

Program of Studies



2024-2025

**Lower Moreland
High School**

Lower Moreland High School

555 Red Lion Road

Huntingdon Valley, PA 19006

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Visit our web site: <http://www.lmtsd.org>

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Assistant Principal, Classes 2026/2028

Mrs. Megan Zeh

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Counseling Staff

Ms. Maura Quinn, Department Chair

Mrs. Jennifer Romano

Mr. Kyle Lutteroty

Mrs. Lindsey McFalls

Ms. Mary Kochaba

Mission Statement: The mission of the Lower Moreland Township School District is to foster educational excellence in a nurturing environment that promotes respect for self and others, utilizing community resources, staff, and an innovative curriculum. All students, regardless of ability, will be provided the knowledge, skills, values and attitudes necessary to become life-long learners in a changing world where they will be required to think critically, act responsibly, and communicate clearly.



LOWER MORELAND HIGH SCHOOL

555 Red Lion Road, Huntingdon Valley, Pennsylvania 19006

*An exemplary learning community...
committed to preparing and empowering all learners*

Dear Student:

This Program of Studies has been designed to assist you in making course selections for the next school year. Used properly, it will help you to determine which courses to take in order to meet graduation requirements, comply with college admissions mandates and occupational objectives, and create a personally fulfilling academic program.

As you begin the planning process, you and your parents/guardians should review all aspects of this booklet very carefully to arrive at decisions which will best fit your own individual abilities, interests, and needs. You are encouraged to select a challenging course of studies in an effort to inspire academic growth and development. Education is a cooperative endeavor and the staff at Lower Moreland High School is prepared to counsel and advise you during this important process.

Since our staffing needs at the high school are predicated upon student course selection, it is extremely important that this process be given appropriate time, effort, and attentive planning on the part of each student and his or her family. Investigate and ask questions early in the scheduling process with the knowledge that your selections are a commitment to specific courses which we will expect you to honor.

The course selection booklet is divided into two parts: Part I, Planning Guide, describes the scheduling process and includes important information about educational requirements; Part II, Course Descriptions, provides detailed course descriptions and includes credit, length of courses, prerequisites, and grades in which the courses are offered. Serious thought and consideration must be given to your selections as requests for schedule changes will be honored only in extreme hardship circumstances and with administrative approval.

I extend to you my best wishes as you undertake this important responsibility.

Sincerely,
William J. Miles
Principal

Main Office – (215) 938-0220 Guidance Office – (215)938-0114
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PART I: THE SCHEDULING PROCESS

The Scheduling Process

Course selection begins with an overview of the Program of Studies, review of requirements and the procedures for choosing courses. Current teachers make recommendations for academic placement for the following school year. Students are then given the opportunity to choose electives. Students and parents/guardians are encouraged to discuss the student's complete course selection list. In March, counselors will meet with students individually to review course recommendations and elective choices. The high school day has eight instructional periods including a lunch period. All students must schedule according to grade level requirements. Major academic courses are given priority in the computerized scheduling process; electives are added later. Students should choose alternatives to their first elective choice. Be mindful of course prerequisites and grade level offerings. There may be prerequisites in order to move on to a sequential course. The offering of courses depends upon the demand for the course and teacher and classroom availability.

Course Selection

Course selections are *firm* decisions and should be made thoughtfully.

Tips on Planning

Students and parents/guardians should consider:

- Specific courses and number of credits required to meet graduation requirements
- course prerequisites
- prior successes and failures
- the importance of balance
- special interests and aptitudes
- future college and career plans

Changes

All student-initiated changes involving course selection create instructional, staffing, scheduling, and budgetary considerations and, therefore, will be made only when absolutely necessary. From the beginning of the scheduling process in February through the month of June, multiple opportunities are provided for students to take an active part in the development of their schedules. Any requests for changes to first and second semester elective courses after the Drop/Add period, which concludes at the end of the first week of school, requires administrative approval by your grade level Assistant Principal. Please note that Advanced Placement courses may not be dropped. Any exceptions to this practice will not be deemed precedent setting and are intended solely for the purpose of improving a student's overall performance as it relates to academic and emotional growth. After the start of the school year, level changes will be considered if there is a teacher recommendation and evidence that the student has been inappropriately placed. **No requests for schedule changes will be honored for teacher assignment or student preference.**

Withdrawal from Course

Withdrawal from a course before the First Marking Period, if approved, will result in no notation on the student's transcript. Withdrawal *after* the first Interim Progress Report will result in the course being listed on the student's transcript as withdrawn/passing (W+) or withdrawn/failing (W-) as determined by the student's cumulative average. Courses dropped during the school year with a (W-) may not be taken in summer school.

Course Levels

Students are placed in course levels by the professional staff after careful consideration of the student's aptitude and past academic performance. Honors and Advanced Placement courses are available to students in grades 9 through 12, who meet the course prerequisites.

Change in Course Placement

Course recommendations are completed by teachers at the beginning of the second semester and are made viewable to students via Home Access Center. Should the parent/guardian disagree with the recommended placement, a Parent Request for Placement Change Waiver Form may be submitted to the High School Counseling Office by Friday July 26, 2024. If necessary, the students will be placed on a waiting list. Waivers do not guarantee a placement change. Each request will be reviewed by the administration, as no change in placement can be made that will result in an overload of students in a class. Please note: only one course override will be honored per student each academic year. Once a change is approved, the student must remain in the course for the duration of the school year.

