w/Lab, 541A-Inquiry Biology w/Lab Honors**, or **542-Applied Biology**, with a grade of 85% or better; **541A-Inquiry Biology w/Lab Honors**, or **541-Inquiry Biology w/Lab** may be taken simultaneously]

551A CHEMISTRY I W/LAB HONORS----- 1½ CREDITS
This is a rigorous, fast-paced course designed for highly motivated students with a strong interest in the math and sciences. This course provides students with in-depth detail of such concepts as matter, atomic structure, quantum mechanics, bonding theory, chemical equations, the periodic table, nomenclature, and the “mole concept”. This class will challenge the student with process and inquiry skills inherent in the study of science. This class will include lecture, as well as, a hands-on laboratory component. Students will be required to maintain a scientific notebook. Students wishing to take **565-AP Chemistry** must take this course. Summer work will be required. [Prerequisites: Successful completion of **421-Algebra I**, with a minimum of 85% or better, **441-Geometry** or **430-Geometry Honors** (may be taken simultaneously); **541-Inquiry Biology w/Lab** or **541A-Inquiry Biology w/Lab Honors** may be taken simultaneously. **Students must pass the Biology Keystone Exam and the Algebra Keystone exam if they have taken these courses.**]

552 APPLIED CHEMISTRY W/LAB----- 1 CREDIT
This course presents a general overview of basic chemistry. Topics include the periodic table, chemical properties, chemical structure, compounds, equations, and reactions. This course introduces students to the basic concepts of chemistry such as the mole, molar mass, and Avogadro’s number. Teacher demonstrations, student laboratories, and student-centered activities are regular parts of the instruction. The course is aimed at providing the student with information, scientific principles, applications, and investigations. It is specifically geared toward non-science/non-math majors. Students who have taken or are taking **551-Chemistry w/Lab** or **551A-Chemistry w/Lab Honors** cannot take this course.

556 ANATOMY & PHYSIOLOGY W/LAB----- 1 CREDIT
This course is designed for college-bound students planning to pursue careers in any of the health-related fields. Students will study the structure and function of human biological systems, the basic chemistry of the human body and cell structure. The course will examine body systems in detail. Offered to 11th or 12th grade students with teacher recommendation. May be taken by 10th grade students who are taking AP Biology simultaneously. [Prerequisite: Successful completion of **541-Inquiry Biology** or **541A-Inquiry Biology w/Lab Honors** or **542-Applied Biology**, with a grade of 85% or better and a Proficient or Advanced score on the Biology Keystone Exam.]

556A ANATOMY & PHYSIOLOGY W/LAB HONORS----- 1 CREDIT
This accelerated course is designed for college-bound students planning to pursue careers in the medical field. This course will be taught at a collegiate level with significant independent work. Students will study the structure and function of human biological systems focusing on the advanced cellular biology that supports each system. The course will examine body systems in detail with a focus on physiology at each level of organization. Dissection and laboratory practical examinations will be emphasized. Summer work may be required. Offered to 11th or 12th grade students with current science teacher recommendation. [Prerequisite: Successful completion of **541-Inquiry Biology** **541A-Inquiry Biology w/Lab Honors**, with a grade of 90% or better and an advanced score on the Biology Keystone. Successful completion of **551-Chemistry I w/Lab** or **551A- Chemistry I w/Lab Honors** with an 85% or better. **551-Chemistry I w/Lab** or **551A-Chemistry I w/Lab Honors** may be taken concurrently with this course.]

561 PHYSICS W/LAB ----- 1½ CREDITS
This is a first-year course in modern physics designed to provide advanced students with basics in the mechanics of work, energy, power, mechanical waves, sound, and electricity. Modern physics and simple machines are also covered in this course. This course prepares the student for college courses by developing cognitive thinking. [Prerequisites: A grade of 80% or better in **431-Algebra I** and **441-Geometry** or **430-Geometry Honors**]

562 GENERAL KEYSTONE SCIENCE-----½ CREDIT
In this course students will further their understanding of biological concepts including basic biological principles, the chemical basis of life, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, and the theory of evolution. This course uses a variety of instructional approaches and laboratory activities to further student understanding in preparation of, as well as remediation for, the Biology Keystone exam. This course is mandatory for any student who does not reach proficiency on the Biology Keystone exam.

563 ADVANCED PLACEMENT BIOLOGY W/LAB----- 1½ CREDITS
The **Advanced Placement Biology** course is designed to be the equivalent of a two-semester college introductory biology course. Topics covered include in-depth review of cell anatomy and physiology, mitosis and meiosis, cellular energetics, heredity and molecular genetics, the anatomy and physiology of plants and animals, and ecology. Primary emphasis is given to developing an understanding of concepts rather than memorizing terms and technical details. Summer work is required. You must have an 85% or higher in this course to be eligible to take the AP exam. [The course is designed for college-bound students planning to major in any of the biological sciences. Prerequisites: **431-Algebra I**; **541A-Inquiry Biology w/Lab Honors** and teacher recommendation; **556-Anatomy & Physiology w/Lab** is recommended but not required. It will help with preparation for the AP exam. **Students must pass the Biology Keystone Exam and the Algebra Keystone Exam.**]

565 ADVANCED PLACEMENT CHEMISTRY W/LAB ----- 1½ CREDITS
Advanced Placement Chemistry is a second-year course in chemistry, designed to provide an opportunity for high school students to receive credit for college-level coursework while still in high school. Topics include structure of matter, kinetic theory of gases, chemical equilibria, chemical kinetics, acid/base chemistry including buffer solutions, electrochemistry, and the basic concept of thermodynamics. Lecture and laboratory work are key components of this college run curriculum. A strong background in math is highly recommended due to the intensive mathematical problems inherent in chemistry concepts. Students are expected to be independent learners and may need to complete subject matter outside of the classroom. Students will be required to maintain a scientific notebook. This course is designed for the college-bound student with a strong interest in science. Summer work is required. You must have an 85% or higher in this course to be eligible to take the AP exam. [Prerequisites: A grade of 90% or better in **431-Algebra I** and **441-Geometry** or **430-Geometry Honors**, **551A-Chemistry w/Lab Honors**. **Students must pass the Biology Keystone Exam and the Algebra Keystone Exam.**]

