

# SPRING-FORD AREA HIGH SCHOOL

## 2024-2025 COURSE SELECTION GUIDE

GRADES 9-12



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## **SFASD MISSION STATEMENT**

Spring-Ford Area School District strives to be educationally relevant, focused on achievement and growth, and have a priority on people so that students are fully prepared to positively contribute to their society.

## **SFASD VISION STATEMENT**

Spring-Ford Area School District will be the district that every parent would choose as their child's educational provider.

## **SPRING-FORD AREA HIGH SCHOOL: Goals**

1. Continue the development of essential learning.
2. Select academic challenges, choose co-curricular activities, and examine vocational opportunities which best meet a students' individual needs and interests.
3. Develop attitudes and values, which promote self-discipline and responsible citizenship.
4. Develop the self-confidence and self-esteem necessary for independent thought and action.
5. Recognize student potential and strive to achieve it.
6. Understand students' democratic heritage, with its balance of privilege, duty, and responsibility.
7. Acquire good health and safety practices conducive to student well-being.
8. Study and learn in a safe, supportive, and pleasant school environment.

## **NON-DISCRIMINATION UNDER TITLE IX AND SECTION 504**

SFASD affirms that no person shall, on the basis of sex, disability, race, color, age, creed, religion, sexual orientation, national origin, ancestry, veteran's status or genetic information be excluded from participation in, be denied the benefits of, or be subjected to discrimination in any educational program or activity. In addition, no person shall, on any of these bases, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in employment, or recruitment, or consideration, or selection therefore, whether full-time or part-time, under any educational program or activity operated by the school district. The district shall make reasonable accommodations for qualified individuals with disabilities upon request. Contact the Title IX Coordinator, Elizabeth Leiss, Director of Human Resources 857 S. Lewis Road, Royersford, PA, or 610-705-6124 or TitleIXCoordinator@spring-ford.net. Refer to Board Policy 103 for further information.

## **MESSAGE TO OUR STUDENTS**

Careful planning is not the only requirement for achieving a goal. However, planning is a vital and almost indispensable component in the lives of those who are thought to be "successful." Planning for a career or other personal goals require careful evaluation of alternatives and decision-making based on a sense of the present, knowledge of the past, and some anticipation of the future. This course selection book will help you to evaluate which of the many courses offered in Spring-Ford will best meet your needs. Careful selection of courses will help you reach the goals that you set for yourself. Your tentative plans must be reviewed and approved by your parent or guardian, your current teachers, and your school counselor. If you need assistance in making your selections or have questions, please contact your school counselor. Course changes are not permitted after June 22, 2023.

## **COUNSELOR ASSIGNMENTS**

Class of 2025 - Mrs. Katie Baker (A-K) and Mr. Michael Rhodes (L-Z)

Class of 2026 - Dr. Keith Cetera (A-L) and Ms. Denise Johnston (M-Z)

Class of 2027 - Mr. John Blazusiak (A-L) and Mrs. Tanya Chambers (M-Z)

Class of 2028 - Mr. Brad Murlless (A-L) and Mrs. Kristin Beideman (M-Z)

## **FUTURE PLANNING CENTER (FPC)**

**College and Career Advisors:** *Mrs. Margaret Lusignea and Mrs. Marissa Sussman*

The FPC is a college and career resource center for SFAHS students and parents. Information about the following items can be found at the FPC: colleges/universities, the college admissions process, standardized tests (PSAT, SAT, and ACT), financial aid, majors, careers, and military options. During senior year, students may also visit the FPC to complete online admissions applications and other pertinent college forms. College & Career Advisors provide individualized assistance with post-secondary planning. They work closely with school counselors to ensure students have the support they need to move toward their goals. Advisors also serve as the primary liaisons between the high school and representatives from colleges, businesses and the military. Students and parents are encouraged to take advantage of FPC services.

## **COURSE REQUESTS/COURSE SCHEDULING**

**Course Request Made Via Skyward:** Teachers will make recommendations for major subject courses and minors with prerequisites. Please consider these recommendations carefully. Parents are encouraged to work with their students and be an active part of the course selection/request process. Counselors will meet with students individually throughout February and early March. Students are encouraged to enter elective requests prior to meeting with their counselor.

### **Procedure For Scheduling A Course**

1. In February, students view pre-entered teacher recommendations in Skyward and submit elective requests.
2. Students will receive verification of requested courses by the end of March. Parents will then review and sign off.
3. Schedules will be posted in Skyward in August.

### **Things to keep in mind:**

- Discuss your course options with both your teachers and parents.
- Consider post-secondary plans and how your course choices can work to your advantage.
- Each student will work with their counselor to map out credits and future plans.
- If your plans include playing a sport at the collegiate level (Division I or II), review NCAA eligibility requirements.
- Consider elective course alternates in the event of a schedule conflict. These can be entered at the alternates tab.
- Students can begin entering elective course requests into Skyward during February.

## **DUAL ENROLLMENT**

Dual credit enrollment provides sophomore, junior and senior students with a preview of college level instruction, the opportunity to earn college credit which can be transferred to most colleges and universities, and the chance to take advanced and intellectually challenging courses. Students will be able to use these courses for both college and high school credit. Dual credit classes are semester-based classes that typically meet on an every-other-day basis. Juniors and seniors who take dual credit classes are eligible for open campus. Open campus allows junior and senior students to arrive late or leave early on the days/semester the dual credit class does not meet. A dual credit student carrying over 7.0 credits will not have their 2nd semester dual credit course calculated in GPA. Students will not be permitted to drop a spring semester dual credit class. Senior Final Exam Exemption does not apply for these college classes. See page 75 for additional Dual Enrollment details.

## **COLLEGE IN HIGH SCHOOL**

College in High School (CHS) offers Spring-Ford High School students the opportunity to simultaneously earn high school credits and university credits from the University of Pittsburgh (in select courses). The curriculum is identical to the Spring-Ford curriculum, but the CHS grade may be calculated differently. All students who are eligible for the corresponding Honors or AP French course may opt to participate in the CHS program. A tuition fee and separate registration for the CHS course are required at the beginning of the school year. CHS courses offered at SFAHS are AP Psychology, AP French, French IV, French V, and Child Development Major.

## **EARLY COLLEGE ADMISSION PROGRAM**

Students requesting participation in an early college admissions program must submit a written request executed by their parent/guardian to their child's high school counselor, who shall confer with the student and parent/guardian prior to recommending the request for approval by the high school principal, Superintendent and Board. Application for early college admission must be submitted by June 1st of their junior year.

Students who request permission for early admissions application must have completed the 11th grade and have a cumulative GPA of ninety percent (90%) or higher, and have been in attendance in the Spring-Ford Area School District for one (1) complete school year.

The student must maintain a C average in their freshman year of college work and must be considered a full-time student before the school district will approve a request for a Spring-Ford diploma. Credits presented for the diploma must include all courses mandated by the State Board of Education regulations which have not been completed prior to college entrance. It shall be the obligation of the student to maintain communication with the home school before leaving for college in September and between semesters to finalize details of graduation and for information concerning student activities.

## **SENIOR PRIVILEGE: Late Arrival/Early Release**

Rising seniors that are eligible may request senior privilege as a scheduling option for the following school year (senior year). This senior privilege would potentially provide seniors the availability to either arrive late or leave early based on student schedules and eligibility. All students are required to request and be scheduled for a minimum of 5.9 credits and courses will not be changed to accommodate senior privilege.

Senior privilege will only be granted to students who are on track to graduate, are in good standing regarding academics, attendance and discipline, are free of all obligations, have successfully applied and submitted parental permission, have a class schedule in which senior privilege fits, and are approved by administration. Administration retains the right to suspend or revoke this privilege for any behavior that violates rules and guidelines for students as put forth in the student handbook and school board policy.

Late arrival would take the place of a period 1 study hall and allow for a student to come to school near the conclusion of period 1 in preparation for period 2, or first scheduled period. Early release would take the place of a period 7 study hall and allow for a student to leave school at the conclusion of period 6, or last scheduled period. Students approved for early release will be required to leave the building at the conclusion of scheduled classes. If involved in after school activities, students will need to return at the conclusion of the school day to participate. Students seeking senior privilege are responsible for their own transportation.

Students approved for senior privilege are responsible for knowing and adhering to schedule changes due to school events, homeroom, assemblies, etc. and will be required to be in attendance. Students in grades 11 and 12 enrolled in dual credit courses that meet period 1 or period 7 are afforded the opportunity to arrive late or leave early if their schedule permits and parent permission is provided. Seniors enrolled in dual credit courses do not need to apply for senior privilege. Senior Privilege can be requested during course selection meetings with counselors. Applications will be available in the house office and must be received and administration approval granted before senior privilege is applied. **Class schedules will not be changed to accommodate senior privilege.**

## GLOBAL STUDIES: Spring-Ford Area School District and Arcadia University

In collaboration with Arcadia University and the global community at large, SFASD strives to avail its high school students with the opportunity to engage in and acquire the knowledge, skills, and values necessary to become responsible, productive, and resourceful 21st century global citizens.

The Global Studies experience will allow SFAHS students to explore an educational structure that includes a partnership with Arcadia University as well as Global-focused courses at SFAHS. Students may “join” the experience at any time and select from a variety of courses (see chart below) to make the Global Studies experience truly personalized.

GRADE	COURSE		COURSE	COURSE	POSSIBLE ELECTIVE
9TH	Modern US History & the Global World Honors	OR	AP Geography	World Language	<b>SFASD:</b> AP Geography International Business AP European History Ancient World AP Macroeconomics  <b>Dual Enrollment with Arcadia:</b> Intro to International Studies Intro to Public Health
	World History & World History Honors		AP US History/ AP European History	World Language	
10TH	US Government and the Global World	AP US Government	World Language		
11TH	Intro to International Studies FALL  (Arcadia Dual Enrollment)	Intro to Public Health SPRING  (Arcadia Dual Enrollment)	World Language or Elective/Year or Semester		

## GRADING GUIDELINES

- GPA will be computed using final grades from ALL courses, including minor courses (up to seven credits). If over seven credits, second semester dual credit courses will not be computed in GPA.
- AP courses and honors courses will be weighted if the student achieves a 70% or above in the course.
- The term “weighted grade” is used to describe the process of assigning additional strength or numerical value to a grade a student earns in certain courses designated as “weighted” courses in the calculation of GPA. Designated WEIGHTED COURSES will be given the following added value: 7% for AP courses and 5% for honors level courses. Please NOTE: The actual grade is recorded on both the report card and the transcript.
- Courses designated as WEIGHTED COURSES, such as AP and Honors, will be more rigorous, require PREREQUISITES, and are more demanding than college prep courses. These classes will stress analytical skills and higher-order thinking.
- Advanced Placement (AP) Courses are the most demanding courses. AP courses cover information, skills, and assignments found in corresponding college courses. These types of courses require extensive reading with multiple texts. They are research-based, requiring several projects. There is an external assessment instrument and curriculum to follow. Tests will include essay and objective parts. Multiple assessment instruments would include problem-solving activities. Daily assignments are very detailed and in-depth while exams include essay portions. College policies vary regarding credit for AP courses. Students are advised to consult college representatives for specific information.

**GRADING SYSTEM:** The faculty makes every effort to mark fairly and accurately. The numerical scale is listed below:

A: 90 to 100	Excellent	D: 65 to 69	Below Average
B: 80 to 89	Good	F: Below 65	Failure
C: 70 to 79	Average		

Both the mid-term and final exam will be 10% each of the total yearly grade. The importance of this grade should not be underestimated. Report cards and transcripts are the only official reporting documents.

## GRADUATION REQUIREMENTS

Students must earn 22 credits during grades 9 through 12 to qualify for graduation:

English (Mandated)	4.0
Math (Mandated)	3.0
Science (Mandated)	3.0
Social Studies (Mandated)	3.0
Physical Ed. (Mandated)	1.6
Health (Mandated)	0.4
Electives	7.0
<b>Total</b>	<b>22.0</b>

## KEYSTONE EXAM INFORMATION

The Keystone Exams are required end-of-course assessments designed to evaluate proficiency in academic content. Keystone exams are taken at the completion of Algebra 1, English 9 and Biology and are based on the Pennsylvania Core Standards. Students must demonstrate proficiency on the Algebra I, Literature and Biology Keystone Exams to graduate, or fulfill one of the other pathways provided to graduate. A link to information explaining Keystone pathways to graduation can be found [here](#).



## **SPRING-FORD SCHEDULE CHANGE GUIDELINES**

Student schedules are created upon student requests and teacher recommendations during our course selection process. Administration makes every effort to schedule each student in their desired and recommended courses, but schedule requests are not guaranteed. Every attempt should be made to finalize courses prior to the June deadline. Counselors have limited summer hours so changes requested after the June deadline are not guaranteed. After the June 22, 2023 deadline, only schedule change requests that meet the following criteria will be considered:

- A. If a student successfully completes a summer school or course advancement course.
- B. If an error occurs (mechanical, clerical, computer, scheduling omission, etc.).
- C. If the student has a change in post-secondary planning.
- D. If the student wishes to challenge themselves and take a higher level course than recommended (i.e. from honors to advanced placement). A course waiver may be mandated if approved.
- E. If the student failed a sequential course or prerequisite course.
- F. If the student needs to fulfill district/state graduation requirements.
- G. All schedule change requests must have strong justification and submitted on the appropriate form to the house office for review.

Any schedule change requested after this date will not be considered for these types of reasons:

- A. Teacher preference
- B. Personal convenience of the student (i.e. having classes or lunch with a friend, scheduling PE at a specific time, having classes closer together, etc.)
- C. If the student is enrolled in a dual credit (DC) course
- D. Course/section is at capacity
- E. Any course where a course override was completed

### **Schedule Changes and Withdrawal From A Course**

If a student requests a schedule change following the defined course selection window the following guidelines will apply:

- A. Schedule change requests must be presented for consideration no later than the end of the 2nd full six-day cycle.
- B. If a student is granted a withdrawal from a course during the second full six-day cycle of school they will receive no grade, no credit, and no penalty.
- C. Students who are approved to drop or withdraw from a course after the second full six-day cycle will receive a 60% for the dropped course.
- D. If a student drops a course after the second full six-day cycle and then substitutes another course, he or she will receive a 60% for the original course.
- E. If a student is granted a 60% it will jeopardize their honor roll status and extracurricular eligibility.
- F. Approval must be granted by the school counselor and administrator.
- G. Extenuating circumstances must be proven.
- H. Students must have obtained extra help in the subject. Teacher input regarding student effort will be considered.
- I. Course drops and withdrawals are considered the same thing.

## **SUMMER SCHOOL**

Students who fail a course are encouraged to make up the work in summer school, provided the summer school enrollment criteria are met. The criteria are as follows:

- A student must have earned a 60% or better in the subject.
- A student may not have been absent more than 25 total days that year.
- A failed prerequisite to another course may not be made up in summer school (admin approval may be granted).
- Students are not eligible to complete original courses/credits (those which the student has not taken before) during summer school.??
- Counselors will answer questions about summer school and any inquiries about credits.
- Any exception to these summer school guidelines MUST be made by the house principal.

# DIVISION I ACADEMIC REQUIREMENTS

To study and compete at a **Division I school**, you must earn 16 NCAA-approved **core-course credits**, earn a corresponding test score\* that matches your **core-course GPA** and submit your final transcript with proof of graduation to the Eligibility Center.

## CORE-COURSE REQUIREMENTS

Earn 16 NCAA-approved core-course credits in the following areas:

<b>ENGLISH</b>	<b>MATH</b> (Algebra I or higher)	<b>SCIENCE</b> (including one year of lab, if offered)	<b>ADDITIONAL</b> (English, math or science)	<b>SOCIAL SCIENCE</b>	<b>ADDITIONAL COURSES</b> (Any area listed to the left, world language or nonacademic religion/philosophy)
<b>4 years</b>	<b>3 years</b>	<b>2 years</b>	<b>1 year</b>	<b>2 years</b>	<b>4 years</b>

For Division I, 10 of your 16 NCAA-approved core-course credits must be completed before the start of your seventh semester, including seven in English, math or science.

## QUALIFIER

As a Division I qualifier, you may practice, compete and receive an athletics scholarship during your first year of full-time enrollment at an NCAA Division I school.

- » Earn 16 NCAA-approved core-course credits in the right areas.
  - Complete 10 of your 16 NCAA-approved core-course credits, including seven in English, math or science, before the start of the seventh semester.
  - Complete your 16 NCAA-approved core-course credits in eight academic semesters or four consecutive academic years from the start of ninth grade.
- » Earn a corresponding test score that matches your **core-course GPA** (minimum 2.3) on the **Division I Sliding Scale**.\*
- » Submit your final transcript with proof of graduation to the Eligibility Center.

## ACADEMIC REDSHIRT

As a Division I academic redshirt, you may practice during your first regular academic term and receive an athletics scholarship during your first year of full-time enrollment but may NOT compete during your first year of enrollment. You must pass either eight quarter or nine semester hours to practice in the next term.

- » Earn 16 NCAA-approved core-course credits in the right areas.
- » Earn a corresponding test score that matches your core-course GPA (minimum 2.0) on the Division I sliding scale.\*
- » Submit your final transcript with proof of graduation to the Eligibility Center.

\* More information regarding the impact of COVID-19 and test scores can be found at [on.ncaa.com/COVID19\\_Spring2023](https://on.ncaa.com/COVID19_Spring2023).



## TEST SCORES

Every time you register for the SAT or ACT, use code **9999** to send your scores directly to the Eligibility Center from the testing agency. You may take the SAT or ACT an unlimited number of times before you enroll full time in college. If you take either test more than once, the best subscore from each test is used to give you the best possible score.

\* More information regarding the impact of COVID-19 and test scores can be found at [on.ncaa.com/COVID19\\_Spring2023](https://on.ncaa.com/COVID19_Spring2023).

## CORE-COURSE LIST

Find your high school's list of NCAA-approved core courses at [eligibilitycenter.org/courselist](https://eligibilitycenter.org/courselist). No core-course list means courses taken from that high school will not count for NCAA eligibility. If your high school does not have a list, you risk being ineligible to play in college.

## NONTRADITIONAL AND ONLINE COURSES

Nontraditional courses are taught online or through distance learning, hybrid/blended, independent study, individualized instruction, correspondence or similar means.

These types of courses may be acceptable for use in the NCAA initial-eligibility certification process; however, it is important to make sure the nontraditional program has been approved and appears on your school/program's list of NCAA-approved core courses.

## BE AHEAD OF THE GAME

- Plan to register with the NCAA Eligibility Center at [eligibilitycenter.org](https://eligibilitycenter.org) before your freshman year of high school. Visit [on.ncaa.com/RegChecklist](https://on.ncaa.com/RegChecklist) to help guide you through the registration process.
- After six semesters of high school, ask your high school counselor from each school you have attended to upload an official transcript to your Eligibility Center account.

## ADDITIONAL RESOURCES

- [DII Academic Requirements flyer.](#)
- [DIII Amateurism flyer.](#)
- [International Initial-Eligibility flyer.](#)

DIVISION I QUALIFIER SLIDING SCALE					
Core GPA	SAT*	ACT Sum*	Core GPA	SAT*	ACT Sum*
3.550	400	37	2.750	810	58
3.525	410	38	2.725	820	60
3.500	430	39	2.700	830	61
3.475	440	40	2.675	840	61
3.450	460	41	2.650	850	62
3.425	470	41	2.625	860	63
3.400	490	42	2.600	860	64
3.375	500	42	2.575	870	65
3.350	520	43	2.550	880	66
3.325	530	44	2.525	890	67
3.300	550	44	2.500	900	68
3.275	560	45	2.475	910	68
3.250	580	46	2.450	920	70
3.225	590	46	2.425	930	70
3.200	600	47	2.400	940	71
3.175	620	47	2.375	950	72
3.150	630	48	2.350	960	73
3.125	650	49	2.325	970	74
3.100	660	49	2.300	980	75
3.075	680	50	2.299	990	76
3.050	690	50	2.275	990	76
3.025	710	51	2.250	1000	77
3.000	720	52	2.225	1010	78
2.975	730	52	2.200	1020	79
2.950	740	53	2.175	1030	80
2.925	750	53	2.150	1040	81
2.900	750	54	2.125	1050	82
2.875	760	55	2.100	1060	83
2.850	770	56	2.075	1070	84
2.825	780	56	2.050	1080	85
2.800	790	57	2.025	1090	86
2.775	800	58	2.000	1100	86

ACADEMIC RED SHIRT

Want more information? Visit [ncaa.org/playcollegesports](https://ncaa.org/playcollegesports).

### CONTACT THE NCAA ELIGIBILITY CENTER

U.S. and Canada (except Quebec): 877-262-1492  
Monday-Friday, 9 a.m. to 5 p.m. Eastern time

[@ncaaec](https://twitter.com/ncaaec) [@playcollegesports](https://www.instagram.com/playcollegesports) [@ncaaec](https://www.facebook.com/ncaaec)

# DIVISION II ACADEMIC REQUIREMENTS

To study and compete at a **Division II school**, you must earn 16 NCAA-approved **core-course credits**, earn a corresponding test score\* that matches your **core-course GPA** and submit your final transcript with proof of graduation to the Eligibility Center.

## CORE-COURSE REQUIREMENTS

Earn 16 NCAA-approved core-course credits in the following areas:

<b>ENGLISH</b>	<b>MATH</b> (Algebra I or higher)	<b>SCIENCE</b> (including one year of lab, if offered)	<b>ADDITIONAL</b> (English, math or science)	<b>SOCIAL SCIENCE</b>	<b>ADDITIONAL COURSES</b> (Any area listed to the left, world language or non-doctrinal religious philosophy)
<b>3 years</b>	<b>2 years</b>	<b>2 years</b>	<b>3 years</b>	<b>2 years</b>	<b>4 years</b>

## QUALIFIER

As a Division II qualifier, you may practice, compete and receive an athletics scholarship during your first year of full-time enrollment at an NCAA Division II school.

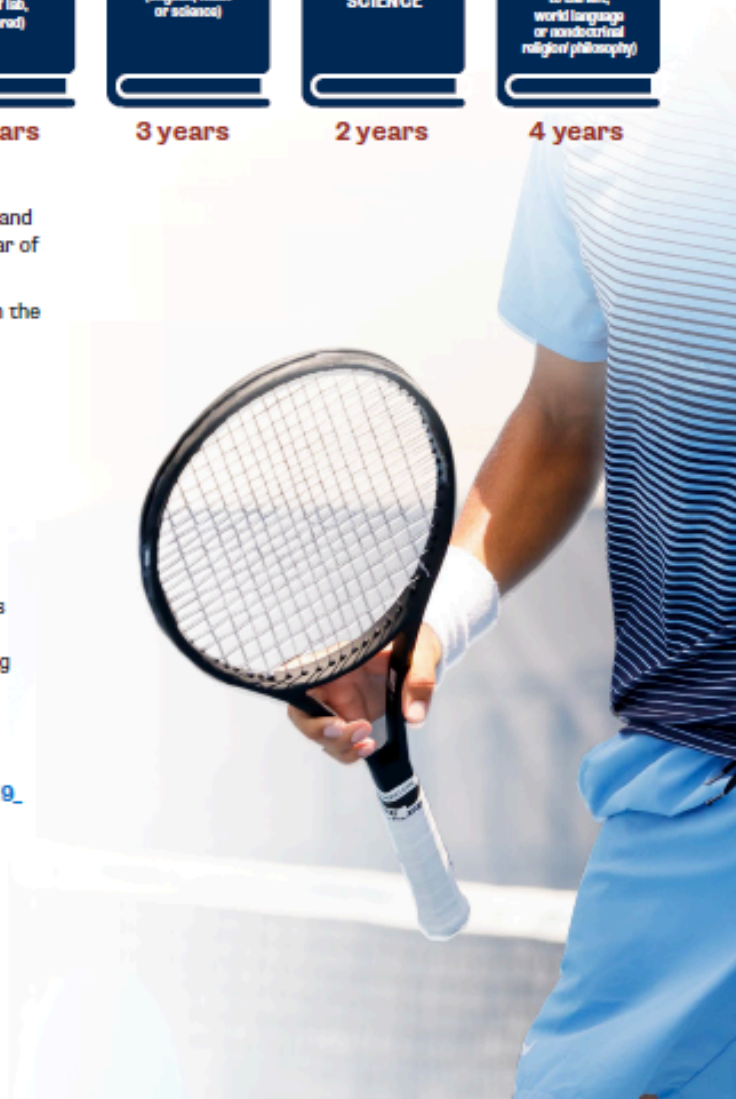
- » Earn 16 NCAA-approved core-course credits in the right areas.
- » Earn a corresponding test score that matches your **core-course GPA** (minimum 2.2) on the **Division II sliding scale**.\*
- » Submit your final transcript with proof of graduation to the Eligibility Center.

## PARTIAL QUALIFIER

If you have not met all of the Division II academic standards, you will be deemed a partial qualifier. As a partial qualifier, you may practice and receive an athletics scholarship, but may NOT compete, during your first year of full-time enrollment at an NCAA Division II school.

\*More information regarding the impact of COVID-19 and test scores can be found at [on.ncaa.com/COVID19\\_Spring2023](https://on.ncaa.com/COVID19_Spring2023).

 **DIVISION II**  
**MAKE IT *YOURS***



## TEST SCORES

Every time you register for the **SAT** or **ACT**, use code **9999** to send your scores directly to the Eligibility Center from the testing agency. You may take the SAT or ACT an unlimited number of times before you enroll full time in college. If you take either test more than once, the best subscore from each test is used to give you the best possible score.