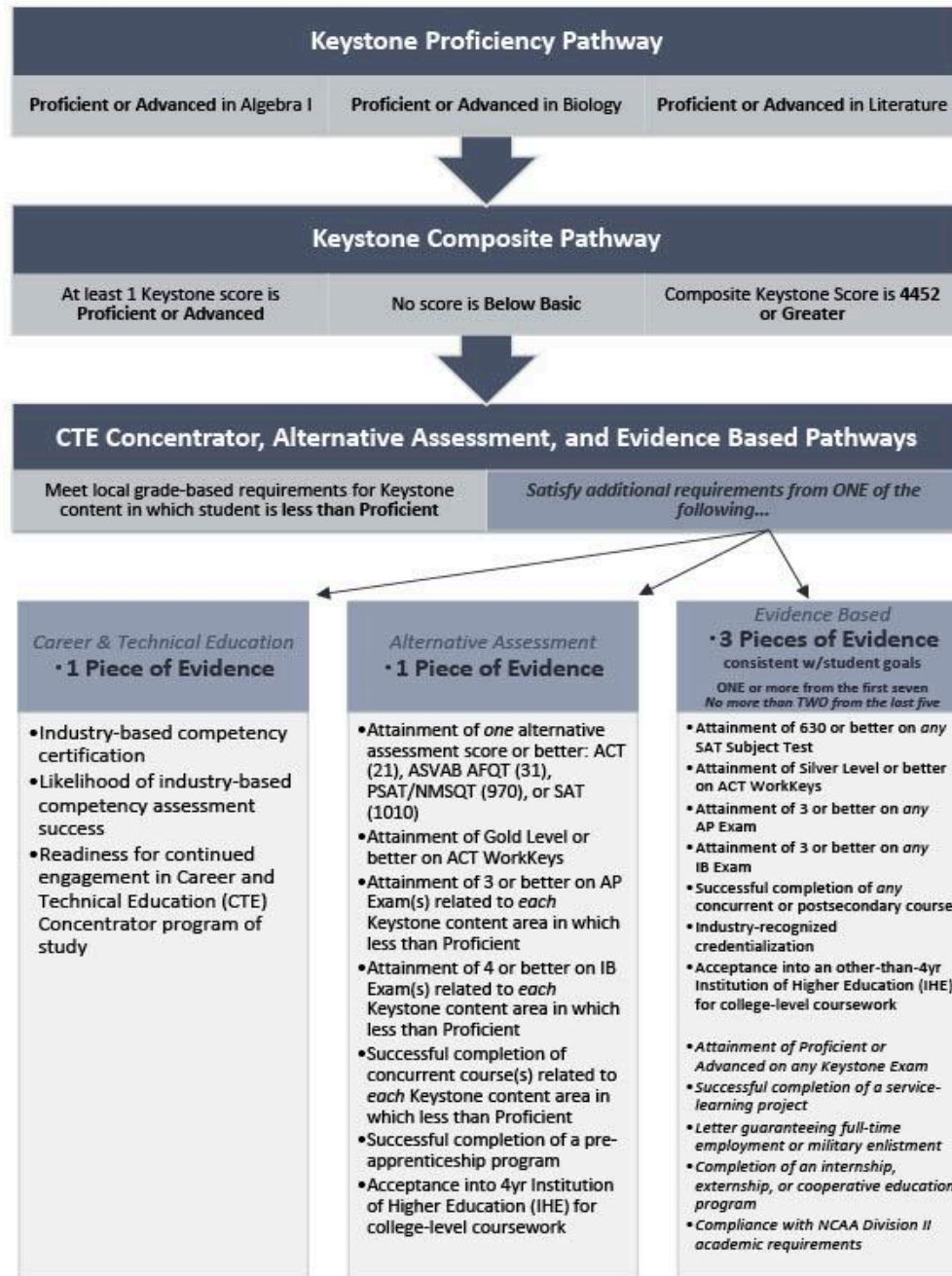
ACT 158: Pathways to Graduation

Act 158, which defines graduation requirements in Pennsylvania, was amended in 2018 to provide students with multiple pathway options to demonstrate academic proficiency and fulfill the state requirements. The implementation of the Act was deferred until the 2023 graduating year. Beginning with the graduating class of 2023, all students must demonstrate proficiency in Algebra, Biology and Literature. Regardless of the pathway a student follows to earn their diploma, the Keystone exam remains a federal requirement. Religious opt out remains the only way that a student can be excused from taking the Keystone exams. The majority of Lower Moreland students are anticipated to meet the graduation requirement through performance on the Keystone exams. Keystone scores can fulfill the requirement in one of two ways. First, if the student is proficient or advanced on each of the Keystone exams, they meet the requirement through the Keystone Proficiency Pathway. There is also the possibility of the Keystone Composite Pathway for students who are not proficient on all three exams, but have no scores of below basic and at least one score of Proficient or Advanced and the total score for all three exams is 4452 or better.

The school counselor and/or high school administration will assist in determining the best pathway based on the student's academic profile. For students who attend ECAT, the requirement can be fulfilled by attaining an industry-based competency certification.

Please see the Act 158 Pathway Graphic for additional information.

Act 158 Pathway Graphic



Credits and Graduation Requirements

Credit for a subject is granted after a student has satisfactorily completed the course requirements and has satisfied any or all other obligations related to the instructional program. A full year course (2 semesters) receives 1.0 credit toward graduation. A semester course receives 0.5 credit. Other courses receive credit as marked in the course description. For graduation purposes, a unit of credit represents satisfactory completion of a planned course of a minimum of 120 hours of instruction in grades 9-12. Courses which meet fewer than 120 hours, will be awarded fractional credit. For example, a semester course which meets each day, receives 0.5 credit.

Required Minimum Number of Credits

Grade 12 - 6.00 credits	Grade 10 - 5.75 credits
Grade 11 - 5.75 credits	Grade 09 - 6.50 credits

LMHS Graduation Requirements

English	4.0 credits
Social Studies**	3.0 credits
Science	3.0 credits
Mathematics	3.0 credits
Physical Education	1.0 credit
Health Education	0.5 credit
Fine/Practical Arts*	1.0 credit
Humanities*	1.0 credit
Creativity and Collaboration in the Arts	0.5 credit
Critical Writing	0.5 credit
Personal Finance	0.5 credit
Additional Courses	<u>6.0 credits</u>
TOTAL	24.0 credits

*For courses which qualify under Fine/Practical Arts and Humanities, see the section entitled *Definitions*. It should be noted that each of these programs lists the *minimum* number of courses and credits students are required to take during the four-year sequence. It is not unusual for the motivated student or the student who wishes to attend a competitive college to exceed the 24 required credits.

**All students must take a Civics course and assessment as required by the PA Department of Education.

Definitions

To comply with the State Board of Education Curriculum Regulations and to clarify some terms related to requirements explained in this booklet, the following definitions are offered:

Planned Course

Instruction offered by a school entity and delivered to the students enrolled is based on a written plan which consists of at least all of the following:

- A list of learning objectives expected to be achieved by students.
- Content and instructional time needed to reach learning objectives typically consisting of 120 clock hours of instruction, or fraction thereof.
- Expected levels of achievement.
- Procedures for evaluation.

Unit of Credit

For graduation purposes, a unit of credit will represent formal, quantitative recognition by the School Board and the Department of Education of satisfactory completion of a planned course of 120 hours of instruction in grades 9-12. A school district may offer a planned course of fewer than 120 hours and course credit will be awarded based on the fraction thereof.

Proficiency in Reading, Writing, Mathematics, and Biology

The State of Pennsylvania requires students to participate in the Keystone Assessments in Algebra, Literature, and Biology. This will occur at the completion of courses in Algebra 1, Biology, and American Studies.

Humanities (1.0 Credit)

Subjects that embrace literature, world languages, history, philosophy, or *additional* courses in English or social studies are humanities courses. Please note that a student may not count the same course for credit to meet more than one graduation requirement.

Fine/Practical Arts Requirements (1.0 Credit)

The purpose of this requirement is to ensure that students who graduate from Lower Moreland High School will have studied subjects which encompass the aesthetic and practical aspects of the curriculum.

The requirement may be fulfilled by taking any fine arts (art, music) course for 0.5 credit, and by taking any practical arts or technology education course, for 0.5 credit, at some time over the four-year period. A student may also meet the requirement by taking a full credit in either art or music. This requirement is *in addition* to the interdisciplinary course in fine arts required of all students.

Graduation Project

All LMHS students are required to successfully complete a graduation project. The project is divided into two parts. In May of junior year, students receive Graduation Project Part A: Essay/Resume/Interview. The project due date is assigned at that time and will be late in August, prior to the start of school. Part A culminates with the mock interview experience which is scheduled for mid-September. Upon successful completion of the project, students will be recommended for participation in Part B: CAPS Field Experience.

College and Career Readiness: Chapter 339

Per the Pennsylvania Department of Education, all students must have access to career exploration and preparation activities that are standards-aligned and evidence-based. By the end of Grade 11, students must have a career portfolio containing both the K-5 and 6-8 grade band evidence *and* an additional eight pieces of evidence that validate that all four strands of the Career Education and Work (CEW) standards have been meaningfully addressed. The strands are as follows:

1. Career Awareness and Preparation
2. Career Acquisition
3. Career Retention and Advancement
4. Entrepreneurship

This applies to all students who are enrolled by April 30th of their junior year. Students will receive guidance and information about this process, primarily from their school and college counselors, throughout each school year.

Course Challenge - Advancement

Advancement in a discipline's sequence may be obtained by enrolling in a course for original credit (120 hours) and demonstrating mastery of the planned course content of the LMHS course through assessment. All summer/advanced courses must receive *prior* approval and signed permission by the school counselor, related department chairperson and parent/guardian. This must be submitted to the school counseling office prior to the last day of school. For a Course Challenge, a raw score of 85% or higher (90% or higher for honors/AP) must be achieved on a test of mastery prepared by the Lower Moreland High School faculty and administered at the end of the summer by the school counseling department. Results of this test, graded by the appropriate professional faculty member and approved by the administration, will be considered final with no retest privileges. Successful completion of course advancement will enable the student to schedule the next sequential course **if it is able to be scheduled (please note that this is NOT a guarantee)**. Courses taken outside of Lower Moreland High School will be listed on the student's transcript. Only in cases where the student is approved for Dual Credit will the course be added to the Lower Moreland High School transcript and factored into the student's Grade Point Average.

Community Service

Community Service hours are not required for Lower Moreland students unless a student is a member of the National Honor Society. Many students choose to volunteer on their own in the community. Students are encouraged to log their total number of hours per service activity in their Extracurricular Activities list in Naviance.

Summer School

In the event that a student receives a failing grade in a course, the counselor will notify the student and parents/guardians and recommend appropriate remediation. Grades and credits for remedial summer school work will be counted towards high school requirements and in the student's grade point average, but will not replace the original grade. In order to remediate the course, the student must have completed the course he/she failed. Students who complete a course with below a 55 average cannot remediate in summer school. Please refer to "F" and "R" grades under *Marking Scale*.

Marking System

Report cards are issued four times per year on a quarterly basis. Each of the four marking period grades is based upon any combination of classroom work, assignments, and assessments. Midterm and final examination grades, as well as, semester and final averages are also recorded on report cards. Only final averages, along with credits earned, are recorded on end-of-year transcripts. Numerical grades are converted to letter grades on report cards and transcripts.

Marking Scale

98 – 100 = A+	77 – 79 = C+
93 – 97 = A	73 – 76 = C
90 – 92 = A-	70 – 72 = C-
87 – 89 = B+	68 – 69 = D+
83 – 86 = B	65 – 67 = D
80 – 82 = B-	55 – 64 = F*
	Below 55 = R** (Repeat Course)

W+ = Withdrawn/Passing

W- = Withdrawn/Failing

I = Incomplete course: two weeks to complete requirements of course before the grade becomes an F.