566 CHEMISTRY LAB TECHNICIAN ----- ½ CREDIT
This is an independent study course in which students are responsible for laboratory preparations. Students will need knowledge of basic chemistry and will need to be able to implement all laboratory safety rules. A thorough chemistry vocabulary and understanding of chemical concepts are required. Students will be required to tutor chemistry with lab students, prepare different solutions of varying concentrations, and identify and locate different glassware and equipment. Students will be responsible for all aspects of laboratory preparations, including safety and proper clean-up. Students will need to be responsible, self-motivated, and be able to follow written instruction. Special projects for community outreach could be part of their tasks. [Prerequisites: **551-Chemistry w/Lab** or **551A-Chemistry w/Lab Honors** with a minimum grade of 85%; Chemistry teacher approval required. Students must score Proficient or Advanced on the Biology Keystone Exam. Students may be asked to complete an independent research project.]

567 BIOLOGY LAB TECHNICIAN----- ½ CREDIT
This is an independent study course in which students are responsible for laboratory preparations. Students will need knowledge of basic biology and chemistry and will need to be able to implement all laboratory safety rules. A thorough biology and chemistry vocabulary and understanding of biology concepts are required. Students may be required to tutor biology with lab students, prepare different reagents, and identify and locate different glassware and equipment. Students will need to be responsible, self-motivated, and be able to follow written instructions. Students must be taking a science concurrently with being a laboratory technician. [Prerequisites: **541-Inquiry Biology with Lab** or **541A-Inquiry Biology w/Lab Honors**; Biology teacher approval; student must have received at least a grade of 85% in **541-Inquiry Biology w/Lab** or **541A-Inquiry Biology w/Lab Honors**. Students must score Proficient or Advanced on the Biology Keystone Exam. Students may be asked to complete an independent research project.]

568 GENERAL SCIENCE LAB TECHNICIAN ----- ½ CREDIT
This is an independent study course in which students are responsible for laboratory preparations. Students will need a basic knowledge of biological and ecological concepts and be able to implement all laboratory safety rules. Students may be required to tutor General Science and General Keystone Science students, prepare labs, and identify and locate all laboratory equipment. Students will need to be responsible, self-motivated and be able to follow written instruction. [Prerequisites: General Science Teacher approval. Completion of 531 General Science with a grade of 85% or higher. Students may be asked to complete an independent research project.]

569 PHYSICS LAB TECHNICIAN ----- ½ CREDIT
This is an independent study course in which students are responsible for laboratory preparations. Students will need knowledge of physics and will need to be able to implement all laboratory safety rules. Students will be responsible for all aspects of laboratory preparations, including safety and proper clean-up. Students will need to be responsible, self-motivated, and be able to follow written instruction. Students may be asked to complete an independent research project. [Physics teacher approval required.]

570 ADVANCED PLACEMENT PHYSICS 1: ALGEBRA-BASED ----- 1½ CREDIT
This course is the equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; mechanical waves and sound. It will also introduce electric circuits. Summer work is required. You must have a 90% or higher in this course to be eligible to take the AP exam. [Prerequisites: A grade of 90% or better in **431-Algebra I** and **441-Geometry** or **430-Geometry Honors**, **531-General Science 9** and **541-Inquiry Biology w/Lab** or **541A Inquiry Biology w/Lab Honors**] **450-Pre-Calculus** or **450A-Pre-Calculus Honors** (must be taken simultaneously). **Students must pass the Biology Keystone Exam and the Algebra Keystone Exam.**

571 ADVANCED PLACEMENT PHYSICS 2: ALGEBRA-BASED ----- 1½ CREDIT
This course is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics, atomics and nuclear physics. Summer work is required. You must have a 90% or higher in this course to be eligible to take the AP exam. [Prerequisites: A grade of 90% or better in **570-AP Physics 1: Algebra-Based**; **431-Algebra I** and **441-Geometry** or **430-Geometry Honors**] **460-Calculus** or **461-AP Calculus** (must be taken simultaneously). **Students must pass the Biology Keystone Exam and the Algebra Keystone Exam.**

SOCIAL STUDIES DEPARTMENT

The Social Studies Department offers a multi-cultural program in all areas of social studies including history, political science, economics, psychology, and geography. Four credits of Social Studies are required for graduation. Students are expected to become proficient in critical thinking and analysis, and to develop a better understanding of the world around them.

230 AMERICAN CULTURES II----- 1 CREDIT
This course is a survey of the history and culture of the Americas, beginning with the U.S. Constitution through the 1800s. In-depth studies are conducted on important historical concepts, economic foundations, and cause-effect relationships, so that the student will better understand the complexities of historical events. The geography of the Western Hemisphere is also incorporated, as it affects the living patterns of those who live there.

230A AMERICAN CULTURES II HONORS----- 1 CREDIT
This course is a survey of the history and culture of the Americas, beginning with the U.S. Constitution through the 1800s. In-depth studies are conducted on important historical concepts, economic foundations, and cause-effect relationships, so that the student will better understand the complexities of historical events. The geography of the Western Hemisphere is also incorporated, as it affects the living patterns of those who live there. This course has an emphasis on writing and primary source analysis at an accelerated pace and will prepare students for the AP US History class. [Prerequisite: Social Studies teacher recommendation and grades will be considered for admission. Summer reading will be assigned.]