*\*More information regarding the impact of COVID-19 and test scores can be found at [on.ncaa.com/COVID19\\_Spring2023](https://on.ncaa.com/COVID19_Spring2023).*

## CORE-COURSE LIST

Find your high school's list of NCAA-approved core courses at [eligibilitycenter.org/courselist](https://eligibilitycenter.org/courselist). No core-course list means courses taken from that high school will not count for NCAA eligibility. If your high school does not have a list, you risk being ineligible to play in college.

## NONTRADITIONAL AND ONLINE COURSES

Nontraditional courses are taught online or through distance learning, hybrid/blended, independent study, individualized instruction, correspondence or similar means.

These types of courses may be acceptable for use in the NCAA initial-eligibility certification process; however, it is important to make sure the nontraditional program has been approved and appears on [your school/program's list](#) of NCAA-approved core courses.

## BE AHEAD OF THE GAME

- Plan to register with the NCAA Eligibility Center at [eligibilitycenter.org](https://eligibilitycenter.org) before your freshman year of high school. Visit [on.ncaa.com/RegChecklist](https://on.ncaa.com/RegChecklist) to help guide you through the registration process.
- After six semesters of high school, ask your high school counselor from each school you have attended to upload an official transcript to your Eligibility Center account.
- For more information on Division II, visit [ncaa.org/D2](https://ncaa.org/D2).

## ADDITIONAL RESOURCES

- [DI Academic Requirements flyer](#).
- [DIII Amateurism flyer](#).
- [International Initial-Eligibility flyer](#).

DIVISION II QUALIFIER SLIDING SCALE		
Core GPA	SAT*	ACT Sum*
3.300 & above	400	37
3.275	410	38
3.250	430	39
3.225	440	40
3.200	460	41
3.175	470	41
3.150	490	42
3.125	500	42
3.100	520	43
3.075	530	44
3.050	550	44
3.025	560	45
3.000	580	46
2.975	580	46
2.950	600	47
2.925	620	47
2.900	630	48
2.875	650	49
2.850	660	49
2.825	680	50
2.800	690	50
2.775	710	51
2.750	720	52
2.725	730	52
2.700	740	53
2.675	750	53
2.650	750	54
2.625	760	55
2.600	770	56
2.575	790	56
2.550	790	57
2.525	800	58
2.500	810	59
2.475	820	60
2.450	830	61
2.425	840	61
2.400	850	62
2.375	860	63
2.350	860	64
2.325	870	65
2.300	880	66
2.275	890	67
2.250	900	68
2.225	910	69
2.200	920	70 & above

Want more information? Visit [ncaa.org/playcollegesports](https://ncaa.org/playcollegesports).

### CONTACT THE NCAA ELIGIBILITY CENTER

U.S. and Canada (except Quebec): 877-262-1492  
Monday-Friday, 9 a.m. to 5 p.m. Eastern time

[@ncaaec](https://twitter.com/ncaaec) [@playcollegesports](https://www.instagram.com/playcollegesports) [@ncaaec](https://www.facebook.com/ncaaec)

## COURSE CHARTS

ART COURSE CHART										
New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N001	Foundations of Art I	Major	6	1	X				\$	CN001
N010	Ceramics	Minor	3	0.5	X				\$	
N019	Studio Art Basics	Minor	3	0.5	X				\$	
N035	Intro to Digital Design	Minor	3	0.5	X					CN035
002	Art II	Major	6	1		X	X		\$ ✓	C002
003	Art III	Major	6	1			X	X	\$ ✓	
004	Art IV: Honors	Major	6	1				X	♦ ∞ \$ ✓	
011	Ceramics	Minor	3	0.5		X	X	X	\$	
012	Ceramics Major	Major	6	1		X	X	X	\$	C012
013	Jewelry	Minor	3	0.5		X	X	X	\$	
014	Advanced Ceramics & Jewelry	Major	6	1			X	X	\$ ✓	
020	Studio Art	Minor	3	0.5		X	X	X	\$	C020
021	Studio Art	Major	6	1		X	X	X	\$	C021
030	Graphic Design I	Minor	3	0.5		X	X	X		C030
031	Graphic Design II	Minor	3	0.5			X	X	✓	
032	Graphic Design I	Major	6	1		X	X	X		C032
033	Graphic Design II	Major	6	1			X	X	✓	
036	Photography I	Minor	3	0.5		X	X			
037	Photography II	Minor	3	0.5			X	X	✓	
040	AP 3D Art & Design	Major	6	1				X	⊙ ∞ \$ ✓	
041	AP 2D Art & Design	Major	6	1				X	⊙ ∞ \$ ✓	
042	AP Drawing	Major	6	1				X	⊙ ∞ \$ ✓	
043	Art History: AP	Major	6	1			X	X	⊙ ∞ ✓	
049	Yearbook	Minor	3	0.5		X	X	X		

BROADCAST COURSE CHART										
New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
190	Broadcast Production	Minor	3	0.5		X	X			
191	Broadcast Production I	Major	6	1			X	X	✓	
192	Broadcast Production II	Major	6	1				X	✓	

AP: ⊙ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊕ NCAA eligible: ⊕

**BUSINESS TECHNOLOGY COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N600	Personal Finance	Major	6	1	X					CN600
N605	Intro to Microsoft Office	Minor	3	0.5	X					CN605
610	Finance	Major	6	1		X	X	X		C610
612	Business Law	Minor	3	0.5		X	X	X		C612
614	Marketing	Minor	3	0.5		X	X	X		C614
616	International Business	Minor	3	0.5		X	X	X		C616
620	Entrepreneurship	Minor	3	0.5		X	X	X		C620
630	Accounting	Major	6	1		X	X	X		
651, 652, 653, 654	Cooperative Work Experience	Major	12-18	Up to 3			X	X		

**COMPUTER EDUCATION COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N670	Computer Science I	Minor	3	0.5	X				✓	
618	Web Design and Construction	Minor	3	0.5		X	X	X		C618
660	Microsoft Office I	Major	6	1		X	X	X	✓	C660**
661	Microsoft Office II	Major	6	1			X	X	✓	C661**
670	Computer Science I	Minor	3	0.5	X	X	X	X	✓	
671	Comp. Science II	Minor	3	0.5		X	X	X	✓	
672	Comp. Science: AP	Major	6	1			X	X	⚙️ ∞ ✓	

AP: ⬠ Honors: ⬠ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⚙️ NCAA eligible: Ⓞ

\*\*This cyber course requires a PC to be used in the cyber environment - Chromebook is not sufficient to meet course requirements.

**ENGLISH COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N101	English 9: Honors	Major	6	1	X				☀️⊕∞	CN101
N100	English 9: Academic	Major	6	1	X				☀️⊖	CN100
N140	Public Speaking and Debate	Minor	3	.5	X				⊖	CN140
N147	Young Adult Literature	Minor	3	0.5	X					
110	English 10: World Lit	Major	6	1		X			☀️⊖	C110
111	English 10: World Lit Honors	Major	6	1		X			☀️⊕∞ ✓	C111
113	AP Seminar	Major	6	1		X	X		☀️⊖∞ ✓	
120	English 11: American Lit	Major	6	1			X		☀️⊖	C120
121	English 11: American Lit Honors	Major	6	1			X		☀️⊕∞ ✓	C121
122	English Language Comp: AP	Major	6	1		X	X	X	☀️⊖∞ ✓	C122
123	AP Research	Major	6	1			X	X	☀️⊖∞ ✓	
130	English 12: British Lit	Major	6	1				X	☀️⊖	C130
131	English 12: British Lit Honors	Major	6	1				X	☀️⊕∞ ✓	C131
132	English Lit Comp: AP	Major	6	1			X	X	☀️⊖∞ ✓	C132
140	Public Speaking and Debate	Minor	3	0.5		X	X	X	⊖	C140
141	Technical Writing	Minor	3	0.5		X	X	X		C141
142	Acting Theories	Minor	3	0.5		X	X	X		
144	Journalism	Minor	3	0.5		X	X	X	⊖	C144
145	Fiction Writing	Minor	3	0.5		X	X	X	⊖	C145
146	Poetry	Minor	3	0.5		X	X	X	⊖	C146
148	Innovation Studio/Media/Comm.	Minor	3	0.5		X	X	X		
N149	Media Explorations	Minor	3	0.5						

AP: ☀️ Honors: ⊕ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊖ NCAA eligible: ⊖



**FAMILY AND CONSUMER SCIENCE (FCS) COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N735	FCS	Major	6	1	X				\$	C735
N700	Sewing, Design and Crafts	Minor	3	0.5	X				\$	
N730	FCS	Minor	3	0.5	X				\$	C730
705	Fashion and Textiles	Minor	3	0.5		X	X	X	\$	
710	Lifetime FCS	Minor	3	0.5		X	X	X		C710
720	Food and Nutrition	Minor	3	0.5		X	X	X		C720
730	FCS	Minor	3	0.5		X	X	X	\$	C730
735	FCS	Major	6	1		X	X	X	\$	C735
740	Prenatal & Infant Development	Minor	3	0.5		X	X	X		C740
742	Parenting & Early Childhood	Minor	3	0.5		X	X	X		C742
745	Child Development	Major	6	1		X	X	X	✓	C745

**GIFTED EDUCATION COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY
	Independent Study	Minor	3	0.5				X	
	Gifted Support Periods					X	X	X	

**HEALTH AND PHYSICAL EDUCATION COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N800	Physical Education	Minor	2	0.4	X					C800
800	Physical Education	Minor	2	0.4		X	X	X		C800
822	Advanced Physical Education	Minor	2	0.4			X	X	✓	
830	Fitness & Wellness I	Minor	2	0.4		X	X	X		C830
832	Fitness & Wellness II	Minor	2	0.5			X	X	✓	
834	Intensive Fitness and Wellness	Minor	3	0.5		X	X	X	✓	
851	Health	Minor	2	0.4			X			C851

**MATHEMATICS COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N311	Algebra I	Major	6	1	X				⊙	C311
N325	Geometry: Honors	Major	6	1	X				⊙♦∞ ✓	C325
N335	Algebra II: Honors	Major	6	1	X				⊙♦∞	C335
311	Algebra I	Major	6	1		X			⊙	C311
321	Geometry	Major	6	1		X	X		⊙✓	C321
325	Geometry: Honors	Major	6	1		X	X		⊙♦∞ ✓	C325
331	Algebra II	Major	6	1		X	X	X	⊙✓	C331
335	Algebra II: Honors	Major	6	1		X			⊙♦∞ ✓	C335
340	Algebra III/Trigonometry	Major	6	1				X	⊙✓	C340
341	Pre-Calculus/Trig	Major	6	1			X	X	⊙✓	C341
345	Pre-Calc/Trig: Honors	Major	6	1		X	X		⊙♦∞ ✓	C345
355	Calculus: Honors	Major	6	1			X	X	⊙♦∞ ✓	
359	Calculus AB: AP	Major	6	1			X	X	⊙♦∞ ✓	C359
369	Calculus BC: AP	Major	6	1				X	⊙♦∞ ✓	
371	Probability & Statistics	Major	6	1				X	⊙✓	C371
379	Statistics: AP	Major	6	1			X	X	⊙♦∞ ✓	C379
380	Math Applications	Major	6	1			X	X	✓	C380

AP: ⊙ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊕ NCAA eligible: ⊙

**MUSIC COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY
N051	Marching Band	Major	6	1	X				\$
N050	Band	Major	6	1	X				
N050M	Band	Minor	3	0.5	X				
N070M	Chorus	Minor	3	0.5	X				
N080M	Orchestra	Minor	3	0.5	X				✓
N080	Orchestra	Major	6	1	X				
050M	Band	Minor	3	0.5		X	X	X	
050	Band	Major	6	1		X	X	X	
050H	Band: Honors	Major	6	1		X	X	X	
051	Marching Band	Major	6	1		X	X	X	\$ ✓
051H	Marching Band: Honors	Major	6	1		X	X	X	\$ ✓
075	Music Theory I	Minor	3	0.5		X	X	X	✓
076	Music Theory II	Major	6	1			X	X	✓
070M	Chorus	Minor	3	0.5		X	X	X	
070	Chorus	Major	6						
071M	Vocal Ensemble	Minor	3	0.5		X	X	X	\$
071H	Vocal Ensemble: Honors	Major	6	1		X	X	X	\$
080M	Orchestra	Minor	3	0.5		X	X	X	✓
080	Orchestra	Major	6	1		X	X	X	
081M	Select Strings	Minor	3	0.5		X	X	X	
081H	Select Strings: Honors	Major	6	1		X	X	X	
090	Music Theory: AP	Major	6	1				X	⚙️ ∞ ✓

AP: ⚙️ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⚙️ NCAA eligible: ☉

**SCIENCE COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N411	Earth Science: Honors	Major	6	1	X				⊖♦∞	CN411
N410	Earth Science	Major	6	1	X				⊖	CN410
N421	Biology: Honors	Major	7	1	X				⊖♦∞ ✓	C421
420	Biology	Major	6	1		X			⊖	C420
421	Biology: Honors	Major	7	1		X			⊖♦∞ ✓	C421
422	Biology: AP	Major	7	1			X	X	⊖⊖♦∞ ✓	C422
423	Microbiology	Major	6	1		X	X	X	⊖✓	
430	Chemistry	Major	7	1			X		⊖✓	C430
431	Chemistry: Honors	Major	7	1		X	X		⊖♦∞ ✓	C431
433	Chemistry: AP	Major	7	1			X	X	⊖⊖♦∞ ✓	
440	Physics	Major	7	1			X	X	⊖✓	C440
441	Physics I: AP	Major	7	1		X	X	X	⊖⊖♦∞ ✓	
442	Physics C: AP	Major	7	1				X	⊖⊖♦∞ ✓	
450	Environmental Science	Major	6	1			X	X	⊖	C450
451	Environmental Sci: AP	Major	6	1		X	X	X	⊖⊖♦∞ ✓	C451
460	Advanced Geology	Major	6	1		X	X	X	⊖✓	C460
461	Anatomy/Physiology	Major	6	1		X	X	X	⊖✓	C461
462	Zoology	Major	6	1		X	X	X	⊖✓	
463	Applied Science	Major	6	1			X	X	⊖	C463
WHACE	PLTW Biomed Science						X	X	⊖♦	

AP: ⊖ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊖ NCAA eligible: ⊖

**SOCIAL STUDIES COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N201	Modern US History: Honors	Major	6	1	X				⊙ ♦ ∞ ✓	CN201
N200	Modern US History	Major	6	1	X				⊙	CN200
N227	Human Geography: AP	Major	6	1	X				♦ ⊙ ∞ ✓	C227
210	Modern World History	Major	6	1		X			⊙	C210
211	Modern World History: Honors	Major	6	1		X			⊙ ♦ ∞ ✓	C211
215	US History: AP	Major	6	1		X	X	X	☀ ⊙ ♦ ∞ ✓	C215
216	European History: AP	Major	6	1		X	X	X	☀ ⊙ ♦ ∞ ✓	
220	US Government	Major	6	1			X		⊙	C220
221	US Government: Honors	Major	6	1			X		⊙ ♦ ∞ ✓	C221
225	US Government/ Politics: AP	Major	6	1			X	X	☀ ⊙ ♦ ∞ ✓	C225
227	Human Geography: AP	Major	6	1		X	X	X	☀ ⊙ ♦ ∞ ✓	C227
230	Psychology/ Sociology	Major	6	1				X	⊙	C230
231	Psychology: AP	Major	6	1			X	X	☀ ⊙ ♦ ∞ ✓	C231
234	Essentials of Behavioral Science	Major	6	1				X	♦ ✓	
244	Economics	Major	6	1				X	⊙	C244
246	Macroeconomics: AP	Major	6	1			X	X	⊙ ♦ ∞ ✓	
247	Microeconomics: AP	Major	6	1				X	⊙ ♦ ∞ ✓	
250	The Ancient World	Major	6	1				X	⊙	C250

AP: ⊙ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ☀ NCAA eligible: ⊙

**TECHNOLOGY AND ENGINEERING EDUCATION COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY
N750	Materials Manufacturing I	Minor	3	0.5	X				\$
N760	Technology Systems I	Minor	3	0.5	X				\$
N770	PLTW Intro to Engineering: Honors	Major	6	1	X				◆∞ ✓
750	Materials Manufacturing I	Minor	3	0.5		X	X	X	\$
751	Materials Manufacturing II	Minor	3	0.5		X	X	X	✓\$
752	Materials Manufacturing III	Minor	3	0.5			X	X	✓\$
760	Technology Systems I	Minor	3	0.5		X	X	X	\$
761	Technology Systems II	Minor	3	0.5		X	X	X	✓\$
770	PLTW Intro to Engineering: Honors	Major	6	1		X	X	X	◆∞ ✓
771	PLTW Principles of Engineering: Honors	Major	6	1		X	X	X	◆∞ ✓
772	PLTW Digital Electronics: Honors	Major	6	1			X	X	◆∞ ✓
773	PLTW Civil Engineering & Architecture: Honors	Major	6	1			X	X	◆∞ ✓

AP: ◊ Honors: ◆ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ☉ NCAA eligible: ☉

**WORLD LANGUAGE COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY	SFCL CODE
N501	French II	Major	6	1	X				⊙✓	C501
N510	German I	Major	6	1	X				⊙	CN510
N520	Spanish I	Major	6	1	X				⊙	C520
N521	Spanish II	Major	6	1	X				⊙✓	C521
500	French I	Major	6	1		X	X	X	⊙	C500
501	French II	Major	6	1		X	X	X	⊙✓	C501
502	French III	Major	6	1		X	X	X	⊙✓	C502
503	French IV: Honors	Major	6	1			X	X	⊙♦∞ ✓	C503
504	French V: Honors	Major	6	1				X	⊙♦∞ ✓	
505	French Language & Culture: AP	Major	6	1				X	⊙⊙∞∞ ✓	C505
510	German I	Major	6	1		X	X	X	⊙	C510
511	German II	Major	6	1		X	X	X	⊙✓	
512	German III	Major	6	1			X	X	⊙✓	
513	German IV: Honors	Major	6	1				X	⊙♦∞ ✓	
520	Spanish I	Major	6	1		X	X	X	⊙	C520
521	Spanish II	Major	6	1		X	X	X	⊙✓	C521
522	Spanish III	Major	6	1		X	X	X	⊙✓	C522
523	Spanish IV: Honors	Major	6	1			X	X	⊙♦∞ ✓	C523
524	Spanish V: Honors	Major	6	1				X	⊙♦∞ ✓	
525	Spanish Language & Culture: AP	Major	6	1				X	⊙⊙∞∞ ✓	C525
531V	Mandarin Chinese II	Major	6	1			X	X	⊙✓	
532V	Mandarin Chinese III	Major	6	1				X	⊙✓	

AP: ⊙ Honors: ♦ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊙ NCAA eligible: ⊙

**DUAL ENROLLMENT COURSE CHART**

New Code	TITLE	LEVEL	PD'S/ CYCLE	CREDIT	GRADE 9	GRADE 10	GRADE 11	GRADE 12	KEY
920	Intro to International Studies: Honors	Arcadia Univ.	3	1 HS/ 3 College			X	X	◆∞✓\$
921	Intro to Public Health: Honors		3				X	X	◆∞✓\$
900	Intro to Speech Comm.: Honors	MCCC	3	1 HS/ 3 College		X	X	X	⊙◆∞✓\$
901	World Civilization I: Honors		3			X	X	X	⊙◆∞✓\$
902	World Civilization II: Honors		3			X	X	X	⊙◆∞✓\$
910	Principles of Mgmt: Honors		3			X	X	X	◆∞✓\$
911	Financial Accounting: Honors		6	1 HS/ 4 College			X	X	◆∞✓\$
930	Introduction to Education		3	1 HS/ 3 College		X	X	X	◆∞✓\$
931	Working With Children With Special Needs		3			X	X	X	◆∞✓\$
932	Intro to Criminal Justice: Honors		3			X	X	X	◆∞✓\$
935	Criminal Law: Honors	3			X	X	X	◆∞✓\$	
903	First Year (College) Experience	3	1 HS/ 3 College			X	X	◆∞✓\$	

AP: ⊙ Honors: ◆ Weighted: ∞ Class Fee: \$ Prerequisite: ✓ Summer Assignment: ⊕ NCAA eligible: ⊙



## 9TH GRADE COURSE DESCRIPTION

### ART

#### **N001 Foundations of Art I - Major**

*Grade 9                      6 periods, 1 credit*

Students will use a variety of media and techniques to create original works of art. A firm foundation in the basic art concepts of drawing, design, composition, and color will be covered through a variety of interesting projects. Students with an interest in improving art skills for personal enrichment and students with career goals will find this course a valuable background for future art experiences. This course is the prerequisite and foundation for the sequential art major classes: Art II, III, IV and AP. NOTE: Students will be responsible for a materials fee.

#### **N010 Intro to Ceramics - Minor**

*Grade 9                      3 periods, .5 credit*

Students will experience an introduction to basic ceramic hand-building techniques and sculpting methods. This course will review handling of clay materials, stages of clay, the tools, and the basic techniques in clay to create a baseline for Ceramics Minor. Basic techniques will include additive and subtractive methods, slab construction, coil construction, 3D sculpture, glazing application, and the kiln firing process. This course is designed to be a foundation for Ceramics Minor. NOTE: Students will be responsible for a materials fee.

#### **N019 Studio Art Basics - Minor**

*Grade 9                      3 periods, .5 credit*

This course is designed to give students a variety of art medium experiences to create original works of art. Students will focus on the basic concepts of drawing, color theory, pen and ink, and an array of 2D and 3D projects. This course is designed to be a foundation for all art studio classes at the 10-12 Center. NOTE: Students will be responsible for a materials fee.

#### **N035 Intro to Digital Design - Minor**

*Grade 9                      3 periods, .5 credit*

Students will build upon the experiences gained in traditional art classes by applying the art elements and principles of design by using digital mediums. This course covers the basics of digital photography, including aperture and shutter speed. Students will learn how to control light, composition and subject matter to make successful photographs. The photographic work is used to focus on Graphic Design based projects with the use of Adobe Photoshop. This includes photo manipulation, illustration techniques, and the use of type. This course is recommended for those with an interest in visual arts, commercial art, photography, communications, animation, architecture, web design, interior design, fashion design, and illustration. This course is designed as a foundation for Photography and Graphic Design at the 10-12 Center.

### **BUSINESS TECHNOLOGY**

#### **N600 Personal Finance - Major**

*Grade 9                      6 periods, 1 credit*

This course teaches the functions of business, banks, money, credit, job searching, stocks, and bonds. The course covers many aspects of investing and methods to help secure your financial future. In addition, the structure and operation of business systems will be discussed. Lastly, the course will include the rights and responsibilities of the worker, the investor, the manager, and the government, and how they all play a role in our economic system.

#### **N605 Introduction to Microsoft Office - Minor**

*Grade 9                      3 periods, .5 credit*

This introductory course is for the student who would like to gain experience in Microsoft Office. Students will learn the basic elements of the Microsoft Office Suite. Elements include Word, Excel, Access, PowerPoint, Publisher, and integrated applications. This course requires some typing skills to be successful. This is an introduction course to Microsoft I and II.

## **N670 Computer Science I - Minor**

Grade 9                      3 periods, .5 credits

This challenging course includes an introduction to computer hardware and software systems, number systems used in computer systems and Boolean logic/truth tables. Students are introduced to computer programming and will use original thinking and problem solving skills as they learn to design and implement computer programs that include variables of several data types, control logic and iteration structures along with other programming constructs to solve a variety of problems while developing interactive desktop applications. Universally applicable programming style and convention are emphasized. No prior programming experience is required. This course is intended for students interested in careers in Computer Science or STEM fields. *PREREQUISITE: Completion of Algebra I with at least an 85, Proficiency on the Algebra Keystone exam*

## **ENGLISH**

The English Department offers a comprehensive approach to the study of literature and its related skills in accordance with PA Core Standards for English Language Arts. Students read, understand, and respond to works of literature and informational text, with an emphasis on comprehension, vocabulary acquisition, and making connections among ideas and between texts with a focus on textual evidence. Students write for a variety of purposes and audiences and practice appropriate speaking and critical listening skills as individuals or in group discussions.

### **Graduation requirements:**

- Essentials of Literature
- World Literature
- American Literature
- British Literature

### **Graduation electives:**

- Media Writing (minor)
- Fiction Writing (minor)
- Acting Mechanics (minor)
- Acting Theories (minor)
- Poetry (minor)
- Dual Enrollment: Speech 110 (major)

## **N100 English 9: Academic - Major**

Grade 9                      6 periods, 1 credit

English 9 is a thematically organized course designed to develop and supplement English/Language Arts skills best designed to prepare students to achieve future personal and professional goals. Students will engage in many types of learning activities to encourage critical thinking and to further develop communication skills, as well as promote speaking, reading, listening, and writing skills through a variety of class discussions, independent learning, and cooperative activities. Evidence-based thinking will encourage students to support literary analysis of novels and related texts drawn from historical through contemporary periods. This course culminates in the administration of the Keystone Literature Exam.

## **N101 English 9: Honors - Major (WEIGHTED COURSE)**

Grade 9                      6 periods, 1 credit

This course is designed not just for students who are passionate about literature but also for those willing to invest time and effort into their academic work, develop and write analytical responses that show insight and commentary on literature, show an understanding of application of literary skills and engage in class discussion of key concepts. This course is an ideal and appropriate option for students considering future AP English courses. English 9 Honors is a thematically organized course designed to develop and supplement the skills of maturing minds. This is a more rigorous course than Academic English as it requires greater student independence and individual accountability, moves at a faster instructional pace, and **presents a more in-depth and sophisticated level of analysis and delivery of difficult literature.**

Self-motivation, time management skills, and accountability are highly encouraged. This course culminates in the administration of the Keystone Literature Exam. *Students must have a 90% average or higher in their current English course and receive teacher recommendation.*

**N140 Public Speaking and Debate - Minor**

Grade 9                      3 periods, .5 credit

This course will begin with the basic elements of public speaking, including speech structures and presentation skills. The structural components of a speech, including a successful introduction, body, and conclusion, will be developed. Skills such as eye contact, articulation, and body language will be cultivated. Informative, persuasive, and demonstration speeches will be discussed, researched and executed. The course will move to the techniques involved in several styles of debates, which will be researched and performed on a variety of current issues.