*F = 60 hours remedial credit course needed

**R = Must earn 120 hours full *original* credit

Testing Policy and Examinations

Testing is a necessary and important part of a student's secondary education. The main reason for testing is to evaluate how well a student is learning a particular subject. It also provides the teacher with an evaluative instrument with which to monitor and adjust his/her teaching. Examinations take many forms and may vary from department to department and among teachers. It is the student's responsibility to be prepared for examinations, to be present when they are given, and to make them up if they are missed.

For each quarter of the year there is an official testing schedule in which *two* subject areas are designated for each day of the A–F cycle, which is posted in the virtual backpack. If more than two tests are assigned for one particular school day (three for grades 11 or 12), it is the student's responsibility to notify the teacher(s) whose subject(s) is (are) not designated for that day *prior* to the day of the test. Teachers will make alternative testing arrangements. If more than the allowed number of tests are assigned to a particular school day, students should notify the teacher prior to the day of the test so that teachers can make alternative testing arrangements.

Midterm and Final Exams are scheduled at the end of each semester for selected English, social studies, math, science, and world language courses. Students must provide documentation in writing from a parent/guardian if they will miss their regularly scheduled exam. Students who have two or more exams scheduled at the same time should make arrangements with their teachers to take one of the exams during the "conflict exam times" that are built into the schedule. Requests for alternate testing must be made in writing from the parent/guardian to the principal.

No exam will be given early. Any missed exam without proper documentation may result in a score of 0 on the final exam. Any make-up exams must be completed by the first Friday in August. Exams not made up within the window may result in a score of 0 on the final exam.

Honor Roll

Honor Roll is awarded to students who have earned a B- or above in all courses.

Distinguished Honor Roll

Distinguished Honor Roll is awarded to students who have earned an A- or above in all courses.

Class Rank and Grade Point Average (GPA) Determination

The grades and credits earned by a student in a course result in quality points. Quality points for a course are calculated by multiplying the point value for the letter grade earned in the course by the number of credits earned for that course. Each letter grade is worth a certain number of points per credit; these point values are indicated in the table below.

4.33 = A+	3.33 = B+	2.33 = C+	1.33 = D+
4.33 = A+	3.33 = B+	2.33 = C+	1.33 = D+
4.00 = A	3.00 = B	2.00 = C	1.00 = D
3.67 = A-	2.67 = B-	1.67 = C-	0.00 = F/R

Classes that do not earn letter grades (such as Pass/Fail courses) and classes not taken for credit (such as audited courses) do not earn quality points or count toward the total credits earned for GPA calculations.

A student's unweighted Grade Point Average (GPA) is calculated by dividing the total quality points earned by the total credits earned. GPAs are rounded to two decimal places.

A student's weighted Grade Point Average (GPA) is calculated by adding-on additional points to the unweighted GPA for AP and honors courses. An additional 0.15 points per credit is added on for each of the first eight AP courses taken in which a final grade of C or higher has been earned. An additional 0.075 points per credit is added on for each AP course beyond the first eight as well as for each Honors level course. These add-on points, together with the unweighted GPA, comprise a student's weighted GPA. GPAs are rounded to two decimal places. Class Rank is not reported.

SPECIAL EDUCATION

Special Education services and supports are available to eligible students attending Lower Moreland High School. Eligibility for special education is determined by a Multidisciplinary Evaluation (MDE) following receipt of signed consent from parent(s)/guardian(s). The MDE team will conduct an evaluation and determine if a student has a disability and, if so, whether or not they require specially designed instruction, thereby making them eligible for special education support and services. If a student is found eligible for special education services, an Individualized Education Program (IEP) is developed by an IEP team that includes parent(s)/guardian(s).

The District provides special education services for students requiring Learning Support, Emotional Support, Life Skills Support, and Autistic Support, as well as related services for eligible students (i.e. speech/language therapy, physical therapy, occupational therapy, hearing therapy, vision therapy). The IEP team determines how special education services will be provided to the students in the least restrictive setting. These supports are provided at the High School through the Special Education Department.

SPECIAL PROGRAMS

Gifted Education

Gifted students may be challenged through participation in a variety of individual opportunities for enrichment at the high school.

Gifted support services aim to provide:

- Academic planning and career investigation
- Both small group and individualized meetings which focus on goal-setting, prioritizing, interest cultivation, and leadership skills
- Development of individual strengths
- Identification of enrichment opportunities including workshops, seminars, field trips, guest speakers, and classes
- Preparation for post-secondary goals

Advanced Placement

Advanced Placement courses are college-level courses offered through College Board. They require a significant amount of study on the part of the student. Most carry one full academic credit (except for Macroeconomics) and they typically meet a minimum of five class periods each week. In addition, the student is required to spend at least one hour on homework for each hour in the classroom. After the student takes the Advanced Placement examination and receives a passing score (3 or higher on a 1 to 5 scale), he/she may receive credit for that course in college, depending on the requirements of individual colleges and universities.

Prior investigation into the philosophy of the college regarding Advanced Placement is highly recommended since all colleges do not recognize Advanced Placement for college credit. This research is the responsibility of the parents/guardians and students, and the information is available via www.collegeboard.org.

Advanced Placement Standards, Criteria, Procedures

1. All students who enroll in an Advanced Placement course will have the option to take the AP examination. Registration and payment will be due in early November.
2. It is strongly advised that students limit the number of AP courses taken in one year to three (3).
3. Students will be selected for AP courses based upon the following criteria listed below.
4. AP add-on weight applies to the first eight (8) AP courses. Honors weight will be awarded to any add- on AP courses
 - Qualified standardized tests scores
 - Grade of "B" or higher in the most previous course of a similar nature (standards for specific AP courses may be higher)
 - Conversation of interest with your current teacher or department chairperson.
 - Written recommendation from the appropriate teachers in the academic disciplines
 - Use of a writing sample to be read by a selection committee, where applicable
 - Completion of a summer project, where required
 - Use of standardized admission test, if applicable
5. Students who want to further explore the potential for college credit should visit <https://apstudents.collegeboard.org/getting-credit-placement/search-policies> (link can be renamed AP Credit Policy Search)

AP Exam Only Requests

Each year, the AP exam administration is designed to meet the testing needs of students taking AP courses at Lower Moreland High School. Students may request to take an AP exam for college credit. Please note that while all requests will be reviewed, not all will be approved. The following parameters must be met:

1. Requests should be specific to courses open to the student's current grade level. In other words, students should not request an exam in a course that they are likely to take in the future.
2. Testing resources should be available to accommodate the request. This will be determined by school officials. The priority will remain on fulfilling the needs of students testing under the regular exam administration.
3. Students should be able to demonstrate a plan for self-study with materials obtained on their own and at their own expense. Lower Moreland High School resources (including teachers, books, etc.) will not be available to students not currently enrolled in the course(s).
4. Students may not request more than two (2) exams per year.

Please note that under no circumstances would a passing score on an AP exam result in a graduation requirement being waived. Students will not receive credit on their Lower Moreland transcript.

For more information about the potential to earn college credit, please visit [College Board AP Credit Policy Search](#)

Dual Enrollment

Students who participate in Dual Enrollment take courses at both Lower Moreland High School and a college / university at the same time. Most often, this falls under the category of "enrichment." There is no pre-approval required by Lower Moreland High School and no credit will be earned that applies to the Lower Moreland High School transcript. College credit will be earned with passing grades and the course (s) may be noted on the Lower Moreland High School transcript. The grades will not be factored into the student's GPA.

According to Lower Moreland Township School District Board Policy 124, students in grades 11 and 12 may apply for a program under Dual Enrollment that would also enable them to earn Dual Credit. [The application form](#) outlines the full set of criteria.

For the 24-25 school year, Lower Moreland High School is partnered with Gwynedd Mercy University. Students have the opportunity to earn college credits by taking **6674 Personal Finance**.

Virtual High School (VHS)

Virtual High School classes take place entirely over the Internet and allow students to engage with peers from around the globe in subjects they are truly passionate about learning. Students need to be intrinsically motivated, independent learners, and have excellent reading, writing, time management, and basic computer skills in order to succeed in this environment. Through VHS students are able to:

- Take high school classes online
- Enjoy small class sizes and low student to teacher ratios
- Engage in unique collaboration opportunities
- Exchange ideas across cultural and geographic boundaries

- Participate in courses that are highly desired and from a variety of disciplines that are not offered locally

VHS courses are available to all students and are designed to supplement and extend our curricular offerings. All VHS course enrollments must be approved by school counselors and are considered LMTSD courses (however they are designated on transcripts as VHS). Accordingly, they are factored into student GPAs and weighted when appropriate. Please see www.vhslearning.org for more information.