240 AMERICAN CULTURES III----- 1 CREDIT
The course begins in the 20th Century, and continues to the present, with emphasis on the social, political, and economic history of our country. The course includes a study of the rise of big business, the growth of big cities, and organization of labor, then the rise of America as a world power with the Spanish-American War and World War I. The prosperity of the 20's, the Depression, and Roosevelt's New Deal are studied with world problems, leading up to World War II. The national and international problems after World War II are considered, concluding with the present-day conditions in America. [Prerequisite: **230–American Cultures II**]

240A ADVANCED PLACEMENT US HISTORY ----- 1 CREDIT
The course begins in the 20th Century, and continues to the present, with emphasis on the social, political, and economic history of our country. The course includes a study of the rise of big business, the growth of big cities, and organization of labor, then the rise of America as a world power with the Spanish-American War and World War I. The prosperity of the 20's, the Depression, and Roosevelt's New Deal are studied with world problems, leading up to World War II. The national and international problems after World War II are considered, concluding with the present-day conditions in America. This course has an emphasis on writing and primary source analysis at an accelerated pace. Social Studies teacher recommendation and grades will be considered for admission. Summer reading will be assigned.

250 WORLD CULTURES----- 1 CREDIT
In this course the student will acquire knowledge of world history from the Renaissance to the present. Emphasis will be upon topics such as: the Italian Renaissance, Reformation, scientific revolutions, European monarchies, French Revolution, Asian empires, Russian revolutions, British Empire, South American independence movements, imperialism in Africa, African independence, Asian governments and change, Vietnam War, and the modern U.S.

255 ADVANCED PLACEMENT WORLD HISTORY ----- 1 CREDIT
This one-credit course is designed for Advanced Placement juniors seeking college credit in the area of world history. This course is a rigorous, challenging, accelerated study in the following areas: change and continuity from 8,000 BCE to the present; impact of interaction among and within major societies; impact of technology, economics, and demographics on people and the environment; cultural, religious, and intellectual developments among and within societies; and changes in functions and structures of states. [Prerequisite: Minimum 90% average in previous social studies course with teacher recommendation. Required summer work will be assigned.]

260 AMERICAN GOVERNMENT & ECONOMICS ----- 1 CREDIT
This is a full-year course that is required of all seniors. Part of the year is devoted to the study of American government and part is used to explore the world of economics. The government portion of the course will emphasize the foundations of our national government with an in-depth analysis of the three branches of the United States federal government. The economics portion of the course will cover the foundations of capitalism and U.S. economic policy in world affairs. The combined course accounts for one full credit.

261 PSYCHOLOGY ----- ½ CREDIT
Psychology concerns itself with the study of the human mind and attempts to explain why people behave the way they do. The objectives of the course are to introduce students to psychological theories and show how they can relate them to their own lives, instruct students in the use of problem-solving techniques that will aid them in everyday living and demonstrate how human behavior can and does change during various transition periods. The student will develop a future-oriented perspective, as well as increased self-understanding, and be able to relate more effectively to others after taking the course. [Prerequisite – at least an 85% average in two years of Social Studies; open to Juniors/Seniors only]

262 ADVANCED PLACEMENT PSYCHOLOGY ----- 1 CREDIT
The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatments of psychological disorders, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, evaluate claims and evidence, and effectively communicate ideas. Students may take the AP Psychology exam. (Open to Juniors/Seniors only) [Prerequisite: Completion of Social Studies and English classes with a 95% or AP/Honors Social Studies and English classes with a 90% and department approval. Required summer work will be assigned.]

265 ADVANCED PLACEMENT UNITED STATES GOVERNMENT & POLITICS ----- 1 CREDIT
This one credit course is designed for senior Advanced Placement students seeking college credit in the area of United States government. Emphasis is placed on an intensive investigation and thorough understanding of the functioning of our national government, its constitutional foundations, civil liberties and civil rights, as well as the role of political parties and interest groups in our society. Students may take the AP United States Government and Politics exam. [Prerequisite: Social Studies Department recommendation. Required summer work will be assigned.]

TECHNOLOGY & ENGINEERING DEPARTMENT

Technology and engineering courses are available to all students on an elective basis. The courses are designed to allow the student to investigate the various areas in STEAM (Science, Technology, Engineering, Arts and Mathematics) along with the industrial field with experiences in woodworking, metalworking, graphic processes, building trades, computer-aided drafting, engineering, video production, electrical concepts, robotics, computer-aided machining, and auto mechanics. This includes core academic concepts and computer experiences relative to the trade area throughout the curriculum. The department suggests that students planning careers in this area should follow the career pathways outlined in this book. Students interested in the engineering fields of study, should follow the engineering pathway recommendation(s) along with high level math and science courses including physics and statistics. If students fail a particular course, students will be required to take a year out of that area and reconsider their options.

- 724 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY** ----- 1 CREDIT
This course is designed to provide a survey of topics that are part of the Automotive Technologies Career Pathway. Ideally, participation in this course is intended for students who wish obtain employment in the Automotive Technology fields of Mechanics, Automotive Technicians, Autobody Repair, Collision Repair, Automotive Detailing/Restoration, Estimate Services, Medium/Heavy Vehicle Technician and Diesel Mechanics. (Open to Grade 9)
- 734 AUTO TECHNOLOGIES I** ----- 2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge of general mechanical technologies. The progression of the course will prepare students to obtain several credentials. Topics covered include, but are not limited to, safety, tools, suspension and steering, brakes, electronic systems, engine performance, engine repair, automatic transmission, power train, and automotive heating and air conditioning. This class is open to students who are enrolled in the **Automotive Technology Career Pathway**. (Open to Grade 10)
- 744 AUTO TECHNOLOGIES II** ----- 2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge and skills of autobody/collision and repair technologies. The progression of the course will prepare students to obtain several credentials. Topics covered include safety, vehicle design and construction, panel replacement and alignment, trim and hardware, metal finishing, body fillers, glass and hardware, damage analysis, structural component repair, corrosion protection, welding, cutting processes, refinishing equipment and safety, automotive finishes, surface preparation, refinishing equipment and operations, blending, detailing, estimating damage analysis, plastic repairs, and restraint systems. This class is open to students who are enrolled in the **Automotive Technology Career Pathway**. (Open to Grade 11)
- 754 AUTO TECHONOLOGIES III** ----- 2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge and skills of medium/heavy vehicle and truck technology, including diesel mechanics. The progression of the course will prepare students to obtain several credentials. Topics covered include safety, tools, fasteners, hardware, suspension and steering systems, preventative maintenance, brake systems, diesel engines, air intake and exhaust systems, cooling systems, fuel systems, electronic systems, and drive line. This class is open to students who are enrolled in the **Automotive Technology Career Pathway**. (Open to Grade 12)