**N147 Young Adult Literature - Minor**

Grade 9                      3 periods, .5 credit

The purpose of this course is to create life-long readers, to build an appreciation for contemporary literature, and to encourage critical thinking across the curriculum while focusing on coming-of-age stories. These goals are met by engaging students in collaborative group discussions, developing their writing through the use of personal response journals, and incorporating a variety of culminating projects designed to demonstrate students' knowledge while also fostering their creative thinking.

**N149 Media Exploration**

Grade 9                      3 periods, .5 credit

This course will explore various types of writing for the mass media including news stories, feature articles, critical reviews, television broadcasts, advertising, public relations, and web journalism. This course is made for students who have a burning desire to know everything and share confirmed, factual information with others in a clear and concise style. Students will learn reporting, writing, researching and multimedia techniques for all news media platforms, and then dig deeper into how social media, community-centered journalism, and multimedia elements can enhance coverage.

**FAMILY AND CONSUMER SCIENCES (FCS)****N700 Sewing, Design and Crafts - Minor**

Grade 9                      3 periods, .5 credit

This course offers students an opportunity to develop and improve sewing construction skills and techniques. Students will explore a variety of crafts within independent peer-led groups including but not limited to crochet, latch-hook, beadwork, and seasonal projects. Information about fashion design and the fashion industry will be included in this course. *NOTE: Students will be responsible for a materials fee.*

**N735 Family and Consumer Sciences - Major**

Grade 9                      6 periods, 1 credit

This course addresses the needs of individuals and the family unit in the areas of nutrition, preparation of food, child development, clothing and textiles, and consumer management. Students will enjoy the opportunity to improve cooking, nutrition, sewing, textile and child development knowledge. Students will learn skills to manage the many challenges that exist across a lifespan and are related to the family unit in a global society. *NOTE: Students will be responsible for a materials fee for the sewing unit.*

**N730 Family and Consumer Sciences - Minor**

Grade 9                      3 periods, .5 credit

This course provides students the opportunity to plan/prepare foods and begins with the foundation of nutrition as applied to family health and food choices. Regional foods of the U.S. will be explored. This course also includes basic hand-sewing and sewing machine skills during which students will create a basic sewing machine project. *NOTE: Students will be responsible for a materials fee for the sewing unit.*

## MATHEMATICS

Students are encouraged to review the TYPICAL MATH SEQUENCES flowchart below. All courses have a calculator requirement. Please refer to the course description for specifics. Math proficiency requires commitment and practice. Students in all math courses can expect daily homework assignments. Although three mathematics courses must be taken during high school to meet state graduation requirements, it is recommended that students enroll in a math class each year. The advice of the student's current math teacher should be sought before selecting the next math course.

7TH GRADE	8TH GRADE	9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE	ELECTIVES
Algebra I	Geometry	Honors Algebra II	Honors PreCalc/ Trigonometry	AP Calculus - AB	AP Calculus - BC	AP Statistics
7th Grade Math			PreCalc/ Trigonometry	Honors Calculus	Elective	Probability and Statistics
	Algebra I	Honors Geometry	Honors Algebra II	Honors PreCalc/ Trigonometry	AP Calculus - AB	Math Applications
			Algebra II	PreCalc/ Trigonometry	Honors Calculus	
	8th Grade Math	Algebra I	Geometry Honors Geometry	Algebra II	Precalculus/ Trigonometry	
Algebra III/ Trigonometry						
Elective						

### N311 Algebra I - Major

Grade 9 6 periods, 1 credit

This course provides a solid foundation in algebraic concepts. Topics covered include the properties of the real number system, solving and graphing linear equations and inequalities, simplifying polynomials, and quadratic functions. Students use linear and quadratic functions to model real-world situations. A scientific calculator is required. Students enrolled in Algebra I will take the Algebra I Keystone Exam.

### N325 Geometry: Honors - Major (WEIGHTED COURSE)

Grade 9 6 periods, 1 credit

This accelerated course is designed to provide an enriching and stimulating environment for the study of geometry. It includes a rigorous development of both Euclidean and coordinate geometry. Right angle trigonometry is also introduced. Algebra I concepts are integrated throughout the course. A scientific calculator is required. *PREREQUISITE: Algebra 1*

### N335 Algebra II: Honors - Major (WEIGHTED COURSE)

Grade 9 6 periods, 1 credit

This rigorous course offers high-ability mathematics students a sound investigation of the structure of the real and complex number systems. Linear, quadratic, rational, and polynomial functions and their graphs are studied in great detail. Logarithmic and exponential functions, matrix algebra, the basic rules of probability, and a brief overview of the conic sections are also included. Students will use traditional algebraic methods and graphical methods to investigate real-world applications of mathematics. A TI83 or TI84 graphing calculator is required.

## **MUSIC**

The Music Department strives to make every student musically literate through creative, engaging, and sequential instruction so they can find meaning in the art of music.

### **N051 Marching Band - Major**

*Grade 9                      6 periods, 1 credit*

Marching Band/Concert Band is a co-curricular, academic performing musical ensemble and is open to students who have the desire to play a wind or percussion instrument in a classroom instrumental music program. Membership will include participation in the marching band program and the Freshman Concert Band. This course is offered as a major (6 days of a 6-day cycle). Participation in this course includes weekend and evening rehearsals in September, October, and November, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs. The course provides students with basic experiences designed to develop technical skills and musical understandings in a progressive way. Primary emphasis is placed upon the development of characteristic instrumental tone, music reading skills, and ensemble performance through the study of a wide variety of musical literature. Performances are given before thousands of spectators at band festivals, competitions and concerts. *NOTE: Members will be responsible for an activities fee.*

### **N050M Band - Minor**

*Grade 9                      3 periods, .5 credit*

Concert Band Minor is a co-curricular, academic performing musical ensemble and is open to students who have the desire to play a wind or percussion instrument in a classroom instrumental music program. Membership will include participation in the Freshman Concert Band. This course will be offered as a minor (3 days of a 3-day cycle) with prior director approval. The primary purpose of this course is to accommodate scheduling conflicts. Students are encouraged to participate in the major equivalent. Students participating in minor will be expected to perform at all Concert Band functions. Participation in this course includes evening rehearsals, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs.

### **N050 Band - Major**

*Grade 9                      6 periods, 1 credit*

Concert Band is a co-curricular, academic performing musical ensemble and is open to students who have the desire to play a wind or percussion instrument in a classroom instrumental music program. Membership will include participation in the Freshman Concert Band. This course is offered as a major (6 days of a 6-day cycle). Participation in this course includes evening rehearsals, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs. The course provides students with basic experiences designed to develop technical skills and musical understandings in a progressive way. Primary emphasis is placed upon the development of characteristic instrumental tone, music reading skills and ensemble performance through the study of a wide variety of musical literature. Performances are given before thousands of spectators at band festivals, competitions and concerts. Students must be enrolled in band as a major to be eligible for extra-curricular jazz ensembles.

### **N070M Chorus - Minor**

*Grade 9                      3 periods, .5 credit*

Chorus is a mixed vocal ensemble intended to challenge the singing student and direct his/her efforts toward increased vocal technique, acquaint him/her with a variety of vocal styles, and focus his/her efforts toward musical performance. The ensemble is co-curricular and rehearses one day after school per week and performs two concerts per school year. Concert performances are mandatory. Prior choir experience is not required.

**N080M Orchestra - Minor**

Grade 9                      3 periods, .5 credit

Orchestra will be provided for those students currently involved in the string music curriculum. Orchestra is co-curricular, and may require evening rehearsals in preparation for school-sponsored musical events. Students are scheduled for sectional string lessons from study halls when possible. Concert performances are mandatory. **PREREQUISITE:** Prior string orchestral experience and director approval is required.

**N080 Orchestra - Major**

Grade 9                      6 periods, 1 credit

Orchestra will be provided for those students currently involved in the string music curriculum. There will also be an emphasis on solo or small group performance as well as fundamental music theory. Orchestra is co-curricular and may require evening rehearsals in preparation for school-sponsored musical events. Students are scheduled for sectional string lessons from study halls when possible. Concert performances are mandatory. **PREREQUISITE:** Prior string orchestral experience and director approval are required.

**PHYSICAL EDUCATION****N800 Physical Education - Minor**

Grade 9                      2 periods, .4 credit

The physical education program provides the opportunity to develop skills, to improve one's level of fitness, to become aware of the various sports and activities which are beneficial, and to choose lifetime recreational activities. Emphasis is placed on active participation, rules, and safety procedures that make the activity cooperative in nature.

## SCIENCE

**TYPICAL SCIENCE COURSE SEQUENCES FOR GRADES 9-12:** This chart is a guideline, and should not be viewed as the only way of progressing through science courses. This chart is intended to help students design a curriculum dedicated to their interests and needs. Students who take both Honors Earth Science and Honors Biology in 9th grade will take both classes the entire year.

9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE
Earth Science is the traditional course, Honors Biology with teacher recommendation	Biology is required. If taken in 9th grade, students usually take Chemistry	Chemistry recommended for students planning on attending college	Science optional. Physics recommended for those considering a STEM career
Earth Science	Biology	Chemistry Other Science Elective	Physics Other Science Elective AP Science
Honors Earth Science	Biology Honors Biology	Honors Chemistry Chemistry Other Science Elective AP Science	Physics Other Science Elective AP Science
Honors Biology	Honors Chemistry Chemistry Other Science Elective AP Physics I	Physics Other Science Elective AP Science	Physics Other Science Elective AP Science

### **N411 Earth Science: Honors - Major (WEIGHTED COURSE)**

Grade 9                      6 periods, 1 credit

The earth science honors program investigates the various parts of the earth and its environment by combining a text and a laboratory inquiry approach. The units of study are: meteorology, geology, historical geology, oceanography, and astronomy. The Honors course will challenge the student to think creatively about the processes that shape the earth. It is recommended for those college prep students who plan a career in science or a science-related field, and who have an "A" average in Science. *PREREQUISITE: To select this course the student must have earned a grade of 90% in Traditional Physical Science or an 80% in Challenge Science*

### **N410 Earth Science - Major**

Grade 9                      6 periods, 1 credit

This course is a study of the earth and its environment using a text and lab-oriented approach. "Earth as a dynamic system" is a theme that is central in the study of weather, geology, oceanography, and astronomy.

### **N421 Biology: Honors - Major (WEIGHTED COURSE)**

Grade 9                      7 periods, 1 credit

This course is offered to students who wish to accept the challenge of an honors program. This fast-paced, in-depth course emphasizes scientific theories and laboratory inquiry through a molecular approach to biology; it will challenge students to think critically, apply knowledge in new ways, and be resourceful and independent. Preparation for the state Keystone exam is included throughout the year. *MATH CONCURRENT: Honors Geometry or Honors Algebra II. PREREQUISITE: To select this course the student must have earned a grade of 94% in Traditional Physical Science or an 88% in Challenge Science.*

## **GIFTED EDUCATION**

### **PARTICIPATION REQUIREMENTS FOR THE GIFTED PROGRAM**

Gifted Support will be provided on an individual basis, as needed. Students are encouraged to meet with their mentor to discuss issues of concern regarding academic performance, personal adjustment, and study skills. Every effort will be made to schedule these sessions at the convenience of both the gifted teacher and the student.

## **SOCIAL STUDIES**

The Social Studies Department values lifelong learning and civic education. Teachers strive to prepare students to live and actively participate in a democratic system by providing a series of courses that promotes strong civic education with an understanding of the United States place in global affairs.

### **N201 Modern US History: Honors - Major (WEIGHTED COURSE)**

*Grade 9                      6 periods, 1 credit*

Following the same scope and sequence for the regular 9th grade U.S. History, the Honors section provides students who desire to follow a more detailed study of this period of history an opportunity to do so. Students can expect a greater emphasis on independent reading and writing. *PREREQUISITE: 90% in the previous year of social studies & teacher recommendation.*

### **N200 Modern US History - Major**

*Grade 9                      6 periods, 1 credit*

In grade 9, students study the development of the United States and its relationship with the world from the late 19th Century through the 20th Century. While the course generally deals with the political and economic development of our country, geographic and cultural influences are studied in proper perspective. The course also studies the United States' relationship with the world and the development of U.S. influence in global political, economic and cultural events.

### **N227 Human Geography: AP - Major (WEIGHTED COURSE)**

*Grade 9                      6 periods, 1 credit*

This course is designed for the motivated students in Grade 9 looking to enhance their understanding of how humans interact with the world around them. This course will introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students study where stuff is, and why it's there. The students will learn about and create tools geographers use to study how humans interact with the earth and the consequences of those actions. Students can expect independent study, geographic fieldwork and consistent homework. *PREREQUISITE: 95% in the previous year of social studies and teacher recommendation.*



## **TECHNOLOGY AND ENGINEERING EDUCATION**

### **N750 Materials Manufacturing I - Minor**

*Grade 9                      3 periods, .5 credit*

This course will give students a basic understanding of the materials and building techniques used in the manufacturing and construction industries today. Students will learn the proper and safe practice of hand tools, power tools and material processing machines. Several opportunities will be given for students to work with their hands to complete small-scale projects. Additionally computer aided drafting (CAD) software and computer numerical control (CNC) equipment will be introduced. NOTE: Students will be responsible for a materials fee.

### **N760 Technology Systems I - Minor**

*Grade 9                      3 periods, .5 credit*

This introductory course is designed to teach students the fundamentals of technology in the areas of communications, manufacturing, construction, power and transportation. Safe and proper use of hand tools and machines, as well as applying problem solving to manufacture different types of projects will be an important component of this course. Computer Aided Drafting (CAD) software and Computer Numerical Control (CNC) equipment will be introduced. NOTE: Students will be responsible for a materials fee.



## **PROJECT LEAD THE WAY (PLTW)**

The Project Lead the Way (PLTW) program is a nationally recognized pre-engineering curriculum that allows students to apply known math and science skills to explore industrial systems, processes and engineering principles for students seeking studies in a technological field. The PLTW courses are rigorous honors weighted courses. Students who perform well in a PLTW course and on the national exam can qualify for college credit in each PLTW class.

### **N770 Introduction to Engineering Design: Honors - Major (WEIGHTED COURSE)**

*Grade 9                      6 periods, 1 credit*

IED is the introduction course in a series of PLTW courses. Students will incorporate their understanding of math and science to study the design of new and innovative products and systems. Problem solving techniques and the processes used to communicate designs and innovations between their peers and the professional community will be deeply explored. Units of study will focus on the design process, research and analysis, teamwork, documentation and communication methods, global and human impacts, engineering standards, and technical documentation. The use of 3D modeling software will be an important aspect of this course. *PREREQUISITE: Successful completion of Algebra I with a grade of B or above and a score of proficient or advanced on the Algebra Keystone Exam.*

## **WORLD LANGUAGES**

Due to the cumulative nature of language learning, **it is strongly recommended that students planning to move to the next level achieve a final average of 75% or higher.** While it is recommended that college-bound students study at least two years of a World Language, those students planning to seek admission to more selective colleges should definitely consider studying a language for 3+ consecutive years.

### **N501 French II - Major**

*Grade 9                      6 periods, 1 credit*

This course is the continuation of French I. In French II, we will continue to develop the skills of listening, speaking, reading, and writing in French. We will review and refine the information learned in French I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the French language. We will continue to explore and discuss various aspects of the culture and history of the French-Speaking world. *PREREQUISITE: French I*

### **N510 German I - Major**

*Grade 9                      6 periods, 1 credit*

This is an introduction to the German language for beginning students. We begin to develop the skills of listening, speaking, reading, and writing in German. We concentrate on the essential structure and vocabulary necessary to achieve basic proficiency in the language. In addition to the German language itself, we also explore and discuss various aspects of the culture and history of the German-Speaking world.

### **N520 Spanish I - Major**

*Grade 9                      6 periods, 1 credit*

This is an introduction to the Spanish language for beginning students. We begin to develop the skills of listening, speaking, reading, and writing in Spanish. We concentrate on the essential structure and vocabulary necessary to achieve basic proficiency in the language. In addition to the Spanish language itself, we also explore and discuss various aspects of the culture and history of the Spanish-Speaking world.

### **N521 Spanish II - Major**

*Grade 9                      6 periods, 1 credit*

This course is the continuation of Spanish I. In Spanish II, we will continue to develop the skills of listening, speaking, reading, and writing in Spanish. We will review and refine the information learned in Spanish I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the Spanish language. We will continue to explore and discuss various aspects of the culture and history of the Spanish-Speaking world. *PREREQUISITE: Spanish I*

## **WESTERN CENTER: 9th Grade Program**

During the 9th grade year students have the opportunity to attend WMCTC. Applications can be found online at [WesternCenter.org](http://WesternCenter.org). If you have questions please contact the counselor at 610-489-7272.

## 10-12 GRADE COURSE DESCRIPTIONS

### ART

The Art Department believes that art can open doors to introduce students to culture and history. Art can incorporate problem solving skills into a hands-on learning environment. AP Art classes follow the curriculum established by the College Board, which requires extensive work beyond the classroom to meet the course requirements, including summer assignments. The goal of AP Art is to encourage students to think and create through research, planning, and production techniques with an advanced level of creativity and execution.

ART DEPARTMENT AP FLOW CHART			
AP Drawing (Fine Art Route)			
9	10	11	12
Foundations of Art or Studio Art Basics*	Art II	Art III	AP Drawing***
AP 2-D Art & Design (Fine Art Route)			
9	10	11	12
Foundations of Art or Studio Art Basics*	Art II	Art III	AP 2-D Art & Design***
AP 2-D Art & Design (Graphic Design Route)			
9	10	11	12
Intro to Digital Design**	Graphic Design Major I	Graphic Design Major II	AP 2-D Art & Design***
AP 2-D Art & Design (Photography Route)			
9	10 & 11		12
Intro to Digital Design**	Photography Minor I & II; Graphic Design Minor I		AP 2-D Art & Design***
AP 3-D Art & Design			
9	10	11	12
	Ceramics Major	Advanced Ceramics/Jewelry Major	AP 3-D Art & Design***

\*This is NOT the recommended 9th Grade class. Students will need teacher approval and portfolio review to enter Art II.

\*\*This class is not required but highly recommended for either Photography or Graphic Design.

\*\*\*Teacher Approval Required.

#### 002 Art II - Major

Grades 10, 11                      6 periods, 1 credit

This course is designed to give students who are serious about developing their artistic talent an opportunity to build on the skills gained in the Art I course. More advanced projects with an emphasis on individual creativity will be offered with more in-depth art experiences. Watercolor, advanced drawing, design, and painting are areas of study. *NOTE: Students will be responsible for a materials fee. PREREQUISITE: Performance of 85% or better in Art I and recommendation of instructor OR Performance of 90% or better in Studio Art Minor, recommendation of instructor, and portfolio review.*

### **003 Art III - Major**

*Grades 11, 12                      6 periods, 1 credit*

Students electing this course must have a strong interest in further developing their artistic ability with complex and creative assignments. This course will concentrate on individual expression. A wide variety of techniques in drawing, painting, and mixed media will allow each student to express individuality in their artwork. *NOTE: Students will be responsible for a materials fee. PREREQUISITE: Foundations Art I, Art II, recommendation of instructor after portfolio review, and an 85% or better in Art II.*

### **004 Art IV: Honors - Major (WEIGHTED COURSE)**

*Grade 12                              6 periods, 1 credit*

Designed for the highly skilled student who excelled in Art III, this course consists of independent study in studio art and art appreciation. Success in this course will require extensive hours of studio work, sketching, and research outside of the classroom as homework. The student will be given maximum opportunity and responsibility for individual growth and self-expression. Creating a college admission portfolio will be a focus for this course. *NOTE: Students will be responsible for a materials fee. PREREQUISITE: Art III with 90% or better and recommendation of instructor after portfolio review.*

### **011 Ceramics - Minor**

*Grades 10, 11, 12                  3 periods, .5 credit*

Students experience the diversity of clay as a medium for creating pottery and sculpture. The study of ceramics from a historical and cultural context will be included as inspiration for the production of original designs in clay. A variety of construction methods will be presented including coiling, slab construction, pinching, carving, and sculpting. Research and sketching are required for creating designs. This course may be elected only one time for credit. *NOTE: Students will be responsible for a materials fee.*

### **012 Ceramics - Major**

*Grades 10, 11, 12                  6 periods, 1 credit*

Students will experience the diversity of clay as a medium for creating pottery and sculpture. The study of ceramics from a historical and cultural context will be included as inspiration for the production of original designs in clay. A variety of construction methods will be presented including coiling, slab construction, pinching, carving, and sculpting. Students will be introduced to wheel throwing. Research and sketching are required for creating designs. This course may be elected only once for credit. This course is a prerequisite for Advanced Metals/Jewelry and AP 3D Design. *NOTE: Students will be responsible for a materials fee.*

### **013 Jewelry - Minor**

*Grades 10, 11, 12                  3 periods, .5 credit*

This course will give students experiences in making jewelry with a variety of media, which may include metal, enamel, colored resins, plaster, and found objects. Several jewelry processes will be covered including plaster mold making, sawing, soldering, and filing. Fine motor skills are necessary for success. This course may be elected only one time for credit. *NOTE: Students will be responsible for a materials fee.*

### **014 Advanced Ceramics/Jewelry - Major**

*Grades 11, 12                      6 periods, 1 credit*

This is a continuation of Ceramics and Jewelry Major and is recommended for students who are interested in learning more complex processes in metal and clay with more difficult levels of design. Focus areas include a variety of techniques which may include found objects, metal, clay, and hollow construction. This course is a prerequisite of AP 3D Design. *NOTE: Students will be responsible for a materials fee. PREREQUISITE: An 85% average in Ceramics Major and teacher recommendation.*

**020 Studio Art - Minor**

Grades 10, 11, 12            3 periods, .5 credit

This course is designed to introduce students to a variety of art techniques and materials through creative assignments. Projects include drawing, painting, printmaking, commercial art, sculpture, architecture, or mixed media. This course may be repeated for credit. *NOTE: Students will be responsible for a materials fee.*

**021 Studio Art - Major**

Grades 10, 11, 12            6 periods, 1 credit

This course is designed to introduce students to a variety of art techniques and materials through creative assignments. Projects include drawing, painting, printmaking, commercial art, sculpture, architecture, or mixed media. Emphasis will be on making and enjoying art. This course may be repeated for credit. *NOTE: Students will be responsible for a materials fee.*

**030 Graphic Design I - Minor**

Grades 10, 11, 12            3 periods, .5 credit

Students will build upon experiences by applying the art elements and principles of design to creating original images on the computer. Graphic Design will challenge students to solve creative problems using Adobe Illustrator and Photoshop in addition to freehand drawing and design. We recommend this course for students with an interest in visual arts including commercial art, photography, communications, animation, architecture, web page design, interior design, fashion design, and illustration. Units of study will include: illustration, logo design, layout, package design and typography. Drawing and original designing are requirements for the course.

**031 Graphic Design II - Minor**

Grades 11, 12                3 periods, .5 credit

This minor course will be an extension of Graphic Design I. This course will further develop the creative and technical skills of aspiring artists and graphic designers. Graphic Design II will enhance student knowledge of computer programs and help develop the portfolio needed to compete in the college application process. *PREREQUISITE: Graphic Design I Minor OR Graphic Design Major.*

**032 Graphic Design I - Major**

Grades 10, 11, 12            6 periods, 1 credit

Students who are thinking about pursuing a career in a commercial art field will find this course beneficial. A more in depth experience than the minor course, this course will challenge students to solve creative problems using the Adobe Creative Suite which includes professional design computer programs: Illustrator, Photoshop, InDesign, GoLive, and Acrobat. Computer illustration, manipulating and transforming photographs, multiple page layouts, advanced animation and web design will be covered in this modern day art course. This course will allow for more in-depth conversation about the creative thought processes, design essentials, and how to enhance the visual impact of design.

**033 Graphic Design II - Major**

Grades 11, 12                6 periods, 1 credit

This major course will be an extension of Graphic Design Major I and is intended for serious students who are interested in pursuing Graphic Design as a career and require an enhanced portfolio for the college application process. Students will continue with the use of the Adobe Creative Suite as a tool for visual communication. This course will allow for more in-depth study on the elements of design, creative thought processes, written and oral critiques, and how to enhance the visual impact of design. *PREREQUISITE: An 85% average in Graphic Design Major I and teacher recommendation.*

### **036 Photography I - Minor**

*Grades 10, 11                      3 periods, .5 credit*

This course is designed to teach the basics of digital photography. Students will learn how the control of light, composition and subject matter make successful photographs. During the course students will gain experience using the manual settings in the camera. Students will work independently and in groups on various in- and out-of-class assignments. Adobe Photoshop will be used for photo manipulation.



### **037 Photography II - Minor**

*Grades 11 and 12                      3 periods, .5 credit*

Photography II is the continuation course for students who have successfully completed Photography I. Students will explore advanced techniques in digital photography. This course will focus on individual solutions and expressions to complex photo assignments. Students work independently and in groups on various in- and out-of-class assignments. Upon completion students will create a digital portfolio of their work. Photoshop will be used for advanced photo manipulation.