Steps for requesting a VHS course:

1. Complete VHS registration request form (found in the school counseling office or VHS site coordinator's office) and return to the VHS Site Coordinator.
2. A committee made up of school counselors and the VHS Site Coordinator will review registration requests and determine student eligibility.
3. Students will be notified of approved course enrollment through the regular course verification process.

National Honor Society

The George S. Robinson Chapter of the National Honor Society at Lower Moreland High School recognizes and fosters academic achievement, scholarship, character, service, and leadership. Membership conveys both an honor and obligation. Selection to the NHS is open to students at the end of the sophomore and junior years. All students with an unweighted cumulative grade point average of 3.25 or higher or are determined to be in the top two deciles of the class, are eligible for consideration. An eligibility list is posted. Students then complete a form documenting school and community activities. Faculty members provide input regarding character and leadership. A committee of five faculty members and the sponsor(s) of the NHS meet to consider prospective members. Students are then informed of their status regarding admission.

Library Media Center

Lower Moreland High School's Library Media Center is a vital component of our school's total educational program and has become the information and digital resource center for students, both in school and from home, through the Library's home page. The focus of our library program is to help students acquire good information and the visual and digital literacy skills necessary to succeed in the 21st century; a highly competitive, global and digital world. Through the help of librarians and teachers, our students learn to become more proficient in finding, analyzing, synthesizing, and critically evaluating information from the Internet, multimedia resources, primary sources, and print books. The Library's collection consists of approximately 12,000 print books, including eBook versions of reference books, 18 Nooks for fiction and nonfiction eBooks, DVDs, video databases, audio books and music on CDs. We also subscribe to over 30 online curriculum-based databases, which help students find the most reliable, current, and unbiased information for research projects. All databases are accessible from home through a log-in and password. practice tests. Students have access to computers in the Library and Media Lab, with special software that enables them to edit video or use programs like Adobe Design, Photoshop, CS5 and Dreamweaver for web design. They also have access to scanners, networked printers including a color printer, and camcorders for loan. The library also offers a makerspace with 3D printers, and a variety of tools and supplies for participating in the maker community.

ACTIVITIES
Interscholastic Athletics

Boys' Sports

Baseball
Basketball
Cross Country
Football
Golf (boys and girls)
Soccer
Swimming
Tennis
Track
Winter Track
Wrestling

Girls' Sports

Basketball
Competitive Spirit/Cheerleading (boys and girls)
Cross Country
Field Hockey
Lacrosse
Soccer
Softball
Swimming
Tennis
Track
Winter Track
Wrestling

Extra and Co-Curricular Activities

The following is a listing of activities that are currently available:

Academic Decathlon	Future Business Leaders of America	Mock Trial	Co-Curricular:
Armenian Club	German Club	SADD	Band (Concert, Jazz and Pep)
Art Club	GSA	Science Club	Choir (Concert, Honors, Treble, and Bass)
Asian Cultures Club	Interact (Rotary)	Spanish Club	Orchestra & Chamber
Buddy Club	JSU	Stage Crew	
Chess Club	Literary Magazine	Student Council	
Debate	Math Club	Students Against Melanoma	
Drama	Mini-Thon	Tech Crew	
Environmental Club	National Art Honor Society	SkillsUSA (ECAT)	
Film Club	National Honor Society	World Affairs Council	
French Club	News Studio	Yearbook	
	Newspaper-Lion's Roar	Young Medical Enthusiasts	

SCHOOL, COLLEGE, AND COMMUNITY COUNSELING SERVICES

The Lower Moreland High School Counseling Department endorses the District's belief in empowering all learners. As students enter ninth grade, they are assigned to a particular school counselor for the next four years. School counselors, in alignment with the standards of the American School Counselor Association, meet with students individually and collectively both in large groups as well as in the classroom setting. School counselors target the areas of *academic advising, personal and social development* as well as *college and career readiness*. Each school counselor also assumes a variety of specialized roles and responsibilities not limited to but including: test coordination, scholarship and enrichment opportunity organization and liaison to NCAA and Eastern Center for Arts and Technology (ECAT). The 2024-2025 school counselor assignments are as follows:

	Mrs. Jenn Romano	Ms. Maura Quinn	Mr. Kyle Lutteroty
9	A- Har	Has-Maz	Mc-Z
10	A-Ge	Gh-Po	Pr-Z
11	A-Hi	Ho-Op	P-Z
12	A-Gi	Gio-Oq	Or-Z

All counselors are a part of the responsive services team and available to assist individual students in times of need and crisis. Counselors are trained and certified members of SAP. Counselors also serve on the Child Study Team, which meets regularly and is designed to address academic needs of students.

To make an appointment with one of our school or college counselors, students may see the Administrative Assistant in the School Counseling Office or email their counselor directly. The community counseling office is open during school hours, Monday – Friday. Students may access services as needed without an appointment.

COLLEGE COUNSELING AND TECHNOLOGY

The counseling team strongly believes in the importance of integrating technology in the delivery of curricula. All students have access to a personalized **Naviance** account where they can simultaneously develop an electronic portfolio while using the tools to assess their own areas of interest and aptitude. Naviance is often utilized in the college research process and is the means by which most college application materials are sent to colleges and universities. Students also register to meet with visiting college admission representatives through Naviance.

In addition to Naviance, students have access to a grade-specific **Google classroom**. School and college counselors will regularly post information on topics including but not limited to: *college admission testing, test preparation, college research, scholarships and enrichment opportunities*.

The counseling team also utilizes the **Remind** App to share information in a timely and efficient manner. Both students and parents have the opportunity to receive up-to-date information on a device of their choosing.

For more information about school, college, and community counseling programs and resources, as well as, current announcements, please visit our website.

[LMHS Counseling](#)

PART II: COURSE DESCRIPTIONS

ART

The Visual Arts Department offers a variety of courses that may be taken to fulfill Lower Moreland's graduation requirement in the Fine/Practical Arts while enriching and expanding the student's aesthetic horizons and creative talents. Our art and design courses engage students in authentic opportunities that require creativity, collaboration, communication and critical thinking. Students employ design thinking, problem solving and risk-taking through learning processes that require the exploration of multiple solutions. For students contemplating studying art in college, or considering careers in art or art-related professions, the department offers a more intensive program that includes Honors and Advanced Placement courses. In the last decade opportunities for careers in the visual arts have expanded enormously. If you have an interest in the arts, please talk to the art teachers or guidance counselors about the best courses to take to be prepared for the future.

7677 CREATIVITY AND COLLABORATION IN THE ARTS **One Semester .5 Credit**

Team taught, this course offers all students, regardless of talent or ability, the opportunity to engage in critical thinking and creative output in the arts. Students will identify their creative identity and collaborate on projects examining expression, impact, storytelling and reaction. Through learner-centered pedagogies and project based learning design, students engage in both process and product to develop important 21st century skills that can better prepare them for careers in creative fields and opportunities beyond the classroom. The course culminates in a show at the end of each semester. Grades 9, 10, 11, 12. This course is required for graduation.

7126 2D ART & DESIGN **One Semester .5 Credit**

This course is an introduction to the basic skills and concepts used in drawing, painting and two-dimensional design. Observational drawing will be emphasized in this course. Students will be introduced to skills and concepts such as perspective, portrait and figure, and composition. Students will also have the opportunity to explore various drawing and painting media such as charcoal, pastel, watercolor and acrylic, as well as collage, printmaking, and mixed media. Creative thinking, art history and aesthetics will also be explored. Grades 9, 10, 11, 12.

7127 2D&3D STUDIO ART & DESIGN-INTERMEDIATE **One Semester .5 Credit**

This course is an expansion of art and design skills taught in 2D or 3D foundations. Content will be theme based for students to develop autonomy and divergent thinking. Materials will be choice-based and open to the students' interests. Creative thinking, technical skills, compositional skills, media exploration, art history and aesthetics will be further developed in this course. Prerequisite: B or higher in course #7126 or #7326. **This course can be repeated for multiple semesters for additional credit.** Grades 9, 10, 11, 12.

7326 3D ART & DESIGN **One Semester .5 Credit**

This introductory course provides a survey of basic knowledge and skills used to create three-dimensional works of art and design. Students will create forms using materials such as paper, cardboard, wood, wire, textiles, fibers, found objects, and 3D printing. Students will explore traditional expression through sculpture, crafts, and design. Real world connections such as fashion, architecture, and interior design as well as problem-based design challenges

will be included. Craftsmanship, creativity, aesthetics and art history are integral components of this course. Grades 9, 10, 11, 12.