730 INTRODUCTION TO MANUFACTURING TECHNOLOGIES ----- 1 CREDIT
This course is designed to provide a survey of topics that are part of the Manufacturing Technologies Career Pathway. Ideally, participation in this course is intended for students who wish obtain employment in the Manufacturing Technologies fields of welding technology, machinist/machine tool technology, electronic engineering, communications engineering, electromechanical technology, drafting and design technologies, and additive manufacturing. (Open to Grade 9)

735 MANUFACTURING TECHNOLOGIES I ----- 2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge and skills of drafting and design, logistics, materials & supply chain management, and engineering technologies. The progression of the course will prepare students to obtain several credentials. Topics covered include introduction to drafting and design, geometric construction, freehand drawing and sketching, introduction to engineering math, introduction to mechanical drawing and design, dimensioning, introduction to architecture, introduction to civil drafting, introduction to electronic drafting, CAD, ergonomics, inventory management, procurement operations, receiving, storage and put-away, order fulfillment, packing, shipping and transportation, management, economics, knowledge of engineering, ethics of engineering, teamwork, engineering graphics, engineering problem solving and design process, modeling, manufacturing and industrial systems, manufacturing processes, CAM, power and energy, mechanical advantage and mechanisms, fluid power systems, green energy, machine controls and automated systems, properties of materials, statics and dynamics,, kinematics, total quality control, and precision measurement for industry. This class is open to students who are enrolled in the **Manufacturing Technology Career Pathway**. (Open to Grade 10)

771 MANUFACTURING TECHNOLOGIES II ----- 2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge and skills of machinist, metal working and welding technologies. The progression of the course will prepare students to obtain several credentials. Topics covered include safety, principals of welding, weld symbol interpretation, welding drawing, shielded metal arc welding, gas metal arc welding, flux corded arc welding, gas tungsten arc welding, manual oxy-fuel gas cutting, mechanized plasma, manual plasma arc cutting, layout work, part inspection, bench work, drill presses, grinding machines, lathes, milling machines, power saw, machine maintenance, metallurgy, reading charts, references and blueprints, and CNC programming. This class is open to students who are enrolled in the **Manufacturing Technology Career Pathway**. (Open to Grade 11)

772 MANUFACTURING TECHNOLOGIES III2 CREDITS
This two-credit course is intended to provide theoretical and practical knowledge and skills of electromechanical technician and electronic engineering. The progression of the course will prepare students to obtain several credentials. Topics covered include safety, basic electricity, electrical reporting, electronic systems measurement, National Electrical Code, electrical resistance, DC motors, basic logic functions, Programmable Logic Controllers', robotics, electrical quantities and components, instrumentation, Ohm's Law/power, series circuits, parallel circuits, series-parallel circuits, alternating current, oscilloscope, inductance, inductive reactance, RI circuits, AC current, transformers, capacitance, capacitive reactance, RC circuits, resistor-inductor-capacitor circuits, resonance, soldering, resoldering, diodes, power supplies, transistor characteristics, small signal amplifiers, operational amplifiers, basic digital electronics, troubleshooting, electronic communications, motors, microcontrollers, and history of electronics. This class is open to students who are enrolled in the **Manufacturing Technology Career Pathway**. (Open to Grade 12)

745 CONSTRUCTION TRADES I ----- 1 CREDIT
This one credit course is intended for general introduction to the knowledge and skills in the areas of plumbing, carpentry, masonry, and electrical work. This course is available to any **9, 10, 11, or 12 grade students** to fulfill an elective credit.

755 CONSTRUCTION TRADES II ----- 1 CREDIT
This course is designed to challenge the students to become trades people in residential construction trades. The students will be challenged by completing projects related to woodworking related to cabinetry, carpentry concepts of roof framing, electrical, plumbing, and masonry building code / estimation experiences. [Prerequisite: Construction Trades I]

720 VEHICLE MAINTENANCE ----- ½ CREDIT
This half credit course is intended for general introduction to the knowledge and skills in the areas of vehicle systems, measurement, trade related mathematics, tools, engines, and parts. This course is available to any **9, 10, 11, or 12 grade students** to fulfill an elective credit.

722 METAL TECHNOLOGIES ----- 1 CREDIT
This one credit course is intended for general introduction to the knowledge and skills in the areas of welding, machinery, layout work and part inspection. This course is available to any **9, 10, 11, or 12 grade students** to fulfill an elective credit.

732 ENGINEERING ----- 1 CREDIT
This one credit course is intended for general introduction to the knowledge and skills in the areas of drafting, design drawing, CAD, and robotics. This course is available to any **9, 10, 11, or 12 grade students** to fulfill an elective credit.

723 VISUAL COMMUNICATIONS I----- 1 CREDIT
This introductory course is designed to provide experiences with basic graphic arts process and photography. Students will be introduced to the fundamentals of design/desktop publishing, layout, pre-press operations, offset processes, post-press operations, some of which will relate to academic or business classes, and the skills of photography in camera operation, producing film and prints.