*PREREQUISITE: Photography I.*

### **040 AP 3D Art & Design - Major (WEIGHTED COURSE)**

*Grade 12                                      6 Periods, 1 Credit*

This college-level art course is designed for highly motivated students who are heading into a career path in the arts or who have a serious passion for self-expression in art. You will demonstrate your understanding of design principles as applied to 3-Dimensional surfaces. It follows the curriculum established by the AP Program which requires extensive work beyond the classroom. Most tools needed to perform the work can be found in the school studio, and students must be able to come to extended studio hours beyond the normal school day. Summer assignments are also mandatory. The goal of AP Art is to encourage students to think and create through careful research, planning, and production techniques with an advanced level of creativity and execution. Students submit finished digital portfolios for evaluation at the end of the school year to the College Board. *NOTE: Students will be responsible for a materials fee, as well as photographing artwork for digital submission to the College Board. PREREQUISITE: Advanced Ceramics/Jewelry with a grade of 93% or better and recommendation of instructor after a portfolio review. This course may be taken as dual credit through Immaculata University.*

### **041 AP 2D Art & Design - Major (WEIGHTED COURSE)**

Grade 12                      6 periods, 1 credit

This is a college-level art course designed for highly gifted artists who are heading into career paths in art or have a serious passion for self-expression in art. You will demonstrate your understanding of design principles as applied to a 2D surface. It follows the curriculum established by the AP Program which requires extensive work beyond the classroom. Summer assignments are also mandatory. The goal of AP Art is to encourage students to think and create through careful research, planning and production techniques with an advanced level of creativity and execution. Students submit finished portfolios for evaluation at the end of the school year to the College Board. *NOTE: Students will be responsible for a materials fee as well as photographing artwork for digital submission to the College Board. PREREQUISITE: a prior grade of 93% or better and recommendation of instructor after portfolio review is required for all AP 2D Design classes. Please refer to AP Art Flow Chart for further clarification. This course may be taken as dual credit through Immaculata University.*

### **042 AP Drawing - Major (WEIGHTED COURSE)**

Grade 12                      6 periods, 1 credit

This is a college-level art course designed for highly gifted artists who are heading into career paths in art or have a serious passion for art. Your mastery of drawing and painting can be demonstrated through a wide range of approaches and media. Students submit finished portfolios for evaluation at the end of the school year to the College Board. *NOTE: Students will be responsible for a materials fee as well as photographing their artwork for digital submission to the College Board. PREREQUISITE: Art III with a grade of 93% or better and recommendation of instructor after portfolio review. This course may be taken as dual credit through Immaculata University.*

### **043 Art History: AP - Major (WEIGHTED COURSE)**

Grades 11, 12                6 periods, 1 credit

This course will allow students to explore major forms of artistic expression including architecture, sculpture, painting and other media from across a variety of cultures. Students will learn about the purpose and function of art as they develop the ability to articulate visual and art historical concepts in verbal and written form. Students will learn to critically analyze works of art within diverse historical and cultural contexts, considering issues such as politics, religion, patronage, gender, and ethnicity. *PREREQUISITE: A seriously-motivated student who has the following final average in the previous year's social studies AND English courses - Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies and English teachers.*

### **049 Yearbook - Minor**

Grades 10, 11, 12            3 periods, .5 credit

The focus of Yearbook Minor is not only to design the Spring-Ford Rambler but also to learn about page design, journalism and photojournalism. We will focus on learning the fundamentals of design and photography including composition, lighting, and subject. This process will be very hands-on, making class attendance extremely important. You will be responsible for taking photos and covering school events both in class and out of class on a weekly basis. This class is great for students who want real world experience in graphic design, photography and journalism. Interested students must fill out an application and be approved by the current Teacher prior to enrolling in the course.

## **BROADCASTING**

### **190 Broadcast Production - Minor**

*Grades 10, 11                    3 periods, .5 credit*

This minor elective course involves the technical aspects of television and field production. Students also will learn to fulfill the various duties of a production crew. Students may also have the opportunity to tape on and off campus events.



### **191 Broadcast Production I - Major**

*Grades 11, 12                    6 periods, 1 credit*

This elective course involves further development of the skills needed for television and field production. Though primarily a teacher-driven course, students will show their creativity as the course becomes more hands-on. Students will also learn how to become an educated viewer in today's visual world. Students in Broadcast Production I will be required to shoot on and off campus events. *PREREQUISITE: Grade of 95% or above in Broadcast Production Minor, excellent attendance record and permission from the instructor.*

### **192 Broadcast Production II - Major**

*Grade 12                         6 periods, 1 credit*

This elective course is an advanced course for serious and committed Broadcast students. Students are required to bring their own ideas and work independently or in small groups to continue their study of all aspects of TV, film and cinematography. In addition, these students will be responsible for the creation of the Senior Slide Show and Video Yearbook. Students in Broadcast Production II will be required to shoot on and off campus events. *PREREQUISITE: Grade of 95% or above in Broadcast Production, excellent attendance record and permission from the instructor.*



## **BUSINESS TECHNOLOGY**

### **610 Finance - Major**

*Grades 10, 11, 12 6 periods, 1 credit*

Finance is designed for students interested in the financial and investment industry. The course combines technology and hands-on skills to develop an understanding of the financial world in a business setting. Topics include saving, investing, using money more effectively, analyzing financial records, business financial choices and capital budgeting.

### **612 Business Law - Minor**

*Grades 10, 11, 12 3 periods, .5 credit*

Business Law involves study in very basic, everyday matters that everyone should understand to function well in our society. This course will cover topics such as Our Laws, Ethics, Court Systems, Criminal Law, Civil Law, Contracts, Consumer Protection, and Leasing Property. These are real-world survival skills. Students will develop an understanding of how many laws will affect their life and success.

### **614 Marketing - Minor**

*Grades 10, 11, 12 3 periods, .5 credit*

This course introduces the fundamentals of marketing while relating the material to the fields of sports and entertainment, food and beverage, fashion, and others. Emphasis will be placed on all aspects of marketing including planning, consumer behavior, marketing research, advertising, and communications. Recommended for students who would like to major in Marketing/Business in college or who would like to pursue a career in this field. The students will engage in individual and group activities involving marketing materials.

### **616 International Business - Minor**

*Grades 10, 11, 12 3 periods, .5 credit*

This course provides an overview of the importance of international business and trade in a global economy and explores the factors that bring success in international markets. Students will learn strategies associated with marketing, distribution, and managing an international business. Other major topics discussed will include cultural customs and traditions, trade, currency, geography, current events, global issues, and career opportunities. This course prepares students for postsecondary programs in business, including international business, marketing, finance and management.

### **620 Entrepreneurship - Minor**

*Grades 10, 11, 12 3 periods, .5 credit*

This course will be designed to instruct students about the concepts and skills necessary for starting a business. Course objectives include the identification of skills required of an entrepreneur, the process of developing a business plan, and all of the steps necessary in setting up a new business. Students will research current businesses in preparation of creating a business plan for a business of their choice. This course includes a simulation that will allow students to make decisions a business owner would make, regarding all aspects of a business.

### **630 Accounting - Major**

*Grades 10, 11, 12 6 periods, 1 credit*

This course is designed to give students an overview of what the accounting profession entails and to develop college readiness skills. Students will develop skills to use accounting systems for gathering and providing data to internal and external decision-makers to plan for and evaluate various business decisions. Students will focus on many business-related topics such as recording transactions, preparing and analyzing financial statements, completing an accounting cycle, ratio analysis, inventory systems, and cash flows. Students planning to major in any area of business will be fully prepared to excel immediately in their required accounting courses. Students should have a strong aptitude for mathematics and algebra skills

## Cooperative Work Experience - Major

Grades 11 and 12      12-18 periods, 1-3 credits

**653/654 - 3 CREDIT EXPERIENCE:** Students will spend the first half of the day taking courses to fulfill their graduation requirements. After Period 3 or 4 the students will leave school to work at their place of employment for the second half of the day. Students work every day we have school, start working no later than noon, and work a minimum of 3 hours per day.

**652 - 2 CREDIT EXPERIENCE:** Students will spend most of the day taking courses to fulfill their graduation requirements. After Period 5 the students will leave school to work at their place of employment. Students must work a minimum of 3 days per week, starting work no later than 1pm. You will still leave every day after Period 5 whether you work that day or not.

**651 - 1 CREDIT EXPERIENCE:** Students will spend the day taking courses to fulfill their graduation requirements. After Period 6 the students will leave school to work at their place of employment. Students must work a minimum of 3 days per week, starting work no later than 2pm. You will still leave school after Pd. 6 whether you work that day or not.

*See the Co-Op teacher for a list of potential Co-Op positions available. Transportation is not provided for this course.*



## COMPUTER EDUCATION

### 618 WEB Design and Construction

Grades 10, 11, 12            3 periods, .5 credit

Web Design is a project-based course that will help students understand the elements of and work required to design and build quality web pages. Students will learn about proper design elements/standards as well as appropriate content and legal issues. Multiple introductory design and construction projects are built-in to the course. Students will use an Editor and do not require coding skills.

### 660 Microsoft Office I - Major

Grades 10, 11, 12            6 periods, 1 credit

This course is designed for college/career-minded students who will need computer skills to meet educational and employment expectations. This hands-on, project oriented course focuses on the components of the Microsoft Office Suite. This includes but is not limited to Word, Excel, Access, and PowerPoint, as well as integrated applications. *Prerequisite: typing skills.* **Students taking this course in a cyber format must use a PC - Chromebook is not sufficient to meet course requirements.**

### 661 Microsoft Office II - Major

Grades 11, 12                6 periods, 1 credit

This course will move at a fast pace and will cover Word, Access, Excel, and PowerPoint in great depth. This course will delve into advanced skills that the typical user does not possess. This course affords the students the opportunity to develop the skills necessary for the Microsoft Office Certification (MSOC) tests. However, MSOC testing will not be offered by the district. *PREREQUISITE: Microsoft Office I or teacher recommendation.* **Students taking this course in a cyber format must use a PC - Chromebook is not sufficient to meet course requirements.**

### 670 Computer Science I - Minor

Grades 10, 11, 12            3 periods, .5 credit

This course is designed for students who are interested in programming, software development, and engineering / STEM disciplines. This is an introductory course and no prior programming experience is required. Computer Science is the study of computers and computational systems – which includes programming, hardware and software, numerical analysis, and software engineering. The aim of CS1 is to expose students to a variety of concepts that are common in the area of Computer Science and prepare them for future programming courses. CS1 will focus on three primary topics: web design, web development in HTML / CSS, and Javascript programming. Additionally, students will be exposed to other foundational concepts of Computer Science such as binary / hexadecimal number systems, Boolean logic, and the software development process. A strong background in mathematics is recommended. *PREREQUISITES: Completion of Algebra 1 with a minimum grade of 85%, and a score of Proficient or Advanced on the Algebra Keystone Exam.*

### 671 Computer Science II - Minor

Grades 10, 11, 12            3 periods, .5 credit

Computer Science II is a challenging course focused on Java programming. This course is a continuation of the concepts covered in Computer Science I with an increased focus on details and rigor. The overall goal of CS2 is to prepare students for AP Computer Science and / or introductory programming courses at the collegiate level. The class will focus on foundational concepts of Java programming including variable types, input / output methods, String variables, math methods, if / else statements, iteration (loops), arrays, and writing methods. Additionally, CS2 will cover the software development process including writing pseudocode, planning and executing projects, and debugging programs. *PREREQUISITES: Completion of Computer Science I with at least an 85% and a teacher recommendation.*

## **672 Computer Science: AP - Major (WEIGHTED COURSE)**

*Grades 11, 12*                      *6 periods, 1 credit*

Advanced Placement Computer Science is a rigorous course that covers high-level programming concepts in Java. The overall goal of the class is to prepare students to study Computer Science / engineering at the collegiate level and prepare students to take the AP exam at the end of the course. Topics covered include data structures (arrays, 2D arrays, and ArrayLists), advanced control logic, object-oriented design and objects, iteration (looping), inheritance, and recursion. Additionally, the class emphasizes the software development process, including design / planning, debugging, and project execution. The College Board AP Computer Science A guidelines will be followed to help prepare students to take the AP exam. *PREREQUISITES: Completion of Computer Science II with at least an 85% and a teacher recommendation. This course may be taken as dual credit through Immaculata University.*

## **ENGLISH**

The English Department offers a systematic and comprehensive approach to the study of literature and its related skills in accordance with PA Core Standards for English Language Arts. Students closely and critically read, understand, and respond to works of literature and informational text---with an emphasis on comprehension, vocabulary acquisition, and making connections among ideas and between texts with a focus on textual evidence. Students write for a variety of purposes and audiences and practice appropriate speaking and critical listening skills as individuals or in group discussions. Students will select appropriate course levels based on teacher recommendation and past performance.

### **110 English 10: World Literature - Major**

*Grade 10*                              *6 periods, 1 credit*

This survey course approaches world literature thematically, examining the questions, issues, and concerns humans have explored throughout time. Students are encouraged to consider global perspectives using novels, short stories, dramas, epics, poetry and nonfiction, and works are examined in the cultural, philosophical, and political climates in which they were created. Students practice literary analysis skills with an emphasis on reading, writing, speaking and listening. Preparation for state exams is included throughout the year.

### **111 English 10: World Literature Honors - Major (Weighted Course)**

*Grade 10*                              *6 periods, 1 credit*

This accelerated-pace survey course approaches world literature thematically, examining the questions, issues, and concerns humans have explored throughout time. Students are encouraged to consider global perspectives using novels, short stories, dramas, epics, poetry, and nonfiction, and works are examined in the cultural, philosophical, and political climates in which they were created. Students practice literary analysis skills with an emphasis on reading, writing, speaking and listening. Students must be prepared to spend time reading and analyzing both fiction and non-fiction texts through various modes of writing. Work will be completed in class and at home, often requiring students to conduct independent research or explore literary criticism which will be shared with the class and used to clarify the understanding of the universality of themes in text. Students must be prepared to conduct in-depth analysis of literature and lead class discussions. *PREREQUISITE: 90% final average in the previous year of English and teacher recommendation.*

### **113 AP Seminar - Major (Weighted Course)**

*Grades 10, 11*                      *6 periods, 1 credit*

This course engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students will read and analyze articles, listen to and view speeches, broadcasts and personal accounts, and will also experience artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and

communicate evidence-based arguments. All AP Seminar students are required to complete the AP Portfolio tasks and take the end of year exam. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current English teacher.*

The AP Capstone program aims to empower students by fostering the research, argumentation, and communication skills that are at the core of college readiness and essential for lifelong learning; providing a setting to build on the knowledge and rigorous course work of AP in an interdisciplinary format; offering students a unique opportunity to distinguish themselves to colleges and universities by choosing to challenge themselves academically, and by showing their passion and interest in specific research topics; and building self-confidence as thoughtful, independent thinkers better prepared for the academic challenges of higher education. It consists of two separate courses: AP Seminar (113) and AP Research (123).

### **120 English 11: American Literature - Major**

*Grade 11                      6 periods, 1 credit*

This survey course addresses the development of a uniquely American body of literature through analysis of novels, short stories, drama, poetry, and historical documents. The texts are examined in the social, political, and historical contexts in which they were created. In accordance with PA Core Standards, students are required to read independently, analyze and interpret a variety of texts, participate in class discussions, complete homework, and develop various individual and collaborative projects to further their understanding of the texts. Students will practice all modes of writing with an emphasis on research-based analysis.

### **121 English 11: American Literature Honors - Major (Weighted Course)**

*Grade 11                      6 periods, 1 credit*

This accelerated-paced survey course explores, in-depth, the development of a uniquely American body of literature through close reading of novels, short stories, drama, poetry, and historical documents. Literary works are examined in the cultural, philosophical, and political climates in which they were created. Students are required to read independently, analyze and interpret a variety of texts, write in various modes, participate in class discussions, and complete inquiry-based project learning (both individually and collaboratively) to extend and refine skills in reading, writing, speaking, and listening. Students must prepare to spend time daily on reading and writing homework in this course. *PREREQUISITE: 90% final average in the previous year of English and teacher recommendation.*

### **122 English Language/Composition: AP - Major (Weighted Course)**

*Grades 10, 11, 12            6 periods, 1 credit*

This course cultivates the reading and writing skills that students need for college success and for intellectually responsible civic engagement. The course guides students in becoming curious, critical, and responsive readers of diverse texts, and becoming flexible, reflective writers of texts addressed to various audiences for unique purposes. The reading and writing students do in the course should deepen and expand their understanding of how written language functions rhetorically: to communicate writers' intentions and elicit readers' responses in particular situations. The course cultivates the rhetorical understanding and use of written language by directing students' attention to writer/reader interactions in their reading and writing. Course activities also deepen students' knowledge and control of formal conventions of written language (e.g. vocabulary, diction, syntax, mechanics, and genre). Students should have good time management skills, sufficient command of mechanical conventions, and an ability to critically read and discuss prose. Students will prepare for the AP Exam in English Language and Composition. Course work involves long-term writing and reading assignments and completion of summer assignments. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current English teacher. This course may be taken as dual credit through Immaculata University.*

### **123 AP Research - Major (Weighted Course)**

*Grades 11, 12                      6 periods, 1 credit*

This course is the second of two offerings in the new College Board Program, AP Capstone. AP Research allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000-5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense. All AP Research students are required to complete the AP Portfolio tasks. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must complete the AP Seminar course and obtain the recommendation of their current English teacher.*

The AP Capstone program aims to empower students by fostering the research, argumentation, and communication skills that are at the core of college readiness and essential for lifelong learning; providing a setting to build on the knowledge and rigorous course work of AP in an interdisciplinary format; offering students a unique opportunity to distinguish themselves to colleges and universities by choosing to challenge themselves academically, and by showing their passion and interest in specific research topics; and building self-confidence as thoughtful, independent thinkers better prepared for the academic challenges of higher education. It consists of two separate courses:

### **130 English 12: British Literature - Major**

*Grade 12                              6 periods, 1 credit*

This survey course approaches British literature thematically addressing major essential questions through novels, short stories, drama, epics, poetry and nonfiction. Works are examined in the cultural, philosophical and political climates in which they were created. The course will develop and employ students' 21st century-based skills through inquiry based units of study, technology, and by making real world connections through both literature and non-fiction selections.

### **131 English 12: British Literature Honors - Major (Weighted Course)**

*Grade 12                              6 periods, 1 credit*

This accelerated-paced course addresses the British/Human experience through thematic, in-depth study of novels, short stories, drama, epics, poetry and nonfiction. Works are examined in the cultural, philosophical and political climates in which they were created. Students expand upon previously acquired skills in reading independently, writing, speaking and listening and develop 21st Century-based skills by employing problem solving, completing inquiry-based learning, and integrating technology. Students conduct analyses of literary and non-fiction articles. Students must expect to spend time daily on reading and writing homework in this course. *PREREQUISITE: 90% in the previous year of English and teacher recommendation.*

### **132 English Literature/Composition: AP - Major (Weighted Course)**

*Grades 11, 12                      6 periods, 1 credit*

This is a college-level English course designed for highly motivated students. The major emphasis is the exploration and analysis of renowned literary works, poetry and prose, as well as the continued development of writing skills. All literary works are examined in the cultural, philosophical and political climates in which they were created. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current English teacher. This course may be taken as dual credit through Immaculata University.*

**140 Public Speaking and Debate - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

The course will begin with the basic elements of public speaking, including speech structures and presentation skills. The structural components of a speech, including the ingredients for a successful introduction, body, and conclusion, will be developed; students will also learn how to craft and effectively use formal outlines, manuscripts, and notecards for effective presentations. Skills such as eye contact, articulation, and body language will be cultivated. Informative and persuasive speeches will be discussed, researched, and executed. The course will then move to the techniques involved in different styles of debates, which will be performed on a variety of current issues.

**141 Technical Writing - Minor**

*Grade 10, 11, 12            3 periods, .5 credit*

This course is designed to provide students with the necessary skills for drafting effective and concise written communications for math, science, computer science, and engineering courses. Students will be taught various communication techniques that can be applied towards documents, such as drafting proposals, lab reports and presentations. The principles and procedures of technical writing will focus attention on analyzing audience and purpose, organizing information, designing graphic aids and writing specialized forms, such as instructions, abstracts and analysis of data. This course will review the technical writing process, step-by-step. Students who are considering STEM related careers will benefit from this course.

**142 Acting Theories - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

This course is designed to give the actor an exploration into the theories of various theatrical and acting methods. Four major theories are presented with corresponding steps, worksheets, and workshops. Performance and movement is a continuous occurrence. Close script reading, scene work, monologues, improvisations and theater games will expand and enhance students' understanding of the performing arts. This course may not be offered on a yearly basis.

**144 Journalism - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

Journalism is designed for the student who has an interest in writing and wants to develop news reporting skills. Students will learn the basics of the field of journalism, where they will build an awareness of the intricacies and inner-workings of the career itself, including developing news judgment and an ethical awareness. Many current topics in journalism (whether from traditional news venues, such as television reporting, or from newer forms of journalism, such as podcasts or blogs) will be discussed, analyzed, and evaluated. Specific course objectives are becoming familiar with journalism terminology, developing interviewing and writing skills, and producing Spring-Ford-centric news, opinion, features, entertainment, and sports stories throughout the year. Students will gain practical publishing experience in pitching, reporting, producing, and editing both online and print content for the school's student-run newspaper, Rampage.

**145 Fiction Writing - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

This course will explore the elements of fiction through the examination of multiple short works. Students study the writing process, produce original short stories, and participate in the revision process through writing workshops. Elements of fiction such as description, dialogue, plot construction, point of view, setting, atmosphere, and character development will be identified, discussed, and integrated into student writing. This course is designed for strong writers to hone their writing skills.

### **146 Poetry - Minor**

Grades 10, 11, 12      3 periods, .5 credit

Students are encouraged to use their own experience and perspective as a basis for writing poetry. Writers will be exposed to a variety of forms, styles, and themes through the reading and analysis of others' poetry. Students will also learn techniques for different poetic genres and find inspiration in writing their own poetry through additional forms of expression (i.e. art, music, photographs, etc.) Vocabulary development, poetic terminology, speaking and listening skills, recitation and interpretation are integrated into the course. *This course may not be offered on a yearly basis.*

### **148 Innovation Studio/Media/Communication - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This course is designed to increase student understanding of software, equipment, and related techniques in the audio, broadcasting, and maker space areas of the Innovation Center. Once certified in each studio, students can work on larger, long-term projects for themselves and faculty/staff in the building. Students may have the opportunity to engage in projects that will require a fee for materials (not a requirement of the course).

## **FAMILY AND CONSUMER SCIENCES (FCS)**

### **705 Fashion and Textiles - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This course will expose students to many aspects of fashion and textiles such as the manufacturing process for industrial and synthetic textiles along with all features of the fashion industry. A basic familiarity with hand and machine sewing is helpful but not required. Students will have the opportunity to develop and improve their clothing and pattern construction skills. There is potential for students to expand their knowledge of needle skills like embroidery, knitting, crocheting, quilting, and weaving. Possible careers in fashion, fabric trends, merchandising, visual effects, and numerous forms of design will be introduced. *NOTE: Students will be responsible for supplying their own fabrics and other project materials.*

### **710 Lifetime Family and Consumer Sciences - Minor**

Grade 10 & 11      3 periods, .5 credit

Are you prepared to handle all the challenges and responsibilities of young adult living? If not, this class is for you! This course is designed to build the bridge between student life and life following high school graduation. Topics will include college and career exploration, employability skills, the basics of financial literacy, car ownership, housing, and interior design. This course does not include a food lab experience.

### **720 Food and Nutrition - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This course offers students an opportunity to plan and prepare foods needed for good health. The nutritional emphasis will include updates on nutritional research and information on eating for fitness and better health. Food production and safety will be explored, as well as international foods and customs.

### **730 Family and Consumer Sciences - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This course provides students the opportunity to plan/prepare foods and begins with the foundation of nutrition as applied to family health and food choices. Regional foods of the U.S. will be explored. This course also includes basic hand-sewing and sewing machine skills during which students will create a basic sewing machine project. *NOTE: Students will be responsible for a materials fee for the sewing unit.*



**735 Family and Consumer Sciences - Major**

Grades 10, 11, 12            6 periods, 1 credit

This course addresses the needs of individuals and the family unit in the areas of nutrition, preparation of food, child development, clothing and textiles, and consumer management. Students will enjoy the opportunity to improve cooking, nutrition, sewing, textile, and child development knowledge. Students will learn skills to manage the many challenges that exist across a lifespan and are related to the family unit in a global society. *NOTE: Students will be responsible for a materials fee for the sewing unit.*

**740 Prenatal and Infant Development - Minor**

Grades 10, 11, 12            3 periods, .5 credit

This class will take students on a journey through the beginning stages of life. The main focus of this course will be on prenatal development, including labor and delivery, along with infant development through the first year of life. Course may include an opportunity for direct participation in our Play School Learning Lab.

**742 Parenting and the Early Childhood Years - Minor**

Grades 10, 11, 12            3 periods, .5 credit

Family life, parenting methods and developmental milestones from age one through early childhood years will be the focus of this course. Students will have the opportunity for direct participation in our high school's Play School Learning Lab, allowing students to gain valuable experience working with young children.