7426 GRAPHIC DESIGN

One Semester .5 Credit

Graphic Design is the visual communication of information and ideas using digital imagery, text and media. Graphic designers develop design solutions for logo design, package design, advertisements, branding, motion graphics and user interface (UI) design. Students will be challenged to creatively solve design problems using a range of new media and Adobe Creative Cloud applications. This semester course, designed for the beginner student, will foster 21st Century creativity, communication and critical thinking skills. Grades 9, 10, 11, 12

7427 DIGITAL ARTS

One Semester.5 Credit

Digital Arts is an introductory studio course that will explore a variety of digital media and tools used by artists and designers to create expressive pieces of digital art. Topics of exploration may include image editing & manipulation, digital drawing & illustration, animation and 3D printing. Students will be introduced to a range of software applications and digital tools to cultivate their creative identity and digital art voice that is valuable in today's multimedia world. This semester course, designed for the beginner student, will foster 21st Century creativity, communication and critical thinking skills. Grades 9, 10, 11, 12.

7226 SMARTPHONE PHOTOGRAPHY

One Semester .5 Credit

Smartphone Photography focuses on the fundamentals of photography, composition, and image editing using smartphone and Adobe Creative Cloud applications. They will hone their visual literacy skills to become effective creators and consumers of digital images. Photography is an important foundation medium that supports digital art careers and 21st century learning and literacy skills. This is a semester course designed for the beginning photographer. Students will need a cell phone camera (iPhone or Android) to participate in this course. Grades 9, 10, 11, 12.

7227 DIGITAL PHOTOGRAPHY

One Semester .5 Credit

Digital Photography explores the creative and technical possibilities of photography using a digital SLR (DSLR) or mirrorless camera. Students will learn about shutter speed, aperture, ISO, exposure, composition and studio lighting to create dynamic visual imagery. Adobe Creative Cloud applications, industry standard software, will be used to further creatively manipulate, process, and share their photographic media. This course combines a hands-on opportunity to use professional equipment along with the necessary digital tools to effectively share their creative content. Photography is an important foundation medium that supports digital art careers and 21st century learning and literacy skills. This is a semester course designed for the beginning photographer. School-owned cameras are available for student use. Grades 9, 10, 11, 12.

7327 CERAMICS

One Semester .5 Credit

This course is designed to introduce the student to clay hand-building, the pottery wheel, and surface decorating techniques. Both functional and sculptural uses of clay are explored with an emphasis on effort and project craftsmanship. The origins of the ceramic medium and key artists will be introduced. Grades 9, 10, 11, 12.

7328 CERAMICS STUDIO-INTERMEDIATE

One Semester .5 Credit

This course is an extension of the skills and techniques taught in Intro to Ceramics, to create functional and sculptural ceramic artwork. Both hand-building and pottery wheel techniques will be investigated more deeply. Students will continue to develop their knowledge of craftsmanship and creativity, and will have more flexibility and choice as their skills increase. Prerequisite: B or higher in course #7327. **This course can be repeated for multiple semesters for additional credit.** Grades 9, 10, 11, 12.

HONORS Level Art Courses:

Students can be recommended to an Honors level Art course once they have successfully completed a prior intro level art course and have recommendation from the teacher. The Honors student should have a high level of creativity and independence to develop a body of work that demonstrates advanced creative, conceptual and technical problem solving skills. This course will assist students in developing an art portfolio for either admission to college level art programs or as preparation for the AP Studio Art course. Grades 10, 11, 12.

2D ART & DESIGN – HONORS

Honors 2D Art & Design is For the student who wishes to concentrate on drawing, painting and 2D design on an advanced level.

7121 Full Year 1 Credit

7125 One Semester .5 Credit

DIGITAL MEDIA - HONORS

Honors Digital Media is for the student who would like to explore photography, digital arts, or graphic design on an advanced level.

7521 Full Year 1 Credit

7525 One Semester .5 Credit

CERAMICS – HONORS

Honors Ceramics is for the experienced student who wishes to further their work in clay or other 3D media on a more advanced and challenging level.

7321 Full Year 1 Credit

7325 One Semester .5 Credit

AP Level Art Courses:

AP Art students will create a portfolio of work that demonstrates inquiry and development of art materials, processes, and ideas. Portfolios include works of art and design, process documentation, and written information about the work presented. At the conclusion of the course, students will submit portfolios for evaluation based on specific criteria, which include skillful synthesis of materials, processes, and ideas and sustained investigation through practice, experimentation, and revision. Students will submit digital images and written information about your work to the College Board for the portfolio review exam. A summer assignment and work outside of class time may be required for this demanding college level art course. Prerequisite: Permission from the instructor and demonstration of materials experience. *Strongly encouraged to take beginning and intermediate level studio art courses prior to consideration.* Grades 10, 11, 12.

7420 AP DIGITAL MEDIA**Full Year 1 Credit**

For the advanced student working in photography, digital arts, and graphic design. Students will submit a 2D Art & Design Portfolio to the College Board.

7120 AP DRAWING**Full Year 1 Credit**

For the advanced student working in drawing (analog or digital), painting, printmaking, and mixed-media work. Students will submit a Drawing Portfolio to the College Board.

7140 AP 2D ART & DESIGN**Full Year 1 Credit**

For the advanced student working in mixed media, illustration, painting, printmaking, collage, fashion design, fabric design, and/or weaving. Students will submit a 2D Art & Design Portfolio to the College Board.

7320 AP 3D ART & DESIGN**Full Year 1 Credit**

For the advanced student working 3D materials and processes such as ceramics, sculpture, architecture modeling, installation, etc. Students will submit a 3D Art & Design Portfolio to College Board.

BUSINESS EDUCATION**6675 ACCOUNTING I****Full Year 1 Credit**

This full year course is designed to provide students with a strong foundation in accounting concepts for students considering careers in Business. These concepts prepare students to see first-hand how businesses plan for and evaluate their operating, financial, and investing decisions and how accounting systems gather and provide data to internal and external decision makers. Students will be able to keep systematic records, analyze, record and interpret business transactions through simulations, practice sets, and case studies. Students will learn how to prepare financial statements both manually and on a computerized program. Grades 10, 11, 12.

6679 SMALL BUSINESS MARKETING & ENTREPRENEURSHIP **One Semester .5 Credit**

This semester course will provide an opportunity for students who are interested in developing a new small business or taking their existing business to the next level. Whether you are a babysitter, DJ, influencer, landscaper, budding real estate mogul, this is the class for you. This class will provide instruction on how to keep your business legal, and grow it from a seed to a whole forest using case studies in business development and marketing. Students are expected to be willing to do group work, and must be able to manage basic data management, and they must be equipped with algebra skills that are incumbent of a business owner. Grades 10,11,12.

6674 PERSONAL FINANCE**One Semester .5 Credit**

This course is essential for students to make the most of their money today, as well as looking to the future. In this course students acquire the necessary skills to promote sound financial habits and create an awareness of the steps necessary to secure their financial futures. Careers, budgeting, money management, taxes, credit, insurance and investing for retirement are some of the major topics of this class. Students will participate in on-line learning activities as well as developing a strategy for their own financial plan. This course is required for graduation. Dual Credit is possible through Gwynedd Mercy University. Information about registration at Gwynedd Mercy University will be shared by the teacher of course. Grades 10, 11, 12.

COMPUTERS/TECHNOLOGY

6672 DESIGN LAB

One Semester .5 Credit

This project based course will allow students to follow the design process to build the best user experience for all web users. In this course, students will learn how to maximize the experience of all with web users, define shortcomings, design solutions, create prototypes of web interfaces, then test and iterate on their designs. This course would be enjoyed by students who want to build accessible apps and websites, are interested in how online business/retail works, and want to employ their enjoyment of graphic design. The students will leave this course with workable prototypes that they can use to build their portfolio with. Grades 9,10,11,12.

6673 APPLIED DIGITAL SKILLS

One Semester .5 Credit

Embark on a journey of digital empowerment with this course. The course is focused on harnessing the versatile tools within Google Suite. In this dynamic and hands-on course, students will acquire essential skills to be competitive in the modern world. Students will improve their communication, collaboration, and organization using Google Tools and more. Applied Digital Skills is designed to equip Lower Moreland students with the technological competence needed to excel in their professional pursuits, foster effective collaboration, and prepare for the evolving digital landscape they will navigate in the future. The course encompasses practical applications, interactive lessons, and collaborative projects to ensure students are not only proficient users of Google Suite but also savvy digital citizens. Students who take this course will be well prepared to earn google certifications. Grades 9,10,11,12.

6105 BROADCAST JOURNALISM & PRODUCTION

One Semester .5 Credit

This course introduces aspiring journalists and news producers to the basic tools, techniques and vocabulary of broadcast journalism. The focus is on broadcast news, writing, production, and reporting. Students will participate in group and individual assignments. Grades 9, 10, 11, 12.