782 VIDEO PRODUCTION ----- 1 CREDIT
This course provides an introductory overview of the techniques, editing, and producing of video mediums. This course is an introduction to television studio and field production. The course will acquaint students with the technical and aesthetic concepts involved in successful studio and field production. Students will develop skills through a series of in-class and limited after-class exercises. The course will also require the students to capture, develop, orchestrate, operate, and deliver video mediums within the high school domain. [Prerequisite: **723-Visual Communications I**; Limited seating available; open to grades 10-12]

786 VIDEO BROADCASTING ----- 2 CREDITS
This course provides a more comprehensive overview of the techniques, editing, and producing of video mediums. This course is a continuation of television studio and field production. The course will acquaint students with the technical and aesthetic in-class and limited after-class exercises. The course will also require the students to capture, develop, orchestrate, operate, and deliver an in-house news medium within the high school domain. [Prerequisite: **723-Visual Communications I**; **782-Video Production**; limited seating; open to grades 11-12]



WESTERN WAYNE
SCHOOL DISTRICT

MATH/SCIENCE CAREER PATH

SUBJECT	#	9 TH GRADE	#	10 TH GRADE	#	11 TH GRADE	#	12 TH GRADE				
ENGLISH	130	English 9	1	140	American Lit.	1	<i>Select One:</i> 155 Multicultural Lit. 155A Multicultural Lit. HR 156 AP Lang. & Comp.	<i>Select One:</i> 166 Brit. Lit. 166A Brit. Lit. HR 165 AP Literature & Comp. 170 Technical Writing				
	130A	English 9 HR	1	140A	American Lit. HR	1						
SOCIAL STUDIES	230	Amer. Cult. II	1	240	Amer. Cult. III	1	250 World Cult. 255 AP World History	<i>Select One:</i> 260 Am. Gov/Economics 265 AP US Government				
	230A	Amer. Cult. II HR	1	240A	AP US History	1						
MATH	431	<i>Select One:</i> Algebra I	1	441	<i>Select One:</i> Geometry	1	<i>Select One:</i> 451 Algebra II 450 Pre Calculus 450A AP Pre-Calculus 453 Statistics	<i>Select One:</i> 453 Statistics 460 Calculus 465 AP Calculus				
	430	Geometry HR	1	440	Algebra II HR	1						
	441	Geometry	1	451	Algebra II	1						
SCIENCE	Option #1 →	531	Gen. Science 9	1	541	Inq. Biology w/Lab or Inq. Biology w/Lab H (<i>Biology required if not taken in 9th grade</i>)	1 ½	551 Chemistry w/Lab or 551A Chemistry w/Lab HR or 563 AP Bio w/Lab	<i>Select One:</i> 563 AP Biology w/Lab 561 Physics w/Lab 570 AP Physics 1:Alg.-Based 571 AP Physics 2:Alg.-Based			
					541A	Inq. Bio. w/Lab HR	1 ½			565 AP Chem. w/Lab and 561 Physics w/Lab or 570 AP Physics 1:Alg.-Based	565 Chemistry w/Lab 1 ½	
	Option #2 →	541A	Inq. Bio. w/Lab HR	1 ½	551	Chem. w/Lab or 551A Chem. w/Lab HR and/or 563 AP Biology w/Lab	1 ½	565	Chemistry w/Lab			1 ½
	<i>OTHER SCIENCE OPTIONS SHOULD BE DISCUSSED WITH GUIDANCE AND THE SCIENCE DEPARTMENT</i>											
	LANGUAGE	330	<i>Select One:</i> French I	1	333	<i>Select One:</i> German II	1	<i>Students may select additional language credits as electives.</i>	<i>Students may select additional language credits as electives.</i>			
331		Spanish I	1	340	French II	1						
332		German I	1	341	Spanish II	1						
341A		Spanish II	1	351	Spanish III	1						
PHYS. ED	40	Boys PE	½	40	Boys PE	½	60	Boys PE	½	60	Boys PE	½
	41	Girls PE	½	41	Girls PE	½	61	Girls PE	½	61	Girls PE	½
	99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½
OTHER	825	Career Explorations		665	Personal Finance	½	52	Health	½			

ARTS/HUMANITIES CAREER PATH

SUBJECT	#	9 TH GRADE		#	10 TH GRADE		#	11 TH GRADE		#	12 TH GRADE		
ENGLISH	130	English 9	1	140	American Lit.	1	155 155A 156	<i>Select One:</i> Multicultural Lit. Multicultural Lit. HR AP Lang. & Comp.	1 1 1	166 166A 165 170	<i>Select One:</i> British Lit. British Lit. HR AP Literature & Comp. Technical Writing	1 1 1 1	
	130A	English 9 HR	1	140A	American Lit. HR	1							
SOCIAL STUDIES	230	Amer. Cult. II	1	240	Amer. Cult. III	1	250 255	World Cult. AP World History	1 1	260 265	<i>Select One:</i> Am. Gov/Economics AP US Government	1 1	
	230A	Amer. Cult. II HR	1	240A	AP US History	1							
MATH	432	<i>Select One:</i> Algebra A	1	431	<i>Select One:</i> Algebra I	1	441 443 450 451 453 450A	<i>Select One:</i> Geometry Applied Geometry Pre Calculus Algebra II Statistics AP Pre-Calculus	1 1 1 1 1 1	<i>For Math selections see course descriptions.</i>			
	431	Algebra I	1	442	Algebra B	1							
	430	Geometry HR	1	441	Geometry	1							
	441	Geometry	1	440	Algebra II HR	1							
				443	Applied Geometry	1							
				451	Algebra II	1							
SCIENCE	531	Gen. Science 9	1	541	Inq. Biology w/Lab or Inq. Bio. w/ Lab HR or Applied Bio. w/Lab (Biology required if not taken in 9 th grade)	1 ½	551 551A 552 563	Chemistry w/Lab or Chemistry w/Lab HR or Applied Chemistry w/Lab or AP Bio w/Lab	1 ½ 1 ½ 1 1 ½	<i>For Science selection see course descriptions.</i>			
				541A	1 ½								
				542	1								
				541A	1 ½								
				541A	1 ½								
	Option #1 →			551	Chem. w/Lab or Chem. w/Lab HR and/or AP Biology w/Lab	1 ½	565 561 570	AP Chem. w/Lab and Physics w/Lab or AP Physics 1:Alg.-Based	1 ½ 1 ½ 1 ½				
	Option #2 →	541A	Inq. Bio. w/Lab HR	1 ½	551	Chem. w/Lab							1 ½
				551A	Chem. w/Lab HR and/or	1 ½							
				563	AP Biology w/Lab	1 ½							
<i>OTHER SCIENCE OPTIONS SHOULD BE DISCUSSED WITH GUIDANCE AND THE SCIENCE DEPARTMENT</i>													
LANGUAGE	330	French I	1	333	German II	1	<i>Students may select credits as electives.</i>			<i>Students may select credits as electives.</i>			
	331	Spanish I	1	340	French II	1							
	332	German I	1	341	Spanish II	1							
	341A	Spanish II	1	351	Spanish III	1							
PHYS. ED	40	Boys PE	½	40	Boys PE	½	60	Boys PE	½	60	Boys PE	½	
	41	Girls PE	½	41	Girls PE	½	61	Girls PE	½	61	Girls PE	½	
	99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½	
OTHER	825	Career Explorations	½	665	Personal Finance	½	52	Health	½				