**745 Child Development - Major**

Grades 10, 11, 12            6 periods, 1 credit

Do you love working with children? Are you interested in learning how to create a fun and enriching environment in which children can grow to be the best versions of themselves? In this course, students will learn the physical, intellectual, emotional, and social developmental milestones of young children. Special concentration will be on contemporary topics in early childhood education and development. Students will be directly involved with lesson planning and will co-lead activities during our high school's PlaySchool Program, in order to gain valuable experience working with young children. *PREREQUISITE: 90% or higher in one or both child development minor courses or teacher approval.*

*\*College in High School (CHS) offers Spring-Ford High School students the opportunity to earn credit in both high school and University of Pittsburgh (HHD 1002 Development: Conception Through Early Childhood). The curriculum is identical to the Child Development Major curriculum, but the CHS grade is generated from additional assessments. Students must meet the prerequisites for the Child Development Major course and will be required to pay a tuition fee to register for the CHS course at the beginning of the school year.*

## **GIFTED EDUCATION**

Students who are identified as gifted are participants in the high school's Gifted Program. Participation may take the form of enrolling a high school gifted course offerings, such as the senior year Independent Study. Participation in the gifted program could also include involvement in Gifted Support Periods during scheduled study halls. All students with an active GIEP are additionally assigned to a Gifted Mentor, a teacher who is available for mentor/student conferencing throughout the year in addition to managing the student's annual GIEP.

### **982 Independent Study - Minor**

*Grade 12                      3 periods, .5 credit*

Mature, responsible students may submit a proposal for studying a topic independently. Students must submit a proposal for study to the gifted department detailing what they intend to study, the rationale for studying it, and the criteria upon which the project would be evaluated and graded. A list of resources, both material and people, should be included, as well as a timeline for the year. Past topics include the origins of socialism, Asian history, computer programming, classical mythology, and the exploration of the field of law. Students are assigned a mentor who will facilitate, not plan or instruct, their study; all work is done at the initiative of the student. This is not for everyone; it takes discipline and perseverance to complete a project. Grades are given each marking period, and it is the responsibility of the student to make sure that they have met the criteria set. This course is open only to 12th grade gifted students who submit a proposal of study by the end of their 11th grade year. Proposals require approval from the Gifted Mentor who will facilitate the independent study as well as from the grade level administrator.

### **Gifted Support Periods (GSDY)**

*All grades variable              No credit*

Students will spend their study hall in the Gifted Support room. Upon returning to school in the fall, students interested in utilizing this resource will have the opportunity to sign up to attend Gifted Support during their study halls. Students may use their time to work on academic assignments, conference with a gifted teacher, study collaboratively with gifted peers, or utilize the print and electronic enrichment resources. This is a resource designed to foster the academic, social, and emotional needs of the gifted learner and to encourage students to develop a working relationship with an adult mentor. Gifted teachers are available to work with individual students in connection with their GIEP goal(s) and/or future plans. Gifted Support is available only to students who are identified as gifted.

## **HEALTH AND PHYSICAL EDUCATION**

### **800 Physical Education - Minor**

*Grades 10, 11, 12              2 periods, .4 credit*

The Physical Education program provides the opportunity to develop physical skills, increase cognitive understanding of various activities and improve one's level of fitness. Students will participate in individual and team sports as well as traditional and non-traditional sports/ activities. These activities are designed to foster improved physical, emotional and mental well-being and become lifetime recreational pursuits. Emphasis is placed on active participation, how to play and safety procedures, as well as, the cooperative nature and team aspect of each activity.

### **822 Advanced Physical Education - Minor**

*Grades 11, 12              2 periods, .4 credit*

The course is designed for students who have a desire to participate in a more challenging environment than a regular physical education class. This course will focus on leadership, teambuilding, problem solving, and sport strategy. In addition, team-building activities will be a significant part of the curriculum. The course meets three times in a six-day cycle.

*PREREQUISITE: Teacher recommendation and a 90% or better in Physical Education in the year prior.*

### **830 Fitness and Wellness I - Minor**

Grades 10, 11, 12            2 periods, .4 credit

Students will learn to effectively use a variety of weight training and cardiovascular equipment. Students will be taught the correct principles and concepts of an exercise program in cardiovascular endurance, muscular endurance, and muscular strength. Students will chart their workouts, receive instruction in muscle anatomy and physiology, nutrition and will design workout programs to meet their individual fitness goals. This course can substitute for Physical Education.

### **832 Fitness and Wellness II - Minor**

Grades 11, 12            3 periods, .5 credit

This course is the next level from Fitness/Wellness I. Utilizing the Physical Education Center as their classroom, students will participate in a higher-level variety of activities designed for students who are actively pursuing an improved personal physical fitness level. The course will focus on program development and implementation, with an emphasis on daily routines designed to increase student participation and knowledge of fitness. *PREREQUISITE: Teacher recommendation and a 90% average or better in Fitness and Wellness I.*

### **834 Intensive Fitness and Wellness - Minor**

Grades 10, 11, 12            3 periods, .5 credit

This course is a high-level, high-energy elective that utilizes all types of modern day training techniques and equipment to develop a bigger, stronger, faster, and more agile student athlete. Using the “state of the art” Physical Education Center as their classroom, students will have access to all variations of strength and conditioning equipment and facilities. *Along with the use of facilities, students will have individually programmed workouts to complete. **Class meets during 7th period, three times per cycle, and will extend to 2:45 PM each class.*** In-season student athletes will be dismissed at 2:30 during their respective seasons, and all students will be responsible for transportation after school. *PREREQUISITE: Teacher recommendation.*

### **851 Health - Minor**

Grade 11            2 periods, .4 credit

This course provides a comprehensive look at health issues in our society. Units of study include: Fitness and Nutrition, First Aid and Safety, Mental Health, Substance Use and Abuse, and Human Growth and Development. Each unit of study provides students with opportunities to learn information that may assist them in making “healthy choices” throughout their lifetimes.

[Health/PE Slideshow](#)



## MATHEMATICS

Students are encouraged to review the typical math sequences chart. All courses have a calculator requirement. Please refer to the course description for specifics. Students in all math courses can expect daily homework assignments.

7TH GRADE	8TH GRADE	9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE	ELECTIVES
Algebra I	Geometry	Honors Algebra II	Honors PreCalc/ Trigonometry	AP Calculus - AB	AP Calculus - BC	AP Statistics
7th Grade Math			PreCalc/ Trigonometry	Honors Calculus	Elective	Probability and Statistics
	Algebra I	Honors Geometry	Honors Algebra II	Honors PreCalc/ Trigonometry	AP Calculus - AB	Math Applications
			Algebra II	PreCalc/ Trigonometry	Honors Calculus	
	8th Grade Math	Algebra I	Geometry Honors Geometry	Algebra II	Precalculus/ Trigonometry	
					Algebra III/ Trigonometry	
Elective						

### 311 Algebra I - Major

Grade 10 6 periods, 1 credit

This course provides a solid foundation in algebraic concepts. Topics covered include the properties of the real number system, solving and graphing linear equations and inequalities, simplifying polynomials, and an introduction to quadratic and exponential functions. Students learn to use functions to model real-world situations. A scientific calculator is required.

### 321 Geometry - Major

Grades 10, 11 6 periods, 1 credit

Euclidean Geometry is learned through investigating, examining, justifying, reasoning and visualizing. Coordinate geometry and right angle trigonometry are also introduced and applied. Algebra I concepts are integrated throughout the course. A scientific calculator is required. *PREREQUISITE: Algebra I and teacher recommendation.*

### 325 Honors Geometry - Major

Grades 10, 11 6 periods, 1 credit

This accelerated course is designed to provide an enriching and stimulating environment for the study of geometry. It includes a rigorous development of both Euclidean and coordinate geometry. Right angle trigonometry is also introduced. Algebra I concepts are integrated throughout the course. A scientific calculator is required. *PREREQUISITE: 95% or better in Algebra 1.*

### 331 Algebra II - Major

Grades 10, 11, 12 6 periods, 1 credit

Algebra II expands students' knowledge of linear, quadratic, and exponential functions to include polynomial, radical, and rational functions. Students will gain facility with operations and solutions over the set of complex numbers and logarithmic functions. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: Geometry and teacher recommendation.*

**335 Algebra II: Honors - Major (Weighted Course)**

Grade 10                      6 periods, 1 credit

This course will deepen and extend student's knowledge of Algebra to build a powerful set of mathematical tools for solving problems. The course investigates linear, exponential, quadratic and polynomial functions as well as their inverses and transformations. Sequences are developed especially in regard to their connection to linear and exponential functions. Systems of equations are also introduced. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A grade of 85% or better in 9th Grade Honors Geometry, a B on the midterm exam, and teacher recommendation.*

**340 Algebra III/Trigonometry - Major**

Grades 11, 12                      6 periods, 1 credit

Algebra III/Trigonometry is a less intense alternative to Pre-calculus/Trigonometry. It is intended to prepare the student for college algebra. The same topics included in Precalculus/Trigonometry are covered but in less depth. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A grade of 70% or better in 331 Algebra II, and teacher recommendation.*

**341 PreCalculus/Trigonometry - Major**

Grades 11, 12                      6 periods, 1 credit

This advanced math course prepares students for college-level calculus. It covers algebraic functions. Unit circle trigonometry, trigonometric functions, graphs, identities, and triangle trigonometry are also included. Special emphasis is placed on graphical techniques, applications, and the algebra of calculus. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A grade of 85% or better in Algebra II, a B on the midterm exam, and teacher recommendation.*

**345 PreCalculus/Trigonometry: Honors - Major (Weighted Course)**

Grades 10, 11                      6 periods, 1 credit

This rigorous course is designed for serious students who have demonstrated strong mathematical ability and are preparing for AP Calculus. It includes extensive study of algebraic, exponential, and logarithmic functions and their graphs; sequences and series; matrices; polar coordinates; unit circle trigonometry, trigonometric graphs, identities and triangle trigonometry. Special emphasis is placed on graphical techniques, applications, and the algebra of calculus. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A grade of 85% or better in Honors Algebra II, a B on the midterm exam, and teacher recommendation.*

**355 Calculus: Honors - Major (Weighted Course)**

Grades 11, 12                      6 periods, 1 credit

This course introduces students to the concepts of limits, differential calculus and integral calculus. It provides a solid foundation for a college calculus course. Analytic geometry and trigonometry are reviewed and used to solve problems. A wide variety of applications are explored to demonstrate the power of calculus. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: Honors Precalculus OR a grade of 80% or better in Precalculus and teacher recommendation.*

**359 Calculus AB: AP - Major (Weighted Course)**

Grades 11, 12                      6 periods, 1 credit

AP Calculus AB is comparable to a first semester college calculus course. Functions, graphs, limits, derivatives, and integrals are covered extensively, with applications to real-world problems. This course is designed for students who intend to take the AP exam for possible college credit. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A grade of 85% or better in Honors Precalculus/Trigonometry, a B or better on both the course midterm and final exams, and teacher recommendation OR a B or better in Calculus Honors and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

### **369 Calculus BC: AP - Major (Weighted Course)**

Grade 12                      6 periods, 1 credit

The topic outline for Calculus BC follows the curriculum established by the College Board Advanced Placement Program. It includes all Calculus AB topics plus parametric, polar, and vector equations, applications of integrals, polynomial approximations, sequences and series (both Taylor and Maclaurin). Successful performance on the AP exam may qualify the student to receive college credit. A TI 93 or TI 84 graphing calculator is required. *PREREQUISITE: AP Calculus AB and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

### **371 Probability and Statistics - Major**

Grades 12                      6 periods, 1 credit

This course is designed for students who have successfully completed Algebra II and wish to extend their knowledge of how mathematics is used in the real world. Topics covered include collecting and analyzing data, basic concepts of probability, normal and discrete distributions, surveying and sampling techniques, and an introduction to statistical inference. Students planning to major in business or the social sciences are encouraged to take this course. It may be taken alone or in conjunction with another math course. A TI83 or TI84 graphing calculator is required. *Prerequisite: Grade of 75% in Algebra II preferred or current math teacher recommendation.*

### **379 Statistics: AP - Major (Weighted Course)**

Grades 11, 12                      6 periods, 1 credit

This course is intended for any college-bound student who has a strong background in Algebra II and solid writing skills. It is comparable to a college-level introductory course in statistics and follows the curriculum established by the College Board Advanced Placement Program. The course introduces the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Four broad conceptual themes are covered: Exploring Data, Planning a Study, Anticipating Patterns, and Statistical Inference. Students enrolled in the course may take the Advanced Placement Statistics exam in the spring for possible college credit. This is a more rigorous course than Probability and Statistics as it requires greater student independence in completing out of class graded assignments in addition to daily homework, consists of a faster instructional pace, and presents a more in-depth level of data analysis and writing in preparation for the AP exam. A TI83 or TI84 graphing calculator is required. *PREREQUISITE: A seriously motivated student who has a grade of 85% or higher in Honors Algebra II or a 90% or higher in Algebra II, and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

### **380 Math Applications - Major**

Grades 11, 12                      6 periods, 1 credit

This course provides an overview of real world applications of mathematics to business, personal finance, and everyday life. A scientific calculator is required. *PREREQUISITE: Teacher recommendation. This is not an NCAA approved course.*

## **MUSIC**

### **050 Band - Major**

*Grades 10, 11, 12          6 periods, 1 credit*

This co-curricular academic performing musical ensemble is open to students with a desire to play a wind or percussion instrument in an instrumental music program. Membership will include participation in the Symphonic Band. Participation in this course includes evening rehearsals, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs. The course provides students with basic experiences designed to develop technical skills and musical understandings in a progressive way. Emphasis is placed upon the development of characteristic instrumental tone, music reading skills, and ensemble performance through the study of a wide variety of musical literature. Performances are given at band festivals, competitions and concerts. Students must be enrolled in band as a major to be eligible for extra-curricular jazz ensembles.

### **050M Band - Minor**

*Grades 10, 11, 12          3 periods, .5 credit*

This co-curricular academic performing musical ensemble is open to students who have the desire to play a wind or percussion instrument in an instrumental music program. Membership will include participation in the Freshman Symphonic Band. Course requires prior director approval. The primary purpose of this course is to accommodate scheduling conflicts. Students are encouraged to participate in the major equivalent. Students participating in minor will be expected to perform at all Concert Band functions. Participation in this course includes evening rehearsals, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs. The course provides students with basic experiences designed to develop technical skills and musical understandings in a progressive way. Primary emphasis is placed upon the development of characteristic instrumental tone, music reading skills, and ensemble performance through the study of a wide variety of musical literature. Performances are given annually at band festivals, competitions and concerts. Students enrolled in a minor may not be eligible for extra-curricular jazz ensembles.

### **050H Band - Honors - Major (Weighted Course)**

*Grades 10, 11, 12          6 periods, 1 credit*

Honors Band promotes solo advanced study on a musical instrument. Students wishing to take Honors Credit in band will pursue this course IN ADDITION to the Band Curriculum. Aspects of the two courses may be overlapped, however, they may not be completed exclusively. The student first and foremost is still a member of the band ensemble. Students will pursue projects in historical, societal, and musical aspects of their instrument while preparing solo performances and chamber music opportunities. Students should be confident in their skills as an instrumentalist. An audition and director recommendation is required as students must display technical achievement on their instrument.

### **051 Marching Band - Major**

*Grades 10, 11, 12          6 periods, 1 credit*

This co-curricular academic performing musical ensemble is open to students with a desire to play a wind or percussion instrument in an instrumental music program. Membership will include participation in the marching band program and the Symphonic Band. Participation in this course includes weekend and evening rehearsals in September, October, and November, a concert adjudication, as well as three concerts a year. Membership is requisite upon students participating in the marching and concert programs. The course provides students with basic experiences designed to develop technical skills and musical understandings in a progressive way. Primary emphasis is placed upon the development of characteristic instrumental tone, music reading skills and ensemble performance through the study of a wide variety of musical literature. Performances are given before thousands of spectators at festivals, competitions and concerts. *NOTE: Members of the marching band must be enrolled in this course and will be required to pay an activities fee.*

### **051H Marching Band - Honors - Major (Weighted Course)**

*Grades 10, 11, 12          6 periods, 1 credit*

Honors Marching Band promotes solo advanced study on a musical instrument. Students wishing to take Honors Credit in band will pursue this course IN ADDITION to the Marching Band Curriculum. Aspects of the two courses may be overlapped, however, they may not be completed exclusively. The student first and foremost is still a member of the band ensemble. Students will pursue projects in historical, societal, and musical aspects of their instrument while preparing solo performances and chamber music opportunities. Students should be confident in their skills as an instrumentalist. *An audition and director recommendation is required as students must display technical achievement on their instrument.*

### **070M Chorus - Minor**

*Grades 10, 11, 12          3 periods, .5 credit*

Chorus is a mixed vocal ensemble intended to challenge the singing student and direct his/her efforts toward increased vocal technique, acquaint him/her with a variety of vocal styles, and focus his/her efforts toward musical performance. The ensemble is co-curricular and rehearses one day after school per week and performs two concerts per school year. Concert performances are mandatory. Prior choir experience is not required.

### **070 Chorus - Major**

*Grades 10, 11, 12          6 periods, 1 credit*

This is a mixed choral ensemble intended to challenge the singing student, directing efforts toward increased vocal technique, a variety of vocal styles and a focus on musical performance. There will be an emphasis on solo or small group performance as well as fundamental music theory. The ensemble is co-curricular, rehearsing one day after school per week and performing two concerts per school year. concert performances are mandatory. *PREREQUISITE: Director approval is required.*

### **071M Vocal Ensemble - Minor**

*Grades 10, 11, 12          3 periods, .5 credit*

Students will focus on fundamentals of vocal and choral technique as well as music theory. This course will give the Spring-Ford choral student the opportunity for competitive choral performance. This is a co-curricular course and there will be evening rehearsals as well as participation in scheduled performances during and outside the school day which will be announced during the school year. All performances are mandatory. This course is by AUDITION only and requires a \$100 student activity fee.

### **071H Vocal Ensemble Honors - Major (Weighted Course)**

*Grades 10, 11, 12          6 periods, 1 credit*

Students will focus on fundamentals of vocal and choral technique for ensemble and solo singing. There will also be a focus on leadership techniques for running a rehearsal which includes learning basic piano skills. This course will give the Spring-Ford choral student the opportunity for competitive choral performance as well as developing solo/small group performance skills. This is a co-curricular course and there will be evening rehearsals as well as participation in scheduled performances during and outside the school day which will be announced during the school year. All performances are mandatory. *This course is by AUDITION only and requires a \$100 student activity fee.*

### **075 Music Theory I - Minor**

*Grades 10, 11, 12          3 periods, .5 credit*

This course is an intensive study of music history, dictation, harmony, and sight-singing. *PREREQUISITE: participation in a current school ensemble, teacher permission or private music lessons outside of school with teacher approval.*



### **076 Music Theory II - Major**

*Grades 11, 12                      6 periods 1 credit*

An extension of Music Theory I with a more intensive study of music theory concepts such as major and minor scales, intervals, chords, beginning composition, and improvisation as well as a focus on Aural skills. *PREREQUISITE: Music Theory I AND recommendation of teacher.*

### **080 Orchestra - Major**

*Grades 10, 11, 12                      6 periods, 1 credit*

Orchestra will be provided for those students currently involved in the string music curriculum. There will also be an emphasis on solo or small group performance as well as fundamental music theory. Orchestra is co-curricular and may require evening rehearsals in preparation for school-sponsored musical events. Students are scheduled for sectional string lessons from study halls when possible. Concert performances are mandatory. *PREREQUISITE: Prior string orchestral experience and director approval are required.*

### **080M Orchestra - Minor**

*Grades 10, 11, 12                      3 periods, .5 credit*

Orchestra will be provided for those students currently involved in the string music curriculum. Orchestra is co-curricular, and may require evening rehearsals in preparation for school-sponsored musical events. Students are scheduled for sectional string lessons from study halls when possible. *PREREQUISITE: Prior string orchestral experience and director approval is required.*

### **081M Select Strings - Minor**

*Grades 10, 11, 12                      3 periods, .5 credit*

Students will focus on fundamentals of string playing technique for ensemble and solo performance. This course will give students an opportunity for performances during and outside the school day which will be announced during the school year. Students are scheduled for sectional string lessons during study halls when possible. All performances are mandatory. *This course is by AUDITION only.*

### **081H Select Strings Honors - Major (Weighted Course)**

*Grades 10, 11, 12                      6 periods, 1 credit*

Students will focus on fundamentals of string playing technique for ensemble and solo performance. There will also be a focus on leadership techniques for running a rehearsal. This is a co-curricular course and may have evening rehearsals as well as participation in scheduled performances during and outside the school day which will be announced during the school year. All students will prepare district solos and perform a solo recital. All performances are mandatory. *This course is by AUDITION and director approval is required.*

### **090 Music Theory: AP - Major (Weighted Course)**

*Grade 12                                      6 periods, 1 credit*

This course will develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of these goals may best be approached by initially addressing fundamental aural, analytical, and compositional skills using both listening and written exercises. Building on this foundation, the course will progress to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation among other skills. Students will need to read and write musical notation. It is assumed that the student has acquired (or is acquiring) at least basic performance skills in voice or on an instrument. *PREREQUISITE: Passed Music Theory II with a B or higher and/or received permission from the instructor.*



## SCIENCE

### TYPICAL SCIENCE COURSE SEQUENCES FOR GRADES 9-12

This chart is a guideline, and not to be viewed as the only way of progressing through science courses. The chart is intended to help students design a curriculum dedicated to their interests and needs. Biology is required. After biology, we offer a number of science course options. Students can choose from electives (Advanced Geology, Anatomy and Physiology, Applied Science, Chemistry, Environmental Science, Microbiology, Physics, Zoology) described below, along with a number of AP science courses. More than one science can be taken in any given year. Three science credits are required to graduate.

9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE
Earth Science is the traditional course, Honors Biology with teacher recommendation	Biology is required. If taken in 9th grade, students usually take Chemistry	Chemistry recommended for students planning on attending college	Science optional. Physics recommended for those considering a STEM career
Earth Science	Biology	Chemistry Other Science Elective	Physics Other Science Elective AP Science
Honors Earth Science	Biology Honors Biology	Honors Chemistry Chemistry Other Science Elective AP Science	Physics Other Science Elective AP Science
Honors Biology	Honors Chemistry Chemistry Other Science Elective AP Physics I	Physics Other Science Elective AP Science	Physics Other Science Elective AP Science

#### **420 Biology - Major**

Grade 10                      6 periods, 1 credit

Biology is the study of life- from molecules and cells to organisms to how those organisms interact with each other and their environment. Through this course, students' understanding of biology will expand by incorporating more abstract knowledge, such as the structure and function of DNA, and more comprehensive theories, such as evolution. This course will contribute to the development of students' abilities to think clearly, to express their ideas with clarity and logic, and to work collaboratively. The course will be presented as a tool to help students describe, explain, predict, and investigate their environment. Preparation for the state Keystone exam is included throughout the year.

#### **421 Biology: Honors - Major (Weighted Course)**

Grade 10                      7 periods, 1 credit

This course is offered to tenth grade students who wish to accept the challenge of an honors program. This fast-paced, in-depth course emphasizes scientific theories and laboratory inquiry through a molecular approach to biology; it will challenge students to think critically, apply knowledge in new ways, and be resourceful and independent. This course is reading intensive and will require students to read and take notes before class discussions on the material. Preparation for the state Keystone exam is included throughout the year. *PREREQUISITE: To select this course the student must have earned a grade of 93% or better in Honors Earth Science or 95% or better in Academic Earth Science. MATH CONCURRENT: Honors Geometry or Honors Algebra II.*

#### **422 Biology: AP - Major (Weighted Course)**

Grades 11, 12                7 periods, 1 credit

A fast-paced, comprehensive course for highly motivated, science-oriented students interested in completing an introductory college-level biology course while still in high school. A college textbook is used and students are expected to complete out-of-class readings with understanding in order to keep pace with the syllabus. A summer project is assigned before the start of the course in August. *PREREQUISITE: A motivated student, with cumulative 90% in Honors Biology, who has previously completed a course in Honors chemistry. This course may be taken as dual credit through Immaculata University.*

#### **423 Microbiology - Major**

Grades 10, 11, 12            6 periods, 1 credit

This course is intended for the curious student who wishes to be diversified in their studies. The course of study in Microbiology is not only fascinating but also pertinent to everyday life. Through readings, discussion, case studies, lecture and labs, students will investigate concepts of sterilization, disinfection, sanitization, and vaccination. Students will also learn about disease and how it's spread, as well as mechanisms of antibiotic and resistance through the culture of live microorganisms. Immunology, biotechnology, and genetic engineering will also be studied. *PREREQUISITE: A grade of 80% or higher in either Biology or Honors Biology. Students wishing to take Microbiology as a sophomore must receive a recommendation from their Honors Biology teacher*

#### **430 Chemistry - Major**

Grades 11                      7 periods, 1 credit

This math based lab course is designed to introduce students to the study of the composition and properties of matter and the changes that matter undergoes. Topics include the structure of the atom, chemical formulas, chemical reactions and equations, the mole, energy and the properties of gases. This college preparatory course encourages the development of problem-solving and critical thinking skills and provides a foundation for the study of any of the sciences. *PREREQUISITE: Grade of "C" or better in Algebra I. Concurrent: Algebra II*

**431 Chemistry: Honors - Major (Weighted Course)**

Grades 10, 11                      7 periods, 1 credit

This challenging course is one which requires the student to learn to think, reason, and come to logical conclusions using the basic concepts of chemistry. The course is designed for those 10 or 11 grade students who have successfully completed Biology Honors. It is an excellent choice for those students planning a science oriented career. Concurrent: Algebra II Honors or Pre- Calculus and recommendation of the student's biology teacher.