6106 VIDEO PRODUCTION

One Semester .5 Credit

This course provides an introduction to the equipment and techniques of video studio production from planning through scripting to videotaping to editing. A series of individual and group exercises and projects provide a foundation for creative expression and various types of productions. Grades 9, 10, 11, 12.

6107 DOCUMENTARY FILMMAKING

One Semester .5 Credit

The purpose of this class is for students to learn the process of planning, writing, filming, and editing a documentary film while displaying an understanding of current and past significant historical events. Students will be given parameters from which to work that will include options for each film made. Students will be utilizing the new technology suit to create, film, and edit the documentaries. The class will be an elective and will be designed for yet not limited to gifted and academically talented students. Grades 9, 10, 11, 12.

ENGLISH

The goals of the secondary English curriculum are to provide students with both mechanical skills and humanistic awareness to gain competency in reading, writing, speaking, and listening so that they may better understand themselves and their world. Students enhance these competencies through guided use of electronic research and modern technologies as a facilitator for better reading and writing.

1111 WORLD LITERATURE - HONORS

1112 WORLD LITERATURE– COLLEGE PREP

Full Year 1 Credit

World Literature provides students with opportunities to explore and respond to multiple literary genres from various global, historical, and social contexts. This class explores overarching ideas and concepts that transcend geographical boundaries and cultural differences. This approach allows us to delve deeper into the universal human experiences, themes and issues that connect us all as human beings. Students work to develop writing, speaking, independent reading, and computer literacy skills. Instruction in each standards-based unit of study integrates reading, writing, speaking and listening, and language study.

The honors level course differs from the college prep level in frequency and sophistication of writing assignments, pacing of the lessons and number of reading selections. Grade 9.

1113 WORLD LITERATURE

Full Year 1 Credit

World Literature provides students with opportunities to explore and respond to multiple literary genres from various global, historical, and social contexts. Fundamental to this course is a strong emphasis on skill building. Teachers will emphasize individualization in addressing the essential skills of reading, writing, speaking, and listening for each student. Textbooks, novels, short stories, poems, films, recordings, and field trips are used in a multi-sensory approach to help students bridge the gap between subject areas and examine the components that combine to form our history and culture. Works have been selected that are both representative of the time periods and appropriate to the reading levels of the students. Students will develop writing, vocabulary, grammar, reading comprehension, research, computer, and analytical skills. Students are active learners, making extensive use of role-playing, simulations and presentations. Serious attention is also given to writing assignments which are process oriented, and varied. Grade 9.

1137 CRITICAL WRITING

One Semester .5 Credit

This required semester-long course, which will be scheduled for all freshmen if possible, has been designed to develop and refine the critical language arts skills of reading and writing. Throughout the course, the focus will be on the development of the advanced reading and writing skills that are essential to success in high school and beyond. This course addresses all aspects of the writing process, vocabulary development, and readings from a variety of genres and subjects. Writing assignments stem from a variety of sources including personal experience, technical topics, and responses to readings; and foster each of the three main types of writing: narrative, informational, and persuasive. This course does not fulfill the graduation requirement for English credits.

1121 AMERICAN LITERATURE - HONORS**1122 AMERICAN LITERATURE - COLLEGE PREP****Full Year 1 Credit**

This class examines 20th and 21st century American literature from diverse genres and authors. This course emphasizes skills and strategies for independent reading, analysis, and writing about works of American literature with a focus on how that literature reflects social, political, and moral issues in the United States. Texts will be selected from among a diverse group of authors for what they reflect about the evolving American experience and character. Students are provided with multiple opportunities to articulate their own ideas as well as to question, interpret, analyze, extend, and evaluate others' ideas. Instruction in each standards-based unit of study integrates reading, writing, speaking and listening, and language study.

The components of the honors level course include pre-Advanced Placement strategies and skills as they relate to interpreting literary and primary source materials, analyzing conflicting interpretations and engaging in critical writing. The honors level course also differs from the college prep level in the frequency and sophistication of writing assignments, pacing of the lessons and reading selections. Grade 10.

1123 AMERICAN LITERATURE**Full Year 1 Credit**

This class examines 20th and 21st century American literature from diverse genres and authors. Fundamental to this course is a strong emphasis on skill building. Teachers will emphasize individualization in addressing the essential skills of reading, writing, speaking, and listening for each student. Works have been selected that are both representative of the time periods and appropriate to the reading levels of the students. Students develop writing, vocabulary, grammar, reading comprehension, research, computer, and analytical skills. Students are active learners, making extensive use of role-playing, simulations and presentations. Serious attention is also given to writing assignments which are process oriented, varied, and designed to build upon work begun in World Literature.

1270 AP ENGLISH LITERATURE & COMPOSITION**Full Year 1 Credit**

Advanced Placement English Literature and Composition engages students in the deliberate reading and critical analysis of literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and stylistic appreciation. Students will examine structure, style, and themes, as well as, the use of figurative language and inferences leading to interpretive conclusions about a work's meaning. Writing is an integral part of the course, and students focus on the critical analysis of literature through expository, analytical, and argumentative essays. The goal of writing in AP is to increase a student's ability to explain clearly, cogently, and even elegantly, what they understand about literary works and why they interpret them as they do. This course is taught at the college level and is designed to give students a critical and scholarly perspective in the analysis of challenging literature. Advanced Placement English Literature examines concurrent themes in a selection of American, British, and European literature as determined by the AP guidelines. Timed in-class writing is a prominent but not controlling aspect of the class. Students must meet the following requirements for selection: a B+ or higher average in American Studies- Honors or recommendation of the American Studies- College Prep English teacher.

1151 ENGLISH 11 - HONORS**1152 ENGLISH 11 – COLLEGE PREP****Full Year 1 Credit**

English in the junior year will explore major genres of literature including: drama, the novel, short fiction, poetry, and non-fiction. In the study of each, key concepts introduced in World and American Studies, such as common themes, components of characterization and symbol, narrative techniques, as well as the conventions of the individual literary forms will be reinforced. The courses are differentiated at times by the works studied, but more precisely by the pace, depth, and manner of presentation. Writing is a major component of this course. Students will receive instruction and practice in the three major modes of writing: narrative, informational, and persuasive. The process approach to writing will, likewise, be stressed to include restriction of topic, outlining, and types of essay development. Students will prepare thesis statements, try out various writing styles, and explore different means of supporting the thesis statement. Research skills are also developed. Students continue their vocabulary and grammar studies to master the language arts standards appropriate at the eleventh grade level. Speaking and study skills, as well as the use of authentic assessments, are important components of this course for all juniors.

1153 ENGLISH 11**Full Year 1 Credit**

This course primarily deals with a survey of various literary genres. Students are exposed to short stories, poems, novels, and plays. Special emphasis is placed upon the many literary devices and themes employed by the authors studied in the course. In addition to literary studies, the course emphasizes the improvement of writing skills. The written composition component of the course stresses the development and organization of descriptive, narrative and expository paragraphs and essays. Special attention is also given to the elimination of common composition errors such as sentence fragments, run-ons, misspellings, capitalization, and punctuation mistakes. Vocabulary units are also studied on a regular basis in an effort to enhance the quality of diction in student compositions.

1280 AP ENGLISH LANGUAGE & COMPOSITION**Full Year 1 Credit**

The AP course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience's expectations, and subjects as well as the way generic conventions and the resources of language contribute to effectiveness in writing. The course allows students to write in a variety of forms—narrative, exploratory, expository, and argumentative - and on a variety of subjects from personal experiences to public policies, from imaginative literature to popular culture. But the overarching purpose is to enable students to write effectively and confidently in their college courses across the curriculum and in their professional and personal lives. Grade 12. Students must meet the following requirements for selection: a prerequisite of a B or higher in Advanced Placement Literature and Composition or a B+ or higher average in English 11 Honors, and/or recommendation of an 11th grade English teacher.

1161 ENGLISH 12 - HONORS**1162 ENGLISH 12 – COLLEGE PREP****Full Year 1 Credit**

The curricula for English 1161 and 1162 are basically the same in scope; the major differences in the courses are in the pace, depth, manner of presentation and amount of required materials. Writing of the research paper and of the critical essay is a major portion of this course. Students will develop and refine their skills in finding and organizing information and in the writing of a

major research paper. Students will be instructed in formats and techniques of critical writing as they apply to literary genres. Literature will include a chronological study of British writers' works from *Beowulf* to those of the nineteenth and twentieth centuries. Students will examine representative Shakespearean plays, along with Romantic, Victorian, and modern poetry and prose. Writers whose works will be studied include Wordsworth, Coleridge, Byron, Keats, Shelley, Dickens, Tennyson, Browning, and others. Students will examine the history of these periods as it affects the literature.