BUSINESS/TECHNOLOGY CAREER PATH

SUBJECT	#	9 TH GRADE		#	10 TH GRADE		#	11 TH GRADE		#	12 TH GRADE																								
ENGLISH	130	English 9	1	140	American Lit.	1	155 155A 156	<i>Select One:</i> Multicultural Lit. Multicultural Lit. HR AP Lang. & Comp.	1 1 1	166 166A 165 170	<i>Select One:</i> British Lit. British Lit. HR AP Literature & Comp. Technical Writing	1 1 1 1																							
	130A	English 9 HR	1	140A	American Lit. HR	1																													
	230	Amer. Cult. II	1	240	Amer. Cult. III	1							250	World Cult.	1	260 265	<i>Select One:</i> Am. Gov/Economics AP US Government	1 1																	
	230A	Amer. Cult. II HR	1	240A	AP US History	1							255	AP World History	1																				
MATH	432 431 430 441	<i>Select One:</i> Algebra A Algebra I Geometry HR Geometry		431 442 441 440 443 451	<i>Select One:</i> Algebra I Algebra B Geometry Algebra II HR Applied Geometry Algebra II		441 443 451 453 450 450A	<i>Select One:</i> Geometry Applied Geometry Algebra II Statistics Pre-Calculus AP Pre-Calculus		1 1 1 1 1 1	<i>For Math selections see course descriptions.</i>																								
		SCIENCE	531		Gen. Science 9	1		541	Inq. Biology w/Lab or Inq. Bio. w/ Lab HR or Applied Bio. w/Lab (<i>Biology required if not taken in 9th grade</i>)				1 ½ 1 ½ 1	551 551A 552 563	Chemistry w/Lab or Chemistry w/Lab HR or Applied Chemistry w/Lab or AP Bio w/Lab	1 ½ 1 ½ 1 1 ½	<i>For Science selection see course descriptions.</i>																		
																			Option #1 →	541A	Inq. Bio. w/Lab HR	1 ½	551A	Chem. w/Lab HR and/or AP Biology w/Lab	1 ½ 1 ½	565 561 570	AP Chem. w/Lab and Physics w/Lab or AP Physics 1:Alg.-Based	1 ½ 1 ½ 1 ½							
																													Option #2 →	551	Chem. w/Lab or Chem. w/Lab HR and/or AP Biology w/Lab	1 ½ 1 ½	565 561 570	AP Chem. w/Lab and Physics w/Lab or AP Physics 1:Alg.-Based	1 ½ 1 ½ 1 ½
																			<i>OTHER SCIENCE OPTIONS SHOULD BE DISCUSSED WITH GUIDANCE AND THE SCIENCE DEPARTMENT</i>																
																			LANGUAGE	<i>Students may select credits as electives.</i>				<i>Students may select credits as electives.</i>				<i>Students may select credits as electives.</i>				<i>Students may select credits as electives.</i>			
																			PHYS. ED	40	Boys PE	½	40	Boys PE	½	60	Boys PE	½	60	Boys PE	½				
		41	Girls PE		½	41		Girls PE	½				61	Girls PE	½	61	Girls PE	½																	
99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½	99	Advanced Gym	½																								
OTHER	825	Career Explorations	½	665	Personal Finance	½	52	Health	½																										

ART CAREER PATHWAY

SUBJECT	#	9 TH GRADE	#	10 TH GRADE	#	11 TH GRADE	#	12 TH GRADE				
DESIGN	935	Art Foundations & Visual Communications I	1	940	Studio Art I	1	744	Studio Art II	1	754	Studio Art III & Architectural/3D Mechanical Drawing & Design &/or Entrepreneurship	1
	723		1			1			1	771		2
FINE ART	935	Art Foundations & Digital Photography I	1	940	Studio Art I &/or Mixed Media Design &/or Digital Photography II	1	744	Studio Art II & Watercolor Design	1	963	Advanced Studio Art	2
	955		½	946		½	945		½			
				956		½						
CERAMICS	920	Introduction to Ceramics	½	943	Ceramics I	½	944	Ceramics II	½	961	Ceramics III	½