**433 Chemistry: AP - Major (Weighted Course)**

Grades 11, 12                      7 periods, 1 credit

This fast paced, demanding, college level course is recommended for highly-motivated students seeking a science related career and prepares them for the AP exam in Chemistry. This second year Chemistry course assumes that the student already has a very strong background in chemistry. A college textbook is used, independent work is required and students must complete a summer assignment prior to the beginning of the fall term. *SUGGESTED PREREQUISITE: Physics or concurrent PREREQUISITES: Honors Algebra II, a minimum grade of 90% in Honors Chemistry in person, and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

**440 Physics - Major**

Grades 11, 12                      7 periods, 1 credit

This introductory course provides the student with the opportunity to study motion, energy, momentum, and forces on matter throughout the entire universe. A study of physics provides the student with a solid foundation for future study in all of the sciences. This course is recommended for the serious college preparatory level student. *PREREQUISITE: A grade of "C" or better in Geometry and Algebra II.*

**441 Physics 1: AP - Major (Weighted Course)**

Grades 10, 11, 12                      7 periods, 1 credit

This course is the equivalent of a first-semester college course in algebra-based physics. Students will develop a deep understanding of the concepts that make up classical mechanics. Topics covered include kinematics in both one and two dimensions; Newton's laws of motion; work, energy, and power; impulse and momentum; circular motion and satellite motion; rotational mechanics; simple harmonic motion; wave motion; sound, and electric circuits. This course will prepare students to take AP Physics C as well as other AP science courses. *PREREQUISITE: Students should have completed or be taking Honors Pre-Calculus/Trigonometry concurrently. This course may be taken as dual credit through Immaculata University.*

**442 Physics C - AP - Major (Weighted Course)**

Grade 12                              7 periods, 1 credit

This second year course is designed for the highly motivated student who wishes to pursue his/her study of physics. While placing a great deal of emphasis on the study of mechanics, this course prepares students for the C level Advanced Placement Physics test. *PREREQUISITE: A minimum grade of 85% in Physics 1 AP or a minimum grade of 90% in Physics. The student also must have either completed Calculus AB or be taking it concurrently. This course may be taken as dual credit through Immaculata University.*

**450 Environmental Science - Major**

Grades 11, 12                      6 periods, 1 credit

Through readings, discussion, lecture, and lab this course will explore real-world applications of the study of the environment. Topics such as energy, pollution, population, and biodiversity will be explored. Successful completion of a biology course is a prerequisite. This is a college preparatory course.

#### **451 Environmental Science: AP - Major (Weighted Course)**

Grades 10, 11, 12            6 periods, 1 credit

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science. *PREREQUISITE: A minimum grade of 90% in Honors Biology or 90% in Academic Biology with a teacher recommendation. Students wishing to take AP Environmental Science as a sophomore must receive a recommendation from their Honors Biology teacher. This course may be taken as dual credit through Immaculata University.*

#### **460 Advanced Geology - Major**

Grades 10, 11, 12            6 periods, 1 credit

Students in this lecture-based course will discover how the geologic landforms of the US were formed. Learn about landforms and realize that geology shares, with other scientific disciplines, the fundamentals of scientific investigation which include observation and the interpretation of geological data. *PREREQUISITE: A grade of B or better in Earth Science or Biology. Students wishing to take Advanced Geology as a sophomore must receive a recommendation from their Honors Biology teacher*

#### **461 Anatomy and Physiology - Major**

Grades 10, 11, 12            6 periods, 1 credit

This course is designed for students who wish to pursue a career in the health sciences. It is intensive and involves the study of human anatomy and physiology. There is a heavy emphasis on anatomical vocabulary, and several vertebrate dissections will take place throughout the course. The course begins with an introduction to anatomical terminology, and then focuses on most organ systems of the human body (such as Skeletal, Muscular, Nervous and Cardiovascular). *PREREQUISITE: Minimum grade of 75% in Biology or Honors Biology. A previous or concurrent course in Chemistry is also recommended. Students wishing to take Anatomy and Physiology as a sophomore must receive a recommendation from their Honors Biology teacher.*

#### **462 Zoology - Major**

Grades 10, 11, 12            6 periods, 1 credit

Zoology is a lab-oriented second level course focusing on the comparative anatomy and physiology of a wide array of organisms, emphasizing their interrelationships with each other, with their environments, and with the human body. Through microscopy and dissection, students gain an appreciation for the evolutionary complexity of organisms and the nine major animal phyla. There is a heavy emphasis on structural vocabulary, and students will be participating in several invertebrate dissections. This course is recommended for students interested in pursuing a career in the life sciences. *PREREQUISITE: Minimum grade of 75% in Honors Biology or Biology. Students wishing to take Zoology as a sophomore must receive a recommendation from their Honors Biology teacher*

#### **463 Applied Science - Major**

Grades 11, 12                6 periods, 1 credit

This is a lab-oriented course that introduces physics and chemistry through the exploration of relevant phenomena. The curriculum is designed to increase the level of both conceptual and mathematical comprehension of physics and chemistry. Units include the analysis of motion with the equations that describe motion, electricity, chemical and physical properties, the scientific method, and science and engineering practices. It is designed to give students exposure to the many ways that chemistry and physics explain experiences in our everyday lives.

## SOCIAL STUDIES

The Spring-Ford Social Studies Department values lifelong learning and civic education. The department strives to prepare students to live and actively participate in our democratic system by providing them with a series of courses that promotes strong civic education with an understanding of the US place in global affairs. The department hopes to reach this goal by offering a specific set of courses and additional electives to meet the needs and interests of all students. We encourage students to experience the full course offerings in US History, Government, and electives according to the interests of all students. The courses available for each grade level are displayed below, with recommendations in bold for each grade level. Three credits in Social Studies are needed for graduation.

9TH GRADE	10TH GRADE	11TH GRADE	12TH GRADE
AP Human Geography can be taken as a required Social Studies course in place of Modern US History.	Modern World History is recommended, but several AP courses can be taken.	US Government or AP US Government is recommended, but several other AP courses can be taken.	There is no required course in 12th grade. Students may choose from a variety of electives listed below:
Modern US History; Honors or Academic	Modern World History Honors or Academic	US Government; Honors or Academic	The Ancient World
		AP US Government & Politics	Economics
	AP US History	AP Human Geography	Psychology/Sociology
			Essentials of Behavioral Science
			AP Human Geography
		AP US History	AP US History
			AP US Government & Politics
	AP Human Geography	AP Human Geography	AP Psychology
AP European History			
AP European History		AP Macroeconomics	
		AP Microeconomics	
AP European History		World Civilizations II from 1500 - Honors (Dual Enrollment - Elective Only)	World Civilizations I to 1500 - Honors (Dual Enrollment - Elective Only)
		World Civilizations I to 1500 - Honors (Dual Enrollment - Elective Only)	World Civilizations II from 1500 - Honors (Dual Enrollment - Elective Only)

### **210 Modern World History - Major**

Grade 10                      6 periods, 1 credit

Students will gain an understanding of World History from approximately 1500 to the present. Students will study the events, people and places in World History and their impact on our current world. We will investigate all major world regions with a focus on key events and their effects.

### **211 Modern World History: Honors - Major (Weighted Course)**

Grade 10                      6 periods, 1 credit

Students will gain an understanding of World History from approximately 1500 to the present. Students will study the events, people and places in World History and their impact on our current world. We will investigate all major world regions with a focus on key events and their effects. The Honors course will include an emphasis on document analysis and independent work. *PREREQUISITE: 90% in the previous year.*

### **215 US History: AP - Major (Weighted Course)**

Grades 10, 11, 12            6 periods, 1 credit

This course is designed for motivated students who have an interest in history and good writing skills. Students who plan on majoring in history in college or who would like the opportunity to take the AP exam for possible credit should consider this course. Students will study American History from the social perspective. The course will use a college level text, and will require students to go into a much greater depth of material. Emphasis will be placed on thinking and writing like a historian to prepare for the AP exam. This course requires a major time commitment from its students for large reading and writing assignments. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's social studies AND English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies teachers. This course may be taken as dual credit through Immaculata University.*

### **216 European History 1450-Present: AP - Major (Weighted Course)**

Grades 10, 11, 12            6 periods, 1 credit

This course is designed for highly motivated students who have an interest in history and good writing and reading skills. AP European History is for students who plan on majoring in history in college or who would like the opportunity to take the AP exam for college credit. The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. The course will use a college level text, and will require students to go into a much greater depth of material. Emphasis will be placed on thinking and writing like a historian to prepare for the AP exam in May. This course requires a major time commitment from its students for large reading and writing assignments. *PREREQUISITE: A seriously motivated student who has the following final average in the previous year's social studies classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies teachers. This course may be taken as dual credit through Immaculata University.*

### **220 US Government - Major**

Grade 11                      6 periods, 1 credit

This course is a required study of the American national government, dealing with the basic operation of our Federal System and the overall American political process. A study of comparative governments and economic systems is also included.

**221 US Government: Honors - Major (Weighted Course)**

Grade 11                      6 periods, 1 credit

This is an in-depth study of the modern American political system and process as it operates within the framework of our national government. Special attention is given to current political personalities, issues, and events which serve to explain the operations of our fundamental political and governmental institutions. Students can expect greater emphasis on independent reading and writing. *PREREQUISITE: 90% in the previous year of social studies and teacher recommendation.*

**225 US Government and Politics: AP - Major (Weighted Course)**

Grades 11, 12                      6 periods, 1 credit

This course is designed for highly motivated students who demonstrate a keen interest in political science and the workings of the US government. Students who plan on majoring in Political Science in college or would like to earn college credit by taking the College Board's AP test may consider this course. This course provides an analytical perspective on government and politics in the US. This course involves both the study of general concepts used to interpret US politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute US political reality. The course requires a substantial time commitment for reading, writing, and critical analyses of our political system. Students are encouraged to take the AP Government and Politics Exam in May. *PREREQUISITE: A motivated student with the following final average in the previous year's social studies AND English classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies teachers. This course may be taken as dual credit through Immaculata University.*

**227 Human Geography: AP - Major (Weighted Course)**

Grades 10, 11, 12                      6 periods, 1 credit

This course is designed for the motivated student looking to enhance their understanding of how humans interact with the world around them. According to the College Board, "The purpose of the AP Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface." (College Board, 2013) The students will also learn about and create tools geographers use to study how humans interact with the earth and the consequences of those actions. Students can expect significant independent study, geographic field work and homework during this course. *PREREQUISITE: Academic, 95%; Honors, 90%; AP, 85% in the previous year of social studies and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

**230 Psychology/Sociology - Major**

Grade 12                      6 periods, 1 credit

Psychology is a social studies elective, which will prepare students for commonly required first year college courses in psychology. It will also help them understand themselves and the interaction of those around them. Psychology studies human development and examines the bases of individual behavior. Topics include the brain, learning, child development, personality theory and behavioral disorders. Sociology studies the dynamics of group interaction, including social structures, social institutions, and the causes and consequences of social problems. The course will emphasize textbook content and its application to students' individual lives and the world in which they live.



### **231 Psychology: AP - Major (Weighted Course)**

Grades 11, 12                      6 periods, 1 credit, 3 credits CHS (if enrolled)

This course is designed for motivated students who plan to enter college and major in psychology or would like the opportunity to take the AP exam. Topics include research methods, biological bases of behavior, cognition, development, personality theory, and psychological disorders. Students must complete a mandatory summer assignment for the first unit of the course. Emphasis will be placed on preparing students to take the AP exam. The course uses a college-level textbook and will require students to apply major concepts to specific situations. This course requires a major time commitment from its students for daily reading and homework assignments. *PREREQUISITE: A seriously-motivated student who has the following final average in the previous year's social studies AND science classes: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies teacher based on this prerequisite. This course may be taken as dual credit through Immaculata University.*

*\*College in High School (CHS) offers Spring-Ford High School students the opportunity to earn credit in both high school and University of Pittsburgh (PSY 0010 - Introduction to Psychology). CHS is an academically rigorous program for motivated students seeking an intellectual challenge within a supportive high school environment. This course is offered within the AP Psychology course. The curriculum is identical to the AP Psychology curriculum, but the CHS grade is generated from additional assessments. Students must meet the prerequisites for the AP Psychology course and will be required to pay a tuition fee to register for the CHS course at the beginning of the school year.*

### **234 Essentials of Behavioral Science: Honors - Major (Weighted Course)**

Grade 12                                      6 periods, 1 credit

Students will explore behavior from a biological perspective in this course. It investigates the scientific study of the link between the brain and behavior. Basic knowledge of psychology, biology, and chemistry is beneficial, but not required. This Honors level senior elective course is designed to be extremely interactive. Therefore, students will need to be willing to participate and speak in front of the class at times. It is a good fit for highly motivated students who want to learn more about psychology in a structured environment that is not as demanding as AP Psychology but is more detailed than the psychology/sociology senior elective course. *PREREQUISITE: 90% in the previous year of social studies and teacher recommendation.*

### **244 Economics - Major**

Grade 12                                      6 periods, 1 credit

Economics is an elective study of the fundamental economic principles, goals, and problems of the American free-enterprise system, and the integration into the world economic picture. The major areas of concentration include the US economy, macroeconomics, and the world economy.

### **246 Macroeconomics: AP - Major (Weighted Course)**

Grades 11, 12                                      6 periods, 1 credit

AP Macroeconomics provides an in-depth study of global economic markets and models. This college level course focuses on the principles that apply to the economic system as a whole. The course places particular emphasis on the study of national income, price-level determination and international markets. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. This course is traditionally a semester-long introductory level economics course at most colleges and universities. Students can expect significant independent study and homework.

*PREREQUISITE: A seriously motivated student who has the following final average in the previous year's social studies: Academic, 95%; Honors, 90%; AP, 85%. Students must obtain the recommendation of their current social studies teacher. This course may be taken as dual credit through Immaculata University.*

**247 Microeconomics: AP - Major (Weighted Course)**

Grade 12                      6 periods, 1 credit

In addition to AP Macroeconomics, AP Microeconomics would be a complementary course for students looking for a deeper study of economic systems. The course studies how individuals and firms interact and how their decisions impact prices through supply and demand. Students study economic data, charts, graphs, supply curves and complete case studies of individual and firms' behavior. The course culminates with an AP exam in May, in which students can earn college credit. *PREREQUISITE: Successful completion of course 246 - Macroeconomics. This course may be taken as dual credit through Immaculata University.*

**250 The Ancient World - Major**

Grade 12                      6 periods, 1 credit

The Ancient World is an upper level social studies elective, which will prepare students for the commonly required first year college course in World Civilizations. It is a survey of the major themes of human history from earliest times up until the discovery of the Americas and the rise of our current western civilization in 1500. How do archaeologists piece together history before the invention of writing? When, where, and why did people settle down, build cities and temples, invent writing and create religions? How did empires gain and maintain power over their neighbors? What role did trade and the spread of Hinduism, Buddhism, Judaism, Christianity and Islam, play in uniting Eurasia? Follow the paths of armies, traders, monks, goods, ideas, and diseases as they formed the world that Columbus left when he sailed from Spain in 1492.

## SPRING-FORD STEM

STEM, by definition, is Science, Technology, Engineering and Math. Some programs are also including the Arts (STEAM) in their programming. We too include the Arts, since traditionally these courses at Spring-Ford Area School District have encouraged the creativity and higher level thinking skills necessary for STEM careers. This STEM education information is designed to help students interested in STEM careers make informed decisions about course selection. The course map described below is comprehensive, including many different courses that pertain to a variety of STEM careers. It is not necessary to take all of the courses listed; rather, this guide should be used for discussion with parents and school counselors to help students choose appropriate courses based on student interest and likely career paths. It is important to understand that STEM careers span a wide variety of subjects, including agriculture, communication, music, and more. Virtually any area of interest can or will translate to a potential career. Students should continue to take courses of interest to them, while building fundamental skills in reading, writing, speaking, and listening. A working knowledge of word processing and spreadsheet programs are also crucial for success in STEM careers.

	ENGINEERING	COMPUTER SCIENCE	BIOMEDICAL	MATERIAL SCIENCE
9TH GRADE	Intro to Engineering Design	Computer Science I	Biology Honors	Materials & Manufact I; Technology Systems I
10TH GRADE	Intro to Eng Design; Principles of Engineering	Computer Science I Web Design and Construction	Biology Chemistry	Chemistry; Materials & Manufacturing I & II; Tech. Systems I & II
11TH GRADE	Intro to Eng Design; Principles of Engineering; Digital Electronics; Civil Eng & Architecture	Comp. Science I & II Web Design and Construction AP Computer Science	Anatomy & Physiology AP Biology; AP Chemistry; AP Environmental Science; Microbiology	AP Chemistry; Physics; Advanced Geology; Materials & Manufacturing I, II, & III; Tech. Systems I & II
12TH GRADE	Intro to Eng Design; Principles of Engineering; Digital Electronics; Civil Eng & Architecture	Comp. Science I & II Web Design and Construction AP Computer Science	Anatomy & Physiology; AP Biology; AP Environmental Science; Microbiology	AP Chemistry; AP Physics; Advanced Geology; Materials & Manufacturing I, II & III; Tech. Systems I & II
WMCTC		Computer Information Systems	Biomedical Academy (PLTW) Health Science Tech	
RECOMMENDED RELATED ARTS COURSES FOR STEM CAREERS				
<b>ART:</b> Foundations Art I, Graphic Design I & II (major and minor)				
<p><b>RECOMMENDED</b> Math courses for students interested in STEM careers: A strong foundation is needed in Algebra I, Algebra II, Geometry, Pre-Calculus/ Trigonometry, Calculus, and Probability and Statistics, Biology, Chemistry, and Physics. Grade level taken can vary, though Honors/AP level is preferred.</p>				

## **TECHNOLOGY AND ENGINEERING EDUCATION**

### **750 Materials Manufacturing I - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

This course will give students a basic understanding of the materials and building techniques used in the manufacturing and construction industries today. Students will learn the proper and safe practice of hand tools, power tools and material processing machines. Several opportunities will be given for students to work with their hands to complete small-scale projects. Additionally computer aided drafting (CAD) software and computer numerical control (CNC) equipment will be introduced. NOTE: Students will be responsible for a materials fee.



### **751 Materials Manufacturing II - Minor**

*Grades 10, 11, 12            3 periods, .5 credit*

This advanced course includes an overview of the lessons learned in Materials Manufacturing I. Students will use their advanced skills to set up equipment and manufacture projects of various materials as they do in industry today. Group and individual manufacturing / construction activities are used to teach the industrial process with emphasis on efficiency, accuracy, in a cooperative learning environment. The safe use of hand tools and equipment will be an important part of this course. NOTE: Students will be responsible for a materials fee in this course. *PREREQUISITE: Successful completion of Materials Manufacturing I.*

### **752 Materials Manufacturing III – Minor**

*Grades 11, 12                3 periods, .5 credit*

Designed for the student who has a strong interest in woodworking and manufacturing processes that are used in industry today. The course is driven by teacher instruction, but projects are completed as group and independent study work. Projects will be regulated by size and complexity. Emphasis on individual creativity requires a student that is self-driven. Attendance must be excellent. Success will require a student to work on their project outside of the normal class period. Homework in the form of research & design, building techniques and materials collection provides the student with a challenging experience. NOTE: Students will be responsible for a materials fee in this course. *PREREQUISITE: Successful completion of Materials Manufacturing II.*

## **760 Technology Systems I - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This course is designed to teach students the fundamentals of technology in the areas of communications, manufacturing/construction, power and transportation. Learning the safe and proper use of hand tools and machines, as well as applying problem solving to manufacture different types of projects will be an important component of this course. Computer aided drafting software and computer numerical control equipment will be introduced. *NOTE: Students will be responsible for a materials fee.*



## **761 Technology Systems II - Minor**

Grades 10, 11, 12      3 periods, .5 credit

This advanced course will expand the basic fundamentals taught in Technology Systems I. Students will increase their knowledge of the classroom equipment and supplies to design and create more challenging projects. CAD software and CNC equipment skills will be improved upon in this course. *NOTE: Students will be responsible for a materials fee.*

*PREREQUISITE: Successful completion of Technology Systems I*

## **PROJECT LEAD THE WAY (PLTW)**

The PLTW program is a nationally recognized pre-engineering curriculum that allows students to apply known math and science skills to explore industrial systems, processes and engineering principles for students seeking studies in a technological field. The PLTW courses are rigorous-honors weighted courses. Students who perform well in a PLTW course and on the national exam can qualify for college credit in each PLTW class.

## **770 Intro to Engineering Design: Honors - Major (Weighted Course)**

Grades 10, 11, 12      6 periods, 1 credit

IED is the introduction course in a series of PLTW courses. Students will incorporate their understanding of math and science to study the design of new and innovative products and systems. Problem solving techniques and the processes used to communicate designs and innovations between their peers and the professional community will be deeply explored. Units of study will focus on the design process, research and analysis, teamwork, documentation and communication methods, global and human impacts, engineering standards, and technical documentation. The use of 3D modeling software will be an important aspect of this course. *PREREQUISITE: Successful completion of Algebra I with a grade of B or above and a score of proficient or advanced on the Algebra Keystone Exam.*

### **771 Principles of Engineering: Honors - Major (Weighted Course)**

Grades 10, 11, 12            6 periods, 1 credit

This course takes a problem solving and hands-on approach to exploring the various tools, techniques, theories and practices common to all Engineering disciplines. POE focuses on how the systems in our world work. Students experience topics such as mechanical advantage and machine design, simple and compound gear systems, energy production and transmission, electricity and circuit theory, thermodynamics, statics and the properties of materials, control systems, fluid power, Vex robotics design, simplified Python Coding, statistics, and kinematics. POE alternates between the classroom and prototyping lab to show the academic as well as practical side of Engineering. Students work in teams during experiments, projects and problem solving activities and draw on each other's strengths to explore the various engineering topics. This is a fast paced, hands-on course that gives students a chance to experience the engineering process by doing.

*PREREQUISITE: Successful completion of Introduction to Engineering Design. It is recommended that students have a strong Algebra background and are enrolled in Geometry or a higher level of math.*

### **772 Digital Electronics: Honors - Major (Weighted Course)**

Grades 11, 12            6 periods, 1 credit

This course explores the foundation of modern electronic devices used in the design of cell phones and laptop computers. Students will be able to identify various electronic components and interpret digital signals and waveforms. Students will also be introduced to soldering techniques. Students will design circuits of various digitally controlled devices, virtually simulate the circuits using digital design software and physically build the circuits on protoboards (breadboards). Students are introduced to Programmable Logic Devices (PLDs), microcontrollers, and counters involving sequential logic circuit design. Students learn simplified Python Coding with the use of the Raspberry Pi-Top. DE is a hands-on course that emphasizes problem-solving skills and provides students with an overview of electronic and electrical engineering concepts. *PREREQUISITE: Successful completion of Introduction to Engineering Design and Principles of Engineering. Seniors may enroll in both Principles of Engineering and Digital Electronics concurrently in the same school year.*

### **773 Civil Engineering & Architecture: Honors - Major (Weighted Course)**

Grades 11, 12            6 periods, 1 credit

CEA is a course in which students will learn important aspects of building, site design, and structural development. Students will apply math, science, and standard engineering practices to design both residential and commercial projects. Students will communicate their work with proper documentation, symbols and national standards. Students will use comparable 3D architectural design software used in industry today to illustrate their class projects. CEA is a hands-on course that emphasizes problem-solving skills and collaboration. *PREREQUISITE: Successful completion of Introduction to Engineering Design and Principles of Engineering.*

## **WORLD LANGUAGES**

Due to the cumulative nature of language learning, **it is strongly recommended that students planning to move to the next level achieve a final average of 75% or higher.** While it is recommended that college-bound students study at least two years of a World Language, those students planning to seek admission to more selective colleges should definitely consider studying a language for 3+ consecutive years.

### **500 French I - Major**

Grades 10, 11, 12            6 periods, 1 credit

This is an introduction to the French language, designed for beginning students. We will begin to develop the skills of listening, speaking, reading and writing in French. We concentrate on the essential structure and vocabulary necessary to achieve basic proficiency in the language. In addition to the French language itself, we also explore and discuss various aspects of the culture and history of the French-Speaking world.