Students entering English 1161 are expected to have an advanced understanding of the fundamentals of writing and the writing process. Students will continue their vocabulary study, and usage problems will be addressed as they present themselves in students' writing. Students are expected to work more independently and required to read additional pieces of literature to augment their understanding and appreciation of British literature.

1163 ENGLISH 12

Full Year 1 Credit

This course is specifically designed for seniors who may need help in making a smooth transition from high school to post-secondary level placement. The ultimate goal of this course is to provide the students with the full realm of possibilities which await them upon graduation from high school and to teach the skills necessary for success in their respective fields of interest. While the core curriculum includes the traditional literary study of short stories, novels and poetry, special emphasis is also placed upon developing the requisite writing skills one needs to achieve success in college and the business world. In addition to the core curriculum, specific learning strategies are taught in order to aid students in the post-secondary classroom. These strategies specifically touch upon reading comprehension, vocabulary, test taking and note taking skills. The curriculum also includes occasional field trips to colleges and technical schools, as well as the scheduling of guest speakers from a variety of professions.

1385 BEYOND THE SCREEN: A FILM APPRECIATION COURSE **One Semester .5 Credit**

This one semester course presents the development of the cinema from its inception to today's feature films. Units consist of technical study of film-making, the use of the camera, lighting, and sound, comparison of the narrative as well as the stylistic messages of the film, animation, special effects, and the study of these elements as they are brought together in representative films. Films will be examined for their contributions to their genres, and students will evaluate them both orally and in writing. Students will be required to select one film from a list of recommended films and write a critical evaluation of it for the class. This course does not fulfill the graduation requirement for English credits. Grades 9, 10, 11, 12.

1245 CREATIVE WRITING

One Semester .5 Credit

This semester-long course has been designed to develop the skills of writing creatively for a variety of audiences and purposes. This course will be conducted in a workshop format where students write original pieces, participate in class critiques, and revise their work together. The expectation is that students will gain confidence in their ability to write expressively and will benefit from the input of others. Throughout the semester, students will experiment with various forms of writing, including the use of wikis, blogs, and other digital media. Students will be expected to create portfolios emphasizing their growth as authors. The major genres of creative writing featured in this curriculum will be poetry, short fiction, play writing, and an independent project that is student designed. Students must meet the following requirements: C or higher in previous English courses or recommendation from an English teacher. This course does not fulfill the graduation requirement for English credits. Grades 9, 10, 11, 12.

1345 CREATIVE WRITING II**One Semester .5 Credit**

This semester-long course is intended for those students who have already taken Creative Writing I and wish to further develop the skills of writing creatively for a variety of audiences and purposes. This course will be conducted in a workshop format where students write original pieces, participate in class critiques, and revise their work together. Instruction will be differentiated to address the unique interests and technical level of more advanced writers. While all students will receive exposure to the major genres of creative writing (poetry, short fiction, play writing), students enrolled in Creative Writing II will have more choice and challenge in their assignments, with emphasis on independent development of ideas, writing for publication, and advanced critique skills. Students must meet the following requirements: C or higher in Creative Writing I. This course does not fulfill the graduation requirement for English credits. Grades 10, 11, 12.

GIFTED AND TALENTED**7902 GIFTED SEMINAR****One Semester .5 Credit**

The course introduces students to the impact that art, literature, music, philosophy, history and ethics have on our world. Crucial themes of continuing importance from different perspectives, such as justice, leadership, tragedy, and the concept of the self will be studied. Emphasis is placed on critical thinking, creativity, innovation, social and emotional health, and the use of technology. Students explore aspects of human nature, human roles, behavior, and human ideals. Other areas of focus include community building, collaboration, creation and practice of effective habits as well as other delivery of services as deemed appropriate by the case manager. Students are eligible for 1 college credit from the University of Pittsburgh for successful completion of this course. **Gifted Seminar is a one semester elective that meets the Creativity and Collaboration in the Arts graduation requirement and is designed for students identified as gifted. Prerequisite: GIEP**

7903 RESEARCH DESIGN AND EVALUATION**One Semester .5 Credit**

The objective of this course is to teach students how to use topics in probability and statistics to critically analyze and conduct scientific research. The focus will be on learning how to apply scientific methods. Students produce two projects; one that focuses on statistics and expected value, the other project will be to create a Research Proposal, similar to those used in college that are based on peer reviewed data with an emphasis on ensuring reliability and validity. Students will also examine methods of data collection and analysis: levels of measurement, graphic presentation, descriptive statistics and some multivariable statistical techniques. Prerequisite: GIEP.

7912 PHILOSOPHY/HUMANITIES II**One Semester .5 Credit**

Philosophy, literally "love of wisdom," is a discipline exploring basic questions about human beings, what we know and can know, and what can be said to exist. Philosophy strives for understanding of many ideas and themes, including the existence of God, the nature of reality, what knowledge is, and what makes actions right or wrong. This course will require students to read and think critically and argue logically. Students will evaluate and understand the positions of others and defend their own positions through discussion and writing. The course also surveys the history of humankind from the evolution of archaic human species in the Stone Age through the 21st century. Further, the course takes an interactive, multi-media approach to

learning through the use of films, the internet, podcasts, and other audio and visual sources with the goal of stimulating dialogue through philosophical investigation. This course will require an open mind to entertain ideas contrary to your own. This course is asynchronous as it is offered online only. Prerequisite: this course is designed for 12th grade Gifted Students.

Prerequisite: GIEP; not having taken Humanities or Creativity and Collaboration in the Arts.

INDEPENDENT STUDY

7923 Full Year 1 Credit

7923-5 One Semester .5 Credit

An independent study program is available for gifted students who wish to extend their learning outside of regularly offered courses. Independent study courses involve academic work chosen or designed by the student with the approval of a mentor teacher, under the gifted case manager's supervision. Students will design an independent study in which they pursue the investigation of a self-selected focus. The independent study must emphasize the development of higher level thinking skills of analysis, synthesis and evaluation and identify the content standards related to the independent study and product.

Proposals for independent study must be submitted to the gifted case-manager.

Applications can be obtained in the Gifted Resource Room. All applications must include specific, measurable, objectives and standards with a specific timeline for work completion. A committee consisting of an administrator, counselor, case manager and teacher will review all proposals for approval. If approved, this committee will decide on the credit value. The student assumes full responsibility for completing academic coursework as proposed and obtaining resources needed. Students are also responsible for creating a portfolio of work. Meetings between the student and gifted case manager will take place regularly. Once approved, students are committed to completion of the course and will receive a final grade of pass/fail. Withdrawal and Incomplete grades will be issued in the same manner as all other coursework. The role of the gifted case-manager will be to monitor progress toward course completion, be available as a resource to the student, grade progress on a quarterly basis and complete a final evaluation upon completion of the coursework which will include a final grade.

Prerequisite: as deemed a need by the GIEP team, with committee approval.

EDUCATIONAL FIELD EXPERIENCE

7924 Full Year 1 Credit

7924-5 One Semester .5 Credit

The educational field experience is an unpaid internship that provides a career exploration opportunity for students who wish to verify career choice. It is an excellent way to determine if a career pathway is the best option to pursue before beginning postsecondary education. The student is responsible for internship acquisition. The case manager supervises, coaches, and mentors students throughout the internship experience. The case manager also collaborates with the community-mentor at the internship site. All student interns meet bi-weekly with their case-manager to share experiences and to participate in topical discussions relevant to the internship experience. Each intern will maintain a reflection journal and complete a culminating project.

*Students must provide their own transportation to and from their internship.

*To participate in the Internship experience students **MUST MEET THE FOLLOWING CRITERIA:**

1. Strong attendance record;

2. Exemplary behavior record; and
3. Recommendation from the school counselor.

Prerequisite: Grades 11 & 12 and GIEP; connections with an educational field experience site prior to enrollment is strongly recommended.

INTERVENTION

9093 STUDENT SUCCESS SEMINAR

One Semester 0.5 Credit

This course offers a student centered intervention program to provide individual and small group instruction. The program is aligned to research based interventions that will emphasize strengthening organizational and time management skills, developing self-advocacy habits while also cultivating executive functioning skills, learning and study skills, note taking and critical thinking techniques. Support will be provided with the completion of academic tasks assigned to their general education classes as well as reinforcing competencies in advancing social and emotional development. Data is collected to evaluate instruction and monitor student progress. Students participating in the *Student Success Seminar* will expand upon these skills by creating realistic and attainable goals with which they hope to achieve throughout their academic experience. In order to ensure preparation for college or employment students who engage in the student success seminar will be taught leadership skill attainment. Students must be recommended through the counseling department for admittance to this course. This course is graded as pass/fail. 9, 10, 11, 12.

MATHEMATICS

The mathematics department offers a variety of courses on several different ability levels to meet the needs of all students. Students in all classes will use technology to better understand mathematical concepts and application to real world events.