FAMILY & CONSUMER SCIENCE CAREER PATHWAY

SUBJECT	#	9 TH GRADE	#	10 TH GRADE	#	11 TH GRADE	#	12 TH GRADE				
HOSPITALITY & FOOD DESIGN	835	Basic Foods & Art Foundations	1	851	Gourmet Foods & Studio Art I	1	840	Culinary Pastry Arts & Visual Communications I	1	861	Advanced Cooking & Entrepreneurship	1
	935		1	940		1	733		1	654		1
HOSPITALITY & CULINARY	835	Basic Foods & Visual Communications I	1	851	Gourmet Foods & Introduction to Business	1	840	Culinary Pastry Arts & Accounting I	1	861	Advanced Cooking & Accounting II	1
	723		1	642		1	733		1	661		1
FASHION	833	Introduction to Sewing & Visual Communications I	1	843	Textile & Design & Art Foundations	1	744	Fashion Exploration & Entrepreneurship &/Or Accounting I	1	864	Creative Construction & Marketing &/Or Fashion Marketing	1
	723		1	935		1	945		1	655		1
CHILD CARE	862	Family Development &/Or Basic Foods	1	844	Child Development I &/Or Family Development &/Or Accounting I	1	855	Child Development II & Entrepreneurship	1	865	Child Development III & Marketing	3
	835		1	862		1	654		1	655		1
				651		1						

BUSINESS CAREER PATHWAY

SUBJECT	#	9 TH GRADE	#	10 TH GRADE	#	11 TH GRADE	#	12 TH GRADE				
OFFICE MANAGEMENT	642	Introduction to Business	1	651	Accounting I	1	664	Business Communications & Procedures & Marketing	1	643	Business & Personal Law & Entrepreneurship	1
							655		1	654		1
BUSINESS MANAGEMENT & ACCOUNTING	642	Introduction to Business	1	651	Accounting I	1	661	Accounting II & Marketing	1	664	Business Communications & Procedures & Entrepreneurship	1
							655		1	654		1

MUSIC CAREER PATHWAY

SUBJECT	#	9 TH GRADE	#	10 TH GRADE	#	11 TH GRADE	#	12 TH GRADE				
Music Education	925	Band & Chorus & Foreign Language	1	925	Band & Chorus & Foreign Language	1	925	Band & Chorus & Music Theory 1	1	925	Band & Chorus & Music Theory II & Stage Crew	1
	927		½	927		½	926		1	926		1
			1			1	971		½	974		½
Music Performance	925	Band & Chorus & Foreign Language & Music Theory I	1	925	Band & Chorus & Foreign Language & Music Theory II	1	925	Band & Chorus & Music theory III & Stage Crew	1	925	Band & Chorus	1
	926		1	926		1	926		1	926		1
	971		½	974		½	979		½	931	Stage Crew	½
Music Theater	926	Chorus & Stage Crew & Foreign Language	1	926	Chorus & Stage Crew & Music Theory I	1	926	Chorus & Theater Arts & Music Theory II	1	926	Chorus & Theater Arts & Stage Crew	1
	931		½	931		½	928		½	928		½
			1			1	974		1	931		1
Music Therapy	925	Band & Chorus & Foreign Language	1	925	Band & Chorus & Music Theory I & Foreign Language	1	925	Band & Chorus & Music Theory II & Anatomy & Physiology	1	925	Band & Chorus & Music Theory III & Psychology	1
	926		1	926		½	926		1	926		½
			1	971		1	974		½	979		½
Light/Sound Tech	931	Stage Crew & Visual Comm. I & Theater Arts	½	931	Stage Crew & Theater Arts	½	931	Stage Crew & Video Productions	½	931	Stage Crew & Video Broadcasting & Digital Photography I	½
	723		1	928		½	782		1	786		2
	928		½							955		½
Scenery Designer	931	Stage Crew & Art Foundations & Visual Comm. I	½	931	Stage Crew & Mixed Media Design	½	931	Stage Crew &/or Digital Photography I	½	931	Stage Crew & Digital Photography II	½
	935		1	946		½	955		½	956		½
	723		1									

ELECTIVES

9 th Grade	10 th Grade	11 th Grade	12 th Grade
<p>935-Art Foundations (1) 925-Band (1) 835-Basic Foods (1) 926/927-Chorus (1, ½) 976-Computer Science I: Networking Essentials, Cisco Support Technician Cybersecurity/Networking, Basic Programming in Python/C+ (2) 977-Computer Science II: Advanced Programming JavaScript and C++ (2) 978-Computer Science III Cisco Certified Network Administrator Training Program (3) 745-Construction Trades I (1) 175-Creative Writing (½) 975-Digital Literacy, IT Essentials, and Microsoft Office Specialist (1) 955-Digital Photography I (½) 732-Engineering (1) 862-Family Development (1) 330-French I (1) 332-German I (1) 724-Intro to Auto Tech (1) 642-Intro to Business (1) 920-Intro to Ceramics (½) 730-Intro to Manufacturing (1) 833-Intro to Sewing (1) 722-Metal Technologies (1) 971-Music Theory I (½) 331-Spanish I (1) 931-Stage Crew (½) 928-Theater Arts (½) 720-Vehicle Maintenance (½) 723-Visual Communications I (1)</p>	<p>9th Grade Electives plus: 651-Accounting I (1) 734-Auto Technologies I (2) 567-Biology Lab Tech (½) 643-Bus. & Personal Law (1) 943-Ceramics I (½) 844-Child Development I (1) 755- Construction Trades II (1) 840-Culinary Pastry Arts (1) 956-Digital Photography II (½) 340-French II (1) 568-General Science Lab Tech (½) 333-German II (1) 851-Gourmet Foods (1) 735-Manufacturing Technologies I (2) 732-Metal Tech I (1) 946-Mixed Media Design (½) 974-Music Theory II (½) 981-SAT Prep Math (½) 980-SAT Prep Critical Reading (½) 341-Spanish II (1) 940-Studio Art I (1) 843-Textile & Design (1) 945-Watercolor Painting (½) 782-Video Production (1)</p>	<p>9th & 10th Grade Electives plus: 661-Accounting II (1) 563-AP Biology/Lab (1½) 156-AP English Lang./Comp. (1) 570-AP Physics I: Algebra-Based 262-AP Psychology 255-AP World History (1) 556-Anatomy & Phys. (1) 556A-Anatomoy & Phys. Honors (1) 744-Auto Technologies II (2) 664-Bus. Comm. & Procedures (1) 944-Ceramics II (½) 755-Construction Trades I (2) 855-Child Development II (1) 654-Entrepreneurship (1) 659-Fashion Marketing (½) 863-Fashion Exploration (1) 852-FCS Lab Technician (½) 771-Manufacturing Technologies II (2) 979-Music Theory III (½) 821-Nutrition & Wellness (1) 261-Psychology (½) 351-Spanish III (1) 657-Sports & Entertaining Marketing (½) 655-Marketing (1) 950-Studio Art II (1) 786-Video Broadcasting (2)</p>	<p>9th, 10th & 11th Grade Electives plus: 861-Advanced Cooking (1) 963-Advanced Studio Art (2) 465-AP Calculus (1) 565-AP Chemistry (1½) 165-AP English Lit./Comp. (1) 571-AP Physics 2: Algebra-Based (1½) 365-AP Spanish Language & Culture (1) 255-AP World History (1) 754-Auto Technologies III (2) 961-Ceramics III (½) 566-Chemistry Lab Tech (½) 865-Child Development III (1) 864-Creative Construction (1) 772-Manufacturing Technologies III (2) 569-Physics Lab Tech (½) 361-Spanish IV (1) 962-Studio Art III (1)</p>