### **501 French II - Major**

*Grades 10, 11, 12                  6 periods, 1 credit*

This course is the continuation of French I. In French II we will continue to develop the skills of listening, speaking, reading and writing in French. We will review and refine the information learned in French I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the French language. We will also continue to explore and discuss various aspects of the culture and history of the French-Speaking world. *PREREQUISITE: French I*

### **502 French III - Major**

*Grades 10, 11, 12                  6 periods, 1 credit*

This course is the continuation of French II. In French III we will continue to develop the skills of listening, speaking, reading and writing in French. We will review and refine the information learned in French I and French II, while incorporating new structures and vocabulary. By the end of French III the students will have become acquainted with most of the fundamental structures of the language, as well as a substantial amount of vocabulary, and they should be approaching an intermediate level of proficiency. Once again, we will continue to explore and discuss various aspects of the culture and history of the French-Speaking world. *PREREQUISITE: French II*

### **503 French IV: Honors - Major (Weighted Course)**

*Grades 11, 12                  6 periods, 1 credit; 3 credits CHS (if enrolled)*

In this course we will review and refine the information learned in French levels I through III, while incorporating new, more advanced structures and additional vocabulary. Once again, we will continue to explore and discuss various aspects of the culture and history of the French-Speaking world. In French IV, we will place even more emphasis on self-expression in the language. The course itself will be taught mostly in French and the students will be expected to actively use French in acquiring and processing new information. *PREREQUISITE: French III. This course may be taken as dual credit through Immaculata University.*

*\*College in High School (CHS) offers Spring-Ford High School students the opportunity to simultaneously earn high school credits and university credits from the University of Pittsburgh (French 103: Intermediate French 1). The curriculum is identical to the Spring-Ford curriculum, but the CHS grade may be calculated differently. All students who are eligible for the corresponding Honors or AP French course may opt to participate in the CHS program. A tuition fee and separate registration for the CHS course are required at the beginning of the school year.*

### **504 French V: Honors - Major (Weighted Course)**

*Grade 12                          6 periods, 1 credit; 3 credits CHS (if enrolled)*

In this course we will further develop the ability to use advanced French to communicate about everyday topics with which you are familiar as well as more complex topics. In this course, we will continue to review and refine the information learned in French levels I-IV, while incorporating more advanced structures along with additional vocabulary. We will be learning more about the culture of French-Speaking countries through literature, periodicals (both print and online), videos and music. An interest in the real-life use of French and an appreciation of language are fostered. *PREREQUISITE: French IV. This course may be taken as dual credit through Immaculata University.*

*\*College in High School (CHS) offers Spring-Ford High School students the opportunity to simultaneously earn high school credits and university credits from the University of Pittsburgh (French 104: Intermediate French 2). The curriculum is identical to the Spring-Ford curriculum, but the CHS grade may be calculated differently. All students who are eligible for the corresponding Honors or AP French course may opt to participate in the CHS program. A tuition fee and separate registration for the CHS course are required at the beginning of the school year.*

### **505 French Language and Culture: AP - Major (Weighted Course)**

Grade 12                      6 periods, 1 credit; 3 credits CHS (if enrolled)

The primary goal of this course is to familiarize students with and prepare them for the AP French Language and Culture exam. An AP French student is expected to possess very strong listening, speaking, reading and writing skills in French along with a willingness and desire to apply them. The course includes many opportunities to practice applying information in the format of the actual AP exam. It also includes a review of French grammatical structures and vocabulary, as well as an exploration of Francophone culture. *PREREQUISITE: French IV along with a teacher recommendation. This course may be taken as dual credit through Immaculata University.*

*\*College in High School (CHS) offers Spring-Ford High School students the opportunity to simultaneously earn high school credits and university credits from the University of Pittsburgh (French 104: Intermediate French 2). The curriculum is identical to the Spring-Ford curriculum, but the CHS grade may be calculated differently. All students who are eligible for the corresponding Honors or AP French course may opt to participate in the CHS program. A tuition fee and separate registration for the CHS course are required at the beginning of the school year.*

### **510 German I - Major**

Grades 10, 11, 12            6 periods, 1 credit

This is an introduction to the German language, designed for beginning students. We begin to develop the skills of listening, speaking, reading and writing in German. We concentrate on the essential structure and vocabulary necessary to achieve basic proficiency in the language. In addition to the German language itself, we also explore and discuss various aspects of the culture and history of the German-Speaking world.

### **511 German II - Major**

Grades 10, 11, 12            6 periods, 1 credit

This course is the continuation of German I. In German II we will continue to develop the skills of listening, speaking, reading and writing in German. We will review and refine the information learned in German I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the German language. We will also continue to explore and discuss various aspects of the culture and history of the German-Speaking world. *PREREQUISITE: German I*

### **512 German III - Major**

Grades 11, 12                6 periods, 1 credit

This course is the continuation of German II. In German III we will continue to develop the skills of listening, speaking, reading and writing in German. We will review and refine the information learned in German I and German II, while incorporating new structures and vocabulary. Once again, we will continue to explore and discuss various aspects of the culture and history of the German-Speaking world. *PREREQUISITE: German II*

### **513 German IV: Honors - Major (Weighted Course)**

Grade 12                      6 periods, 1 credit

This course is the continuation of German III. We will continue to develop the skills of listening, speaking, reading and writing in German. We will review and refine the information learned in German levels I - III, while incorporating new structures and vocabulary. Students will have become acquainted with most of the fundamental structures of the language, as well as a substantial amount of vocabulary. Once again, we will continue to explore and discuss various aspects of the culture and history of the German-Speaking world. By the end of German IV, the students should be approaching an intermediate level of proficiency. *PREREQUISITE: German III*



### **520 Spanish I - Major**

*Grades 10, 11, 12                  6 periods, 1 credit*

This is an introduction to the Spanish language, designed for beginning students. We begin to develop the skills of listening, speaking, reading and writing in Spanish. We concentrate on the essential structure and vocabulary necessary to achieve basic proficiency in the language. In addition to the Spanish language itself, we also explore and discuss various aspects of the culture and history of the Spanish-Speaking world.

### **521 Spanish II - Major**

*Grades 10, 11, 12                  6 periods, 1 credit*

This course is the continuation of Spanish I. In Spanish II we will continue to develop the skills of listening, speaking, reading and writing in Spanish. We will review and refine the information learned in Spanish I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the Spanish language. We will also continue to explore and discuss various aspects of the culture and history of the Spanish-Speaking world. *PREREQUISITE: Spanish I*

### **522 Spanish III - Major**

*Grades 10, 11, 12                  6 period, 1 credit*

This course is the continuation of Spanish II. We will continue to develop the skills of listening, speaking, reading and writing in Spanish. We will review and refine the information learned in Spanish I and II, while incorporating new structures and vocabulary with an emphasis on both presentational and interpersonal speaking. By the end of Spanish III, the students will have become acquainted with most of the fundamental structures of the language, as well as a substantial amount of vocabulary, and they should be approaching an intermediate level of proficiency. We will explore and discuss various aspects of the culture and history of the Spanish-Speaking world. *PREREQUISITE: Spanish II*

### **523 Spanish IV: Honors - Major (Weighted Course)**

*Grades 11, 12                      6 periods, 1 credit*

In this course we will review and refine the information learned in Spanish levels I through III while incorporating more advanced structures and additional vocabulary. Also, we will explore and discuss various cultural themes found throughout the Spanish-speaking world. In Spanish IV, we will continue to foster the ability to express oneself in Spanish. The course itself will be taught mostly in Spanish and the students will be expected to use Spanish on a daily basis for acquiring and processing new information. *PREREQUISITE: Spanish III and teacher recommendation. This course may be taken as dual credit through Immaculata University.*

### **524 Spanish V: Honors - Major (Weighted Course)**

*Grade 12                              6 periods, 1 credit*

The purpose of this course is to further develop the ability to use advanced Spanish to communicate about everyday topics with which you are familiar as well as more complex topics. In this course, we will continue to review and refine the information learned in Spanish levels I - IV, while incorporating more advanced structures along with additional vocabulary. We will be learning more about the culture of Spanish speaking countries through literature, periodicals (both print and online), videos and music. An interest in the real-life use of Spanish, understanding of current events and an appreciation of language are fostered. *PREREQUISITE: Spanish IV. This course may be taken as dual credit through Immaculata University.*

### **525 Spanish Language and Culture: AP - Major (Weighted Course)**

Grade 12                      6 periods, 1 credit

The primary goal of this course is to familiarize students with and prepare them for the AP Spanish Language and Culture exam. An AP Spanish student is expected to possess very strong listening, speaking, reading and writing skills in Spanish along with a willingness and desire to apply them. The course includes many opportunities to practice applying information in the format of the actual AP exam. It also includes a review of Spanish grammatical structures and vocabulary, as well as an exploration of Hispanic culture. *PREREQUISITE: Spanish IV along with a teacher recommendation. This course may be taken as dual credit through Immaculata University.*

### **531V Mandarin Chinese II - Major**

Grades 11, 12                      6 periods, 1 credit

This course is the continuation of Mandarin Chinese I. Students will use an interactive, online platform to complete their work, just as they did in Mandarin Chinese I. They will review and refine the information learned in Mandarin Chinese I, while incorporating new structures and vocabulary, with the goal of reaching beyond basic proficiency in the Chinese language. They will continue developing the skills of listening, speaking, reading and writing in Mandarin Chinese, as well as furthering their knowledge and understanding of Chinese culture. Again this year, initiative, self-motivation and strong organizational skills are crucial to success in this course. *PREREQUISITE: Mandarin Chinese I along with a teacher recommendation. **Although this is a “virtual” course, it is not a Spring-Ford Cyber Learning course. This course is not self-paced and requires in-person attendance.***

### **532V Mandarin Chinese III - Major**

Grade 12                      6 periods, 1 credit

This course is the continuation of Mandarin Chinese II. In Mandarin Chinese III, the students will again use an interactive, online platform to complete their work, as they did in Mandarin Chinese levels I and II. They will review and refine the information learned in their previous levels, while incorporating new structures and vocabulary, with the goal of further advancing their proficiency in the Chinese language. They will continue developing the skills of listening, speaking, reading and writing in Mandarin Chinese, as well as furthering their knowledge and understanding of Chinese culture. Again this year, initiative, self-motivation and strong organizational skills are crucial to success in this course. *PREREQUISITE: Mandarin Chinese I and II along with a teacher recommendation. **Although this is a “virtual” course, it is not a Spring-Ford Cyber Learning course. This course is not self-paced and requires in-person attendance.***

## DUAL ENROLLMENT

### ARCADIA UNIVERSITY AND MONTGOMERY COUNTY COMMUNITY COLLEGE

Dual credit enrollment provides students with a preview of college level instruction, the opportunity to earn college credit that can be transferred to many colleges and universities, and the chance to take advanced and intellectually challenging courses. Students will be able to use these courses for both college and high school credit. Dual credit classes are semester based classes that typically meet on an every-other-day basis.

- Only juniors and seniors who take dual credit classes are eligible for open campus. Open campus allows these students to arrive late or leave early on the days/semester the dual credit class does not meet.
- A dual credit student carrying over 7.0 credits will not have their 2nd semester dual credit course calculated in GPA.
- Students will not be permitted to drop a spring semester dual credit class.
- Senior Final Exam Exemption does not apply for these college classes.

Students enrolled in dual credit courses that are issued an alpha grade will be assigned the following numeric grade unless otherwise notified by the student on college/university letterhead within two weeks of the end of the dual credit course. Notification is to be provided to the Future Planning Center.

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
99	95	91	88	85	81	78	75	71	69	67	65	60

It is the responsibility of the student to be familiar with the grading practices of the dual credit institution he or she is enrolled in.

### ARCADIA UNIVERSITY: courses offered at SFAHS

The following courses will be offered to academically capable **juniors and seniors** taught at SFAHS during the regular school year as part of the global studies initiative. Students will be able to use this course for both college and high school credit. Students in this program must have a GPA of 80% or higher. Dual credit enrollment provides students with a preview of college level instruction and the opportunity to earn college credit that can be transferred to most colleges and universities. The cost of each course is \$640, or \$160/credit for the four credit undergraduate classes (as of the date of publication, subject to change as determined by Arcadia University). Students will be responsible for purchasing texts through Arcadia University.

#### 920 Introduction to International Studies: Honors - IS101 Fall 2024 (Weighted Course)

*Grades 11, 12                      3 periods, 1 HS credit/4 college credits*

This course introduces students to the interdisciplinary field of International Studies. Key themes and issues focused on include globalization, development, poverty, and human rights. The course explores how political, social and economic inequalities are produced and how they affect a variety of peoples and regions differently. Students examine the evolution of nation-state sovereignty and the inter-related impacts of other subnational and supra-national actors, groups and forces such as those of global markets and non-governmental and intergovernmental organizations. In addition, students learn how the disciplines of history, anthropology, political science and economics engage the central topics of International Studies in distinct ways. This course does not follow the traditional Spring-Ford course calendar. Arcadia's fall course will tentatively end in mid-December. **This course will be offered in a virtual hybrid format. Students will be required to attend one virtual synchronous class per week (as determined by the professor). All other work will be completed asynchronously.**

## **921 Introduction to Public Health: Honors - PBH110 Spring 2025 (Weighted Course)**

*Grades 11, 12                      3 periods, 1 HS credit/4 college credits*

This course is designed to provide an overview of public health globally, with an emphasis on the US. The course will focus on the population health perspective, including the impact on the health care system and the environment and the specific needs of underserved populations. A history and background of public health will be included to provide a framework for understanding how health and health care evolved globally and within the US. The course will provide an introduction to disease incidence and prevalence, and how the frequency, distribution and determinants of disease affect how resources are allocated to target health conditions and health disparities. Methods used to detect diseases within populations will be described along with educational interventions used to facilitate behavior change and disease prevention. Issues of health care delivery will be included with a discussion of health care financing, reimbursement, cost containment and utilization. Students will be introduced to the concept of social determinants of health promotion and disease prevention, including health communications and informatics, so that they may gain an understanding of the health disparities that exist today and the factors that contribute to this inequity. *This course does not follow the traditional Spring-Ford course calendar. Arcadia's spring semester class will tentatively start in early January. **This course will be offered in an asynchronous, virtual format only.***

## **MONTGOMERY COUNTY COMMUNITY COLLEGE**

Dual credit provides students with a preview of college level instruction, the opportunity to earn college credit that can be transferred to many colleges and universities, and the chance to take advanced and intellectually challenging courses. Academically capable sophomores (15 years of age or older) juniors and seniors have the opportunity of taking MCCC dual credit classes at Spring-Ford High School or at the college campus.

### **OPTION 1: FULL TIME DUAL ENROLLMENT**

Students can start taking courses full time at Montgomery County Community College's Pottstown or Blue Bell Campus as early as sophomore year. Students interested in full time dual enrollment should see FPC for assistance to apply to MCCC's dual enrollment program, discuss graduation requirements with your school counselor, take MCCC's Placement Testing at the college for in the FPC, meet with a MCCC course advisor to determine which classes you would like to take, and complete MCCC's Course Registration Form. A school counselor will need to sign the MCCC Course Registration Form to ensure that students receive high school credit for all MCCC courses. Students must provide their own transportation to MCCC's campus for classes. Students are permitted to participate in Spring-Ford activities if they are a full time dual enrollment student. All MCCC courses approved by a school counselor will appear on the Spring-Ford transcript as well as the MCCC transcript. Students are required to pay MCCC's credit fees (currently \$209 per class, as of the date of publication, subject to change as determined by MCCC) and purchase the necessary textbooks for their classes.

### **OPTION 2: PART TIME DUAL ENROLLMENT**

Students can start taking courses part time at Montgomery County Community College's Pottstown or Blue Bell Campus as early as their sophomore year. Students interested in part time dual enrollment should see FPC for assistance in applying to MCCC's dual enrollment program, talk to a school counselor about the courses, take MCCC's Placement Testing at MCCC or in the FPC, and complete the MCCC Course Registration Form. A school counselor will need to sign the MCCC registration form to ensure that students receive high school credit for all MCCC Courses. Students are only permitted to take elective courses at MCCC as a part time dual enrollment student. Students must provide their own transportation to MCCC's campus for classes. Students are permitted to participate in Spring-Ford activities if they are a part time dual enrollment student. All MCCC courses approved by your school counselor will appear on your Spring-Ford transcript as well as your MCCC transcript. Students are required to pay MCCC's credit fees (currently \$209 per class, as of the date of publication, subject to change as determined by MCCC) and purchase the necessary textbooks for their classes.

### **OPTION 3: 8AM DUAL ENROLLMENT COURSE AT MCCC'S POTTSTOWN CAMPUS**

Spring-Ford provides transportation to and from MCCC West Campus for students to take a morning class on a Monday/Wednesday/Friday schedule. Students will not be permitted to drive to MCCC. The cost for these courses is the prevailing rate for in-county residents at MCCC (currently \$209 per class, as of the date of publication, subject to change as determined by MCCC). Students will also be responsible for purchasing texts through MCCC at an additional cost. Students are only eligible to select the courses running on a M/W/F schedule with a meet time of 8 a.m.

#### **930 Introduction to Education - Honors**

*MCCC EDU100*                      *Fall Semester*  
*Grades 10, 11, 12*                      *3 periods, 1 HS credit/3 college credits*

This course is designed to give prospective teachers an introduction to education, including historical, ethical, legal, and theoretical perspectives, cultural influences, as well as classroom management techniques. While in class, students will participate in various instructional strategies both individually and in group settings. The course requires students to complete 20 hours of field experience/observation in an early childhood, elementary, or secondary school setting in order to reflect on present-day practices and the diverse roles and responsibilities of teachers in today's world. This experience will help prospective teachers to confirm their career choice. Students will also apply for all necessary child care background clearances.

#### **931 Working With Children With Special Needs- Honors (Weighted Course)**

*MCCC EDU 213*                      *Spring Semester*  
*Grades 10, 11, 12*                      *3 periods, 1 HS credit/3 college credits*

Working with Children with Special Needs is an introductory course that provides students with an overview of the historical perspective as well as current issues and practices related to special education. Students will learn about laws that affect students with special needs and the classification of exceptionalities identified by the laws. Students will acquire knowledge of definitions, terminology, and assessment tools that relate to special education. The focus will be on the types of accommodations and adaptation that a teacher should make to support students with special needs to ensure their success. Each student will be assigned to a public school special education classroom for the purpose of gaining first-hand knowledge of the current state of the art of special education. Students will engage in observation hours during this course. PREREQUISITE: 930 (MCCC EDU100)

#### **932 Introduction to Criminal Justice - Honors (Weighted Course)**

*MCCC CJS 100*                      *Fall Semester*  
*Grades 10, 11, 12*                      *3 periods, 1 HS credit/3 college credits*

The course introduces the student to the American system of criminal justice. Its growth and development will be examined with emphasis placed on the various subsystems of the criminal justice system (substantive and procedural criminal law; police, prosecution, defense, courts, institutional and community corrections; and the juvenile justice system). Additionally, contemporary issues that challenge the functional efficiency and effectiveness of the criminal justice system will be addressed. Students will learn the terminology of the field; have the opportunity to evaluate personal attitudes and values regarding crime and responses to crime. NOTE: This course is not recognized for NCAA eligibility.

#### **935 Criminal Law - Honors (Weighted Course)**

*MCCC CJS 105*                      *Spring Semester*  
*Grades 10, 11, 12*                      *3 periods, 1 HS credit/3 college credits*

(WEIGHTED COURSE) An introduction to the origins and functions of the substantive criminal law of Pennsylvania; a survey and analysis of the elements of major offenses in common law and under modern penal codes, and the available defenses; a consideration and discussion of leading judicial interpretation of penal codes and criminal law. PREREQUISITE: 932 (MCCC CJS100). NOTE: This course is not recognized for NCAA eligibility.

#### **OPTION 4: MCCC DUAL ENROLLMENT AT SPRING-FORD**

Courses are taught by SFAHS teachers, who have been approved as adjunct instructors at MCCC, each course is \$209 (price as of date of publication, subject to change). Students will be responsible for purchasing texts through MCCC at an additional cost.

#### **903 First Year Experience**

SCS 101                      *One Semester*  
Grades 11, 12              *3 periods, 1 HS credit/3 college credits*

An introductory course that involves familiarization with college resources, culture, policies and technology. This course focuses on personal development, student success strategies and career exploration. Throughout the semester, students will use technology to engage in self-assessment and reflection to facilitate the transition to higher education. NOTE: This course is not recognized for NCAA eligibility.

#### **900 Speech Communication - Honors (Weighted Course)**

MCCC CMS110              *One Semester*  
Grades 10, 11, 12        *3 periods, 1 HS credit/3 college credits*

A human performance course designed to improve oral communication skills in public speaking, group process, and interpersonal situations. Communication theory will be presented and practice will be provided with audience/situation analysis, organizational strategies, critical listening and thinking, and use of ethical principles and evidence in the preparation and delivery of informative and persuasive speeches, participation in decision-making groups, and analysis of interpersonal relationships. The incorporation of research from credible sources into all communication contexts, with a specific emphasis on public communication, will be emphasized.

#### **901 World Civilizations I: To 1500 - Honors (Weighted Course)**

MCCC HIS121              *Fall Semester*  
Grades 10, 11, 12        *3 periods, 1 HS credit/3 college credits*

This course is a survey of the civilizations that have occurred in the world from prehistory to 1500. Comparisons will be made among the civilizations of Asia, Africa, Europe, and the Americas. All aspects of these civilizations will be looked at, including government, society, economy, culture, and religion. This course offers a view of all the world's civilizations and how they relate to each other. Class time will be devoted to lectures, readings and discussion. Grades will be based on primary source evaluations, three exams, one research assignment, and a participation/quiz component. Content, teaching materials and instructional methods will be appropriate for a college class and should distinguish this class from the existing elective, Ancient World. In order to ensure that students are able to meet the course expectations, students will be asked to attend a pre-registration meeting with the instructor.

#### **902 World Civilizations II: From 1500 - Honors (Weighted Course)**

MCCC HIS122              *Spring Semester*  
Grade 10, 11, 12        *3 periods, 1 HS credit/3 college credits*

This course is a continuation of World Civilization I. It is a survey of the major events that have occurred in the world since 1500. The inter-relationships between the civilizations of Asia, Africa, Europe, and the Americas provide many opportunities for comparisons of their varied histories. This course will help students gain a clearer understanding of a complicated, interdependent modern world. Class time will be devoted to lectures, readings and discussion. Grades will be based on primary source evaluations, three exams, one research assignment, and a participation/quiz component. Content, teaching materials and instructional methods will be appropriate for a college class and should distinguish this class from the existing elective, The Modern World. In order to ensure they are able to meet the course expectations, interested students will be asked to attend a pre-registration meeting with the instructor.

### **910 Principles of Management - Honors (Weighted Course)**

MCCC MGT 111

One Semester

Grades 10, 11, 12

3 periods, 1 HS credit/3 college credits

In addition to building a solid foundation of management fundamentals, this course is designed to introduce students to emerging concepts and issues that are shaping the theory and practice of management. Throughout the course, students are exposed to discussions of quality, productivity, customer satisfaction, global management, social responsibility, ethics, and other topics that students will encounter both on the job and in any advanced studies. NOTE: This course is not a recognized course by the NCAA for eligibility.

### **911 Financial Accounting - Honors (Weighted Course)**

MCCC ACC 115

One Semester

Grades 11, 12

6 periods, 1 HS credit/4 college credits

Students will develop literacy and skills in the application of the basic principles of financial accounting including accounting principles and practices, accounting journals and ledgers for recording business transactions, and application of the accounting cycle for service and merchandising enterprises from analysis of business transactions through preparation and evaluation of the income statement, balance sheet and statement of cash flows. NOTE: This course is not a recognized course by the NCAA for eligibility.

## **IMMACULATA UNIVERSITY**

Spring-Ford has partnered with Immaculata University to offer dual credit opportunities in several of our Advanced Placement (AP) courses and select world language classes. Students enrolled in eligible AP classes or honors French and Spanish courses will have the option of taking the class as a dual credit class through Immaculata University while also maintaining the advantages of an AP or honors class.

Students who choose to take the AP class or honors French or Spanish as a dual credit class will register with Immaculata University in late fall and pay \$125.00 per credit (price at the time of publication) to receive 3 college credits from Immaculata University upon the successful completion of the AP or honors language class in June. The student's final grade in the SFASD course will be the final grade in the Immaculata course. The Immaculata University grading scale is provided below. College credit will be awarded through Immaculata University upon the successful completion of the AP or honors language course. We encourage all AP students to take the AP exam, however this dual credit option and the resulting college credits are not contingent upon the results of the AP exam.

Students who choose this as an option are responsible to research this along with all other post secondary plans/options to ensure it aligns with their post secondary goals/plans. Due to the specific college requirements and eligibility for transfer credit, we cannot guarantee that the credits will transfer. However, if you are interested in seeing if your credits will transfer to a specific institution, you can use [www.collegesearch.net](http://www.collegesearch.net) and enter the Immaculata course code to view eligible transfer courses.

Dual credit eligible AP classes and honors level French and Spanish courses will be noted at the end of the specific course description(s) in the course book.

<b>SFASD Course</b>	<b>Immaculata University Equivalent</b>
422 Biology: AP	BIOL 103
359 Calculus AB: AP	MATH 207
369 Calculus BC: AP	MATH 208

433 Chemistry: AP	CHEM 103
672 Computer Science: AP	CIS 218
042 Drawing: AP	ART 102
122 English Language and Composition: AP	ENG 106 or ENG 107 (if taken after AP Lit)
132 English Literature and Composition: AP	ENG 106 or ENG 107 (if taken after APLang)
451 Environmental Science: AP	BIOL 113
216 European History: AP	HIS 115
227 Human Geography: AP	GEO 101
246 Macroeconomics: AP	ECO 201
247 Microeconomics: AP	ECO 202
442 Physics C: AP	PHY 203
441 Physics I: AP	PHY 152
231 Psychology: AP	PSY 101
379 Statistics: AP	MATH 308
041 2-D Art and Design: AP	ART102
040 3-D Art and Design: AP	ART 306
215 US History: AP	HIS 311
225 US Government and Politics: AP	POL 201
525 Spanish Language and Culture: AP	SPA 104
523 Spanish IV	SPA 103
524 Spanish V	SPA 104
505 French Language and Culture: AP	FREN 102
503 French IV	FREN 101
504 French V	FREN 102



## Immaculata University Grading Scale

Grade	Percent Range
A	100% to 93%
A-	92% to 90%
B+	89% to 87%
B	86% to 83%
B-	82% to 80%
C+	79% to 77%
C	76% to 73%
C-	72% to 70%
D+	69% to 67%
D	66% to 60%
F	59% to 0%

### **WESTERN MONTGOMERY CAREER AND TECHNOLOGY CENTER (WMCTC)**

The Western Montgomery Career and Technology Center, located at 77 Graterford Road, Limerick, is an extension of the existing programs of the secondary schools of Spring-Ford, Pottsgrove, and Upper Perkiomen School Districts. The technical programs offered at WMCTC are available for students in grades 9-12. Students will attend WMCTC ½ day in their technical program and spend the other ½ day in academic classes at their school. WMCTC currently offers 18 technical programs to give students a jump-start on their careers directly after high school or through post-secondary education.

### **Deciding on Your Future**

Career planning begins with education planning. Every spring, thousands of students make important career choices when they schedule for next year's classes. Many times these choices are made without much thought for the future. High school **MUST** be viewed as a critical phase that determines your career future. You must select classes as if your livelihood depends upon it - because it does! Each time you do not take a subject, you close a door to a career opportunity. Prepare your career goals and select the course that will enable you to reach these goals. When deciding what course you should take, keep the following in mind:

- Take as many classes and the most rigorous classes possible. The more educational experiences you have, the more opportunities you'll be aware of.
- Have a career goal in mind. Plan what classes you need and when you need to take them.
- Supplement your academics with hands-on learning experiences.
- WMCTC will provide you with the skills necessary for working-world success and/or post-secondary education.
- Consider a 2-year or 4-year college institution.

A WMCTC education is challenging. Following completion of a technical program, students are ready to confidently step into the world, believing in the dignity and worth of all work. They are committed to achieving success on the job, in college, in the military or wherever their paths may lead. Various industry certifications can be earned by students upon successful completion of their technical program. Many employment opportunities, both now and in the future, require technical

education. Students from WMCTC can successfully advance to college with the necessary academic prerequisites. It is important to maintain a rigorous academic program at your high school to complement your technical program at WMCTC.

### **Career Exploration Opportunities (CEO)**

This program is designed to integrate career education and transition planning for students with an Individual Education Program in grades 9-12. This program provides students with disabilities intensive support in a variety of career areas. Students receive direct instruction in career development, job preparation and social skills training. The program highlights the opportunity for hands-on experiences and academic skills integrated with career instruction in various work settings. Career development is a focus of the program including interview skills, and job searches. Interest in this program should be directed to the student's school counselor or the high school Supervisor of Special Education - Aimee Oblak.

### **Technology Centers That Work (TCTW)**

The TCTW initiative was designed specifically to assist shared-time centers in reviewing and implementing actions needed to produce high-demand, high-wage graduates who will be leaders in their selected careers. It is based on the belief that most students can master complex academic and technical concepts if schools create an environment that encourages students to make the effort to succeed.

### **Students Occupationally and Academically Ready**

SOAR is built on programs of study that incorporate secondary and postsecondary education elements to ensure relevant career and technical content. Students can earn college credits through statewide articulation agreements while they are still in high school by successfully completing our programs of study. SOAR programs prepare today's students for High Priority Occupations that include career categories that are in high demand by employers, have higher skill needs, and are most likely to provide family sustaining wages. These programs provide students with career planning opportunities and college success. Check our website and link to SOAR for more information.

### **Scheduling note to students**

All WMCTC students must also schedule the following courses, as appropriate:

WPE09 and WH09.....9th grade PE/Health @ WMCTC

WPE10 and WH10.....10th grade PE/Health @ WMCTC

WPE11 and WH11.....11th grade PE/Health @ WMCTC

WPE12 and WH12.....12th grade PE/Health @ WMCTC

### **School-to-Work Program at WMCTC**

School-to-Work Program at WMCTC strives to provide every student with the opportunity to participate in an on-the-job experience. WMCTC has partnered with various businesses and industries to provide paying employment in the students' technical field of study. Students must meet the eligibility requirements along with the recommendation from their technical instructor. This opportunity occurs during the senior year of the students' technical program. Other school-to work programs include job shadowing, clinical experiences and internships. For further information regarding enrollment into the School-to-Work Program at WMCTC, contact the WMCTC School to Work Coordinator at 610-489-7272 x 218

### **Introduction to Medical Careers (Open to 9th Grade)**

*NWMC1A (1st year students)*

Introduction to Medical Careers, part of the Human Services Cluster, is a year-long 9th grade class that will focus on numerous aspects of medical careers with an emphasis on units that are taught in WMCTC's current medical programs to include: Health Science Technology, Dental Occupations, and Sports Medicine. Key units of instruction will feature lessons in anatomy, medical terminology, physiology, human body systems, medical ethics, and many more. The class will be academically rigorous and feature a final exam.

## **9-12 WMCTC Courses**

### **Precision Machining (AM)**

*NWAM1A (1st year students); WAM1 (2nd year); WAM2 (3rd year)*

A precision machinist uses various high-tech machine tools to machine and remove material for the purpose of producing the many manufactured products we use in our daily lives. These products and components are across every industry sector and range from automotive components to military applications to medical devices. The training students will receive in the Precision Machining program will prepare them with the in-demand skills regional and global employers seek and value. Students in this program will learn the safe use of hand tools and the set-up and operation of conventional machine tools such as lathes, milling machines, drill presses, and surface grinders. The emphasis of the training focuses on the set-up, operation and programming of Computer Numerically Controlled(CNC) machine tools. CAD/CAM programming software instruction and training is a key component of the CNC instruction. Additionally, the interpretation of engineering drawings, semi-precision and precision measurement, heat treating, statistical process control, material characteristics and metallurgy are components of the curriculum. Industry certifications may be earned through: National Institute for Metalworking Skills (NIMS); Career Safe - Osha 10; S/P2 Machining. Students who complete this program of study have exceptional opportunities to gain immediate employment in the field or pursue post-secondary education, or enter the military. COLLEGE OPPORTUNITIES: Pennsylvania College of Technology; Thaddeus Stevens College of Technology; MCCC; DCCC; RACC.

### **Automotive Technology**

*WAT1 (1st year students); WAT2 (2nd year); WAT3 (3rd year)*

The Automotive Technology program has been specifically designed to prepare students to continue their training at post-secondary schools or continue into industry. The program follows Pennsylvania Department of Education's program of study. The program content consists of classroom instruction in: automotive fundamentals, driveline, engine repair, HVAC, brakes, steering and suspension, electrical/electronic systems, engine performance and PA Safety and Emission Inspection procedures. The program utilizes a combination of classroom instruction, computer-based learning and hands-on lab work for an innovative learning process. Level 3 students have the opportunity to qualify for participation in various manufacturers' sponsored automotive skills competitions that offer scholarship money and prizes. Also, Level 3 students may be eligible for our cooperative education program. COLLEGE OPPORTUNITIES: Penn College of Technology; Northampton Community College; Automotive Training Center; Thaddeus Stevens College. This program is an approved Program of Study and is aligned with the PDE SOAR Program

### **Carpentry**

*WCR1 (1st year students); WCR2 (2nd year); WCR3 (3rd year)*

For individuals with an aptitude for working with tools and materials, this program can be the stepping-stone to a variety of rewarding careers. Training in carpentry prepares the student for job opportunities in new home construction, commercial construction or the woodworking industry. Students focus on areas of specialization such as framing, roofing, siding, and finish work. Residential carpentry construction makes up the major portion of the program. Students should enjoy working indoors and outdoors, have good mechanical ability and manual dexterity, have a sincere interest in building or woodworking, and a desire to work with other people. Students will learn the following: proper use of hand and power tools, site layout using the transit, residential framing including floor, wall and roof, exterior finish work including roofing and siding, door and window installation, installation of aluminum soffits, gutters, and downspouts, interior finish work including dry walling and hanging doors, interior trim work including installing hardwood flooring, blueprint reading, estimating, and introduction to construction management. COLLEGE OPPORTUNITIES: Penn College of Technology; Thaddeus Steven State College of Technology; Associated Builders and Contractors Apprenticeship program.

## **Collision Repair**

*WCL1 (1st year students); WCL2 (2nd year); WCL3 (3rd year)*

This program is designed for students interested in pursuing employment in the field of collision and auto body repair. Students have the opportunity to gain entry-level skills required for this profession. These skills are acquired through classroom presentations, textbook readings, and hands-on experiences. Students use hand tools and power tools to perform the various training activities. The Collision Repair program covers instructional areas such as: safety instruction, estimating and customer relations, and frame and uni-body repair. Students are also instructed in metal straightening, welding and cutting, panel replacement and alignment, surface preparation, and masking and painting. During the course students are expected to develop job acquisition skills. The importance of safety, quality, productivity and teamwork is also emphasized in this program. Students in this program should have patience and attention to detail. Additionally, the Collision Repair program follows the Industry Curriculum of Automotive Repair curriculum. COLLEGE OPPORTUNITIES: Penn College of Technology; Thaddeus Stevens State College of Technology.

## **Commercial Art**

*WCA1 (1st year students); WCA2 (2nd year); WCA3 (3rd year)*

The students in this program will be introduced to the tools and techniques used by successful commercial artists. Students will learn to use their creative art skills to translate client's needs into marketable artwork. The core curriculum is structured to encompass design, composition, layout, illustration, computer graphics, desktop publishing, and electronic production art. The Commercial Art program is an excellent prelude to advanced post-secondary training in both colleges and commercial and fine art schools. A career in art can take three different directions: fine arts, teaching, or commercial art. The field of commercial art offers a broad number of employment opportunities and provides great earning potential. Students successfully completing this program will be prepared to work in entry-level positions that could lead to an exciting career as a Commercial Artist, Art Director or Production Supervisor. COLLEGE OPPORTUNITIES: Penn College of Technology; MCCC; Art Institute of Philadelphia; Antonelli Institute; Kutztown University; and many more.

## **Computer Information Systems**

*WCI1 (1st year students); WCI2 (2nd year); WCI3 (3rd year)*

Computer Information Systems (CIS) is a program designed for students interested in pursuing careers in Information Technology. Areas of focus include basic and advanced hardware and software topics with an emphasis on Networking. Students will be using A+ and Net+ curriculum in the CIS program. Students will be eligible to test for A+, Net+, and Cisco CCENT certification. Students enrolled in the CIS program must be highly motivated and committed to achieving personal excellence. Based on the amount of technical information each student must acquire from books and manuals, good reading and comprehension skills are essential for success in the program. COLLEGE OPPORTUNITIES: Allentown Business School; Delaware County CC; Immaculata College; Penn State University; Drexel University; Temple University; MCCC; and many more.

## **Cosmetology**

*WCO1 (1st year students); WCO2 (2nd year); WCO3 (3rd year)*

The Cosmetology program is designed to prepare students for the states' professional licensing examination for Cosmetologists, and entry-level employment in the beauty profession. In this three-year program, students are provided the opportunity to earn 1250 hours of state required instruction and develop skills in all aspects of Cosmetology including: sculpting, styling, perming, hair color, skin care, chemical hair straightening, nails, and most importantly, people skills. It is necessary for students to keep their work area and equipment organized and well maintained. Students should also possess a sense of form, artistry, and creativity. Hands-on experience is obtained several days a week in The Salon. Upon completion of 900 hours, students are eligible and encouraged to take the state board licensure exam. Students who pass the state board exam and successfully complete 1250 hours will qualify for PA state licensure. Students who complete their hours and/or earn their license will have an opportunity to participate in the school-to-work program. COLLEGE OPPORTUNITIES: Students looking to add a business component to their Cosmetology license may consider MCCC

(Associate of Applied Science Degree in Management), St. Francis University (Associate of Applied Science Degree in Human Resources/Computer Technology)

### **Culinary Arts**

*WCU1 (1st year students); WCU2 (2nd year); WCU3 (3rd year)*

This instructional program prepares students for employment in institutional or commercial food establishments or other food industry occupations. Instruction includes theory and applications related to planning, selecting, purchasing, preparing (cooking and baking) and serving of quality food and food products; nutrition; use and care of commercial equipment, and safety and sanitation precautions. Practical experience is a major part of the course through the operation and management of a complete food service facility. This program is based on proven culinary operations and techniques used in country clubs, restaurants, hotels, cafeterias, hospitals and (in-plant) industrial food preparation and service. The graduate traditionally has a wide range of job offers to choose from. From our teaching exposure, experience, co-op training, and job placement program, students can start their careers in any of the SOC areas shown below. Upon completion of this program, students will be prepared for entry-level positions in the food service industry or advanced study at a culinary college or university. POST-SECONDARY OPPORTUNITIES/ARTICULATION AGREEMENTS: Culinary Institute of America; Johnson & Wales University; Penn College of Technology; Montgomery County Community College; Baltimore International College; Philadelphia Restaurant School. This program offers dual-enrollment that meets Montgomery County Community College requirements. This program is an approved Program of Study.

### **Dental Occupations**

*WDO1 (1st year students); WDO2 (2nd year); WDO3 (3rd year)*

For students in grades 10-12. This program prepares students for entry-level employment as a dental assistant and a strong foundation for continuing to post-secondary education. Dental occupations continue to be a high priority occupation. This program incorporates lectures, demonstrations, and hands-on experience in a variety of dental related subjects. The students will study everything from anatomy and physiology to infection control, four-handed dentistry and radiology, as well as learn about procedures for running a dental office and complying with Occupational Safety and Health Administration standards. Students will be able to continue their education to become an expanded functions dental assistant, dental hygienist, or dental school after the completion of this program. COLLEGE OPPORTUNITIES: MCCC, Penn College of Technology, Harcum Junior College, Northampton Community College.

### **Diesel Technology**

*WDT1 (1st year students); WDT2 (2nd year); WDT3 (3rd year)*

This program is designed to prepare students to repair and service diesel engines used to power buses, trucks and construction machinery. The employment outlook for diesel mechanics and technicians in PA is projected to increase over the next several years. Instruction in this program will include the diagnosis of engine malfunctions, disassembly of engines, examination of parts, reconditioning and replacement of parts, controls and transmissions, the PA state inspection code, and many other skills necessary to enter the diesel automotive field in an entry level position. Classroom instruction, computer based learning and hands-on lab works are all utilized for effective learning. COLLEGE OPPORTUNITIES: Penn College of Technology.

### **Early Childhood Education**

*WEC1 (1st year students); WEC2 (2nd year); WEC3 (3rd year)*

For students in grades 10-12. The Early Childhood Education program offers training for either direct employment in the early childhood profession or a strong foundation for continuing into post-secondary education with the intent for a teaching degree. This “teacher-in-training” course emphasizes the development of knowledge and skills necessary to provide safe, healthy, positive, developmentally appropriate, and high-quality instruction/teaching, education and care for young children. Classroom instruction for students is reinforced with hands-on experience through the WMCTC on-site preschool program for toddlers and preschool-age children. Course work includes instruction in PA Dept. of Human Service

regulations, first aid, nutrition, child development, structuring routines, time management, curriculum planning, positive guidance techniques, observation of children's behavior, and supervisory skills relating to children. Student portfolios and other written coursework is required. Emphasis is placed on self-help skills, self-concept, art, language arts, music, math, science, social sciences, infection control, room arrangement, and developmentally appropriate practices. Students with an interest in teaching, instruction or early childhood care are encouraged to enroll in this class. COLLEGE OPPORTUNITIES: MCCC; Reading Area Community College; most 4-year colleges.

### **Electrical Occupations**

*WEM1 (1st year students); WEM2 (2nd year); WEM3 (3rd year)*

This program has been developed to give students entry-level skills and knowledge to directly enter the workforce or pursue further education. The program incorporates a combination of theory lessons and practical experiences that provides instruction in electrical theory, National Electrical Code, residential, commercial, and industrial wiring techniques, telecommunications, smart home technology, green energy technology, and electrical maintenance. The safety, quality, productivity and teamwork is emphasized. Graduates may enter an apprenticeship program to be trained as a highly paid journeyman electrician or lineman. Electricians install, connect, test, maintain electrical power systems for residential, commercial, and industrial buildings. Students can also further their education at a technical school or university to become an electrical systems technician or an electrical engineer. The electrical occupations student should have good mechanical aptitude, manual dexterity, eye-hand coordination, ability to distinguish between colors, mathematics fundamentals, and reading ability. COLLEGE OPPORTUNITIES: Penn College of Technology; Penn State University; MCCC; Thaddeus Stevens State College of Technology; Reading Area Community College; Lincoln Technical School; Associated Builders and Contractors (ABC) Apprentice Program; International Brotherhood of Electrical Workers (IBEW) Apprentice Program.

### **Health Science Technology**

*WHS1 (1st year students); WHS2 (2nd year); WHS3 (3rd year)*

For students in grades 10-12. The Health Science Technology program consists of three components: Introduction to Healthcare and Careers, Nursing Assistant Preparation and Medical Assistant with Medical Terminology. Introduction to Health Care and Health Careers is presented to first year students with an introduction to the healthy body as well as the diseased body. Research is completed by the students regarding a disease process to present to the student body and community as a contribution to the public related to health. The NA Prep component provides students with skills that enable them to work in a long-term care facility, hospital, or home care setting following completion of a three week course outside of school at an approved PDE testing site. A Nurse Assistant is a member of a team that provides direct patient care as directed by the RN, while utilizing technical skills. This individual is also responsible for completing and documenting patient care activities. A Nurse Assistant promotes communication between the health care team and the patient, and demonstrates initiative, flexibility and good work ethic. Students are instructed in skills, clinical rotation and theory as required by the American Red Cross Nurse Aide competency program and the PDE. If all competencies are completed they are eligible to take the state certification Nurse Aide Registry exam for certification as a Nurse Assistant. The MA component will teach anatomy and physiology in depth as well as nutrition, communication, pharmacology and medical ethics. The Medical Terminology component provides a blueprint for learning medical vocabulary that is used in all aspects of health care. Skills that will be taught include EKG technique, principles of phlebotomy, blood and body fluid precautions, vital signs, positioning a patient for procedures, and medication administration. First Aid certification and school-to-work based opportunities are available to eligible students. COLLEGE OPPORTUNITIES: MCCC Montgomery County Community College; Gwynedd Mercy College; Northampton Community College; Reading School of Nursing and Radiology; Alvernia College, Penn College of Technology, Duquesne University, Bloomsburg University, Kutztown University, Temple and others. This program offers dual enrollment in meeting with MCCC requirements.

## **Heating, Ventilation and Air Conditioning (HVAC)**

*WHV1 (1st year students); WHV2 (2nd year); WHV3 (3rd year)*

This program provides knowledge and skill training in: Introduction to HVAC, Safety, Hand and Power Tools, Blueprint reading, Piping Practices, and HVAC Electricity. The student will learn to Install, Troubleshoot, and Service Oil, Gas and Electric Heating, Air Conditioning, and Heat Pump Units. The combination of lab practice and theory prepares students for entry level employment and advancement in today's Heating, Ventilation and Air Conditioning (HVAC) industry. Students entering this program should have a basic mechanical aptitude, be able to move heavy objects, be self-motivated and a self-starter. COLLEGE OPPORTUNITIES: Penn College of Technology; MCCC; Thaddeus Stevens State College of Technology; Associated Builders and Contractors (ABC) Apprentice Program

## **Project Lead The Way (PLTW): Biomedical Science**

*WHACE Biomedical Science (Grades 11-12)*

The Project Lead The Way (PLTW) Biomedical Science program is designed for college-preparatory students who are interested in pursuing a medical or health science career. The rigorous three- course Biomedical Science sequence, Principles of Biomedical Science, Human Body Systems, and Medical Intervention is a nationally recognized curriculum that allows students to investigate the roles of biomedical professionals as they study the concepts of human medicine, medical terminology, physiology, genetics, microbiology, and public health. The PLTW curriculum is project-based and will expose students to the design process, research and analysis, teamwork, communication skills, global medicine, and human impacts. The curriculum prepares students to be the next generation of problem solvers, critical thinkers, and innovators for the global economy. The opportunity for clinical experience in various health care facilities is always pursued for these students. Students applying to this program will need to submit an application with an essay, interview with instructor, have a recommended 3.0 GPA, upper level science/math, and the ability to provide their own transportation to clinical sites. An updated immunization record, 2-step PPD, and a background check may be required for participation in the clinical experience. Grants and college credits may be earned with PLTW's industry and college partners.

## **Protective Services**

*WPS1 (1st year students); WPS2 (2nd year); WPS3 (3rd year)*

An instructional program that prepares individuals to apply technical knowledge and skills required to perform entry-level duties in law enforcement, firefighting, EMS and other public safety services. This program stresses the techniques, methods and procedures specific to the areas of criminal justice and fire protection especially in emergency and disaster situations. Physical development and self-confidence skills are emphasized due to the nature of the specific occupation(s). In addition to the application of mathematics, communication, and science, students receive training in social and psychological skills, investigations, vehicle and equipment operations, the judicial system and landmark Supreme Court decisions, pre-hospital emergency medical care and appropriate emergency assessment, treatment and communication. Students will learn skills from the entry-level Firefighter 1 curriculum, including ground ladders, water supply, hose line advancement and use of Self-Contained Breathing Apparatus. POST SECONDARY OPPORTUNITIES: Montgomery County Community College; Montgomery County Police Academy, Northampton County Community College; Reading Area Community College; Pennsylvania College of Technology. This program is an approved Program of Study.

## **Sports Medicine**

*WSM1 (1st year students); WSM2 (2nd year); WSM3 (3rd year)*

For students in grades 10-12. The WMCTC Sports Medicine program will be designed to prepare students for a number of technical fields related to kinesiology. Instruction includes theory and applications related to: Athletic training, anatomy and physiology, medical terminology, exercise physiology, pathophysiology, injury recognition, injury management, rehabilitation, restorative care, physical therapy, strength training and high intensity training, weight management, nutrition, resistance training, exercise programming, mental health and wellness. Students will learn essential skills directly related to the Athletic Training, Personal Training, and Physical Therapy career paths. Students will learn to design safe and effective exercise prescriptions, conduct individual exercise programs, and fitness testing. Students will be prepared for employment

in a wide variety of settings that include but are not limited to, athletic teams, hospitals, corporate wellness programs, strength and conditioning, clinical rehabilitation programs, and fitness clubs. In addition, the program serves as a strong foundation for students wishing to pursue advanced degrees in the field of exercise science or enter professional disciplines such as physical or occupational therapy. Industry certifications may be earned in American Heart CPR/AED, American Heart First Aid, Personal Training Certification (ACSM).



### **Welding and Metal Fabrication (WE)**

*NWMF1A (1st year students); WAM1 (2nd year); WAM2 (3rd year)*

The welding program prepares students to apply technical knowledge and skills in Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, Flux-core Arc Welding, brazing, and torch cutting. Students learn safety practices, types and application of electrodes and welding rods, properties of metals; industrial drawing reading; principles of electricity, interpretation of welding symbols, quality control for testing welds by various methods, use of manuals and specification charts, use of portable grinders and hand tools; positioning and clamping, fabricating, fixturing, and welding standards established by the American Welding Society. Welding technology offers immediate job prospects with potential for growth and promotion. Welding career pathways also include college where students can consider a field of study in welding engineering or metallurgy. Brazing and soldering are closely related fields in which welders may achieve proficiency. Individuals in these occupations set up, operate, and monitor welding, soldering, or brazing machines that weld, braze, solder, or heat treat metal products, components, or assemblies. Those individuals completing the welding program may be employed as fabricators, cutters, mig welders, sub arc operators, aluminum welders, spot welders, fitter welders, maintenance welders, and welders. Students who complete this program of study have exceptional opportunities to gain immediate employment in the field or pursue post-secondary education, or enter the military.



## GLOSSARY

**Alternate Courses:** An alternate is a second and third course selection made by students for use in situations when first-choice courses cannot be scheduled.

**Advanced Placement (AP) Courses:** AP courses cover the breadth of information, skills and assignments found in corresponding college courses; align with the standards and expectations of leading liberal arts and research institutions; and provide motivated and academically prepared students with the opportunity to study and learn at the college level. Most U.S. colleges and many international ones have an AP Credit Policy that allows students who have taken AP courses or exams to earn college credit, placement or both.

**Credit:** Students must earn 22 credits during grades 9 through 12 to qualify for graduation. The following 15 credits are mandated: 4 English, 3 Social Studies, 3 Math, 3 Science, 0.4 Health, 1.6 Physical Education. A minimum of 7.0 additional credits are required for graduation.

**Dual Enrollment:** Dual credit enrollment provides junior and senior students with a preview of college level instruction, the opportunity to earn college credit that can be transferred to many colleges and universities (check with your desired university to determine their dual enrollment policy). Students will be able to use these courses for both college and high school credit. Dual credit classes are semester-based classes that typically meet on an every-other-day basis.

**Elective:** Students are required to take a minimum of seven credits of electives. Students may choose an elective to personalize their course work based on their own future interests or career goals. Examples may include an art class, a technology class or a language class.

**Grade Point Average (GPA):** Final course grades are based on all four marking period grades for the course, the midterm and the final exam. A cumulative GPA is calculated based on the students' grade, the credit value for the class and the degree of difficulty of the courses a student is taking (AP, honors or regular courses). Many college admission offices consider a students' cumulative GPA when reviewing an application.

**Honors (H) Course:** Courses identified as "Honors" will be more rigorous, require PREREQUISITES, and are more demanding than college preparatory courses. These courses stress analytical skills and higher-order thinking. Honors Courses receive additional weight (5%) in the calculation of the GPA.

**Major:** A major subject meets every day and carries one credit for a full year. Dual Enrollment courses count as semester-based majors.

**Minor:** A minor subject does not meet daily and carries less than 0.50 credit for a semester course or less than 1.00 credit for a full-year course.

**Period:** Each senior high school day has seven class periods and one lunch period. Of the 42 class periods in a 6-day cycle, most students are expected to carry 37 or 38 periods, including five major subjects.

**Prerequisite:** A prerequisite is a course that a student must complete in order to qualify for entry into another course. For instance, before students can take French III, they must have completed French II.

**Weighted Grade:** The term "weighted grade" is used to describe the process of assigning additional strength or numerical value to a grade a student earns in certain courses designated as weighted courses. Designated courses will be given the following added value: 7% for AP courses and 5% for both honors courses. NOTE: the actual grade is recorded on the report card and transcript. Weight is only given if a student earns 70% or higher.

**WMCTC:** See pages 78.