Western Wayne School District is an equal opportunity educational institution and will not discriminate on the basis of race, color, national origin, sex, and handicap in its activities, programs, or employment practices as required by Title VI, Title IX, and Section 504.

What are Career Clusters?



The sixteen Career Clusters were developed to relate occupations to broad industries. Within each cluster are several “pathways,” which provide a more focused category within the cluster. These are useful to educators, industry groups, employers, parents, and others. Some occupations will occur in more than one cluster or pathway.

Career Clusters prepare all students
for colleges and careers.

Educators helping students learn career management skills can encourage students to explore a range of career options by focusing attention on broad areas (clusters or pathways), rather than specific occupations. Since each cluster includes occupations with a range of skill and training requirements, students can concentrate on groups of occupations most suitable to their individual needs.

Skills and knowledge required for the occupations in each cluster have been identified. This information can be used by educators to help ensure that students are acquiring the qualifications they need for employment and by industry groups and employers to help structure job descriptions and employee training programs. Parents can use cluster information to learn about qualifications and training and to help their children explore career possibilities.



For more information on Career Clusters, visit the
States' Career Clusters web site at:

<https://careertech.org/career-clusters/>

16 USDOE Career Clusters - Brief Descriptions

	<p>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</p>
	<p>Careers in designing, planning, managing, building and maintaining the built environment.</p>
	<p>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</p>
	<p>Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</p>
	<p>Planning, managing and providing education and training services, and related learning support services.</p>
	<p>Planning, services for financial and investment planning, banking, insurance, and business financial management.</p>
	<p>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</p>
	<p>Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</p>
	<p>Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services.</p>
	<p>Preparing individuals for employment in career pathways that relate to families and human needs.</p>
	<p>Building Linkages in IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.</p>
	<p>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</p>
	<p>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</p>
	<p>Planning, managing, and performing marketing activities to reach organizational objectives.</p>
	<p>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</p>
	<p>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</p>

81 Pathways within the 16 USDOE Career Clusters

	<p>Food Products and Processing Systems; Plant Systems; Animal Systems; Power, Structural & Technical Systems; Natural Resources Systems; Environmental Service Systems and Agribusiness Systems</p>
	<p>Design/Pre-Construction; Construction and Maintenance/Operations</p>
	<p>Audio and Video Technology and Film; Printing Technology; Visual Arts; Performing Arts; Journalism and Broadcasting and Telecommunications</p>
	<p>Administration; Management; Business Financial Management & Accounting; Human Resources; Business Analysis; Marketing and Administrative & Information Support</p>
	<p>Administration and Administrative Support; Professional Support Services and Teaching/Training</p>
	<p>Financial & Investment Planning; Business Financial Management; Banking & Related Services and Insurance Services</p>
	<p>Governance; National Security; Foreign Service; Planning; Revenue and Taxation Regulation and Public Management and Administration</p>
	<p>Therapeutic Services; Diagnostic Services; Health Informatics; Support Services and Biotechnology Research and Development</p>
	<p>Restaurants and Food/Beverage Services; Lodging; Travel & Tourism and Recreation, Amusements & Attractions</p>
	<p>Early Childhood Development & Services; Counseling & Mental Health Services; Family & Community Services; Personal Care Services and Consumer Services</p>
	<p>Network Systems; Information Support and Services; Interactive Media and Programming and Software Development</p>
	<p>Correction Services; Emergency and Fire Management Services; Security & Protective Services; Law Enforcement Services and Legal Services</p>
	<p>Production; Manufacturing Production Process Development; Maintenance, Installation & Repair; Quality Assurance; Logistics & Inventory Control and Health, Safety and Environmental Assurance</p>
	<p>Management and Entrepreneurship; Professional Sales and Marketing; Buying and Merchandising; Marketing Communications and Promotion; Marketing Information Management and Research; Distribution and Logistics and E-Marketing</p>
	<p>Engineering and Technology and Science and Math</p>
	<p>Transportation Operations; Logistics Planning and Management Services; Warehousing and Distribution Center Operations; Facility and Mobile Equipment Maintenance; Transportation Systems/Infrastructure Planning, Management and Regulation; Health, Safety and Environmental Management and Sales and Service</p>