A strong understanding of mathematical principles and problem-solving strategies is vitally important for all students. Students need to exhibit computational competence and use the skills and concepts of mathematics as tools to understand and solve problems in order to be successful in our increasingly technological society.

All graduates of Lower Moreland will need to meet the mathematics standards set forth by the state. All courses, regardless of the level, have been designed so that all mathematics standards can be met. Mathematics courses offered in grades 9–12 are described below.

3132 ALGEBRA I - COLLEGE PREP

Full Year 1 Credit

This course serves as a foundation for the study of higher levels of mathematics. Real world applications and modeling of problems are an integral part of this program. Emphasis is placed on data analysis, data collection, and the use of technology to help visualize the development of mathematical concepts. Students will work with variables to simplify expressions, solve equations, factor polynomials, and solve linear systems. The use of graphing technology is a major element of this course. Grade 9.

3133 ALGEBRA 1**Full Year 1 Credit**

This course is designed to emphasize the study of multiple representations of linear and nonlinear functions. It includes mathematical concepts for working with rational numbers, various expressions, analyzing and solving linear equations & inequalities, data analysis, probability, statistics, and polynomials. Students will use hands-on materials and calculators when needed in solving problems where the algebra concepts are applied. Grade 9.

3134 ALGEBRA**Full Year 1 Credit**

This course will introduce students to variables, algebraic expressions, equations, inequalities, functions, and all their multiple representations. In this class, students will develop the ability to explore and solve real-world application problems, demonstrate the appropriate use of graphing calculators, and communicate mathematical ideas clearly. The goal of this course will be to lay the foundation for mathematical literacy that will help students be successful in subsequent courses in mathematics.

3231 GEOMETRY – HONORS**Full Year 1 Credit**

This course integrates geometric relationships through visualization, problem solving, and application. The logical and deductive thinking skills developed enable students to extend their ability to draw appropriate mathematical conclusions. Reading mathematics is a consistent strand throughout the course. Graphing technology and dynamic geometry software is used to enrich the students' understanding of geometry. Coordinate geometry is integrated throughout the program. Prerequisite: B or higher in Algebra I-Honors or teacher recommendation. Grade 9.

3242 GEOMETRY – COLLEGE PREP**Full Year 1 Credit**

This course is the study of geometry and all of its elements. Emphasis is placed on spatial visualization while building a knowledge of the relationships between the geometric elements. Students use inductive and deductive thinking and apply logical reasoning when studying lines, angles, planes, triangles, polygons, circles, and spheres. Graphing technology and dynamic geometry software are used to enrich the students' understanding and appreciation of geometry. Coordinate geometry is integrated throughout the program. Prerequisites: C or higher in Algebra 3132 or teacher recommendation. Grades 9, 10.

3243 GEOMETRY**Full Year 1 Credit**

This course is the study of geometry and all of its elements. Emphasis is placed on spatial visualization and development of logical thinking skills through the interrelationship of ideas. Dynamic geometry software is used to enrich the students' appreciation of geometry. Coordinate geometry is integrated throughout the program. All the topics remain the same as geometry 3242; however, less emphasis is placed on proof development and examining rigorous problems. Prerequisite: C- or higher in Algebra or teacher recommendation. Grades 9, 10.

3244 GEOMETRY**Full Year 1 Credit**

This course is the study of practical and applied geometry with a minimal emphasis on proofs and abstractions. Students are introduced to the roles played by undefined terms, definitions, postulates, and theorems in the deductive reasoning process. Dynamic geometry software is used to explore geometric relationships. Prerequisites: completion of Algebra I. Grades 9, 10.

3151 ALGEBRA II – HONORS**Full Year 1 Credit**

This course is a continuation of the first course in Algebra and includes the study of quadratics, compound inequalities, complex numbers, rational functions, exponential, and logarithmic

functions. Students will also be exposed to probability and statistics as well as sequences. A strong development of concepts both in theory and application is emphasized throughout the year. The use of graphing technology is a major component of this course. Prerequisite: B or higher in Geometry 3231 or teacher recommendation. Grades 9, 10.

3152 ALGEBRA II – COLLEGE PREP

Full Year 1 Credit

This course is a continuation of first-year Algebra with an emphasis on the fundamental operations. Added experience is gained in factoring, and new areas such as properties of functions, quadratic equations, complex numbers, graphing transformations of functions, rational expressions and exponential and logarithmic functions are introduced. Problem solving and real-world applications are used to demonstrate the value and use of algebra. Graphing technology is used for topics throughout the course. Prerequisite: C or higher in Geometry 3242 or teacher recommendation. Grades 10, 11, 12.

3153 ALGEBRA II

Full Year 1 Credit

This course is a continuation of first-year Algebra. All the topics and concepts remain the same as 3152 but less emphasis is placed on the theoretical underpinnings of Algebra. Real-world applications show the value of algebra. Problem solving is a continual process in this program. Graphing technology will be used for topics throughout the course. Prerequisite: C- or higher in Geometry 3243 or teacher recommendation. Grades 11, 12.

3154 ALGEBRA II

Full Year 1 Credit

This course is designed for those students who find mathematics challenging. Emphasis is placed on strengthening fundamentals of Algebra and demonstrating growth in various new topics such as linear and quadratic equations and complex numbers. Problem solving is a major component of this program. Students who successfully complete this course are prepared to progress to concepts in Functions and Trigonometry. Graphing technology will be used for topics throughout the course. Prerequisite: completion of Geometry 3244 or teacher recommendation. Grades 11, 12.

3351 PRE-CALCULUS – HONORS

Full Year 1 Credit

This course integrates and develops topics in algebra, geometry, and trigonometry necessary for a firm foundation in the study of calculus. The course stresses both theory and application, as students are challenged with problems varying in scope and level of difficulty. Units covered include; Trigonometry (Triangular and Circular); Conic Sections; Polar Functions; Parametric Equations; Rational Functions with Limits and Continuity and a heavy emphasis on the Algebra II skills needed to be successful in an AP Level Calculus course.– While graphing and computer technology is an integral component of this course, there is an emphasis on solving without the use of technology to develop the conceptual skills needed for future higher level math courses. Prerequisite: B or higher on tests and quizzes in Algebra II Honors 3141 or teacher recommendation. Grade 10, 11.

3352 PRE-CALCULUS– COLLEGE PREP

Full Year 1 Credit

This course is a study of circular and trigonometric functions, coordinate geometry, polynomial functions, exponential and logarithmic functions and conic sections. It provides a solid preparation for the student who intends to continue the study of mathematics. It is also helpful to the student who, although not wishing to continue a formal mathematics program, desires exposure to some important topics in higher mathematics. Graphing and computer technology is an integral component of this course. Prerequisite: C or higher in Algebra II 3152 or teacher recommendation. Grades 11, 12.

3363 FUNCTIONS AND TRIGONOMETRY**Full Year 1 Credit**

This course is a study of advanced algebra topics, as well as basic circular and trigonometric functions. Review of linear functions and relationships will also be integrated into the course. The topics are developed through visualization, with emphasis on the relationships between these concepts. Graphing technology is an integral component of this course. Students are provided preparation for the continued study of mathematics. Prerequisite: C- or higher in Algebra 3153 or teacher recommendation. Grades 11, 12.

3364 FUNCTIONS & TRIGONOMETRY**Full Year 1 Credit**

This course offers a continuation of concepts in Algebra II and a comprehensive coverage of trigonometry. Emphasis is placed on strengthening algebraic concepts and using these skills in the development of trigonometry. Prerequisite: completion of Algebra II 3154 or teacher recommendation. Grades 11, 12.

3461 CALCULUS – HONORS**Full Year 1 Credit**

Students will study differential and integral calculus with a balance between theory and practical application. This course is for students who have completed Math 3351 or 3362 with a grade of C or higher or teacher recommendation. A sound background in pre-calculus is essential for the development of topics in calculus. Prerequisite: 3351 or 3362. Grade 12.

3472 CALCULUS – COLLEGE PREP**Full Year 1 Credit**

The focus of this course is to introduce students to calculus to the primary concepts covered in a traditional college calculus course with an emphasis on applications rather than theory. This course will include the following calculus concepts: functions, limits, derivatives and integrals. There will be an in depth review of precalculus concepts. The topics will include algebraic manipulations of rational equations along with a review of the following; quadratic, exponential and logarithmic functions. Prerequisite: 3362 with a B or higher or a challenge exam that demonstrates proficiency in the topics covered in 3362. Grades 11, 12.

3460 AP CALCULUS (AB)**Full Year 1 Credit**

AP Calculus AB is a standard college-level course in differential and integral calculus, equivalent to one semester of calculus at most universities. Topics include a review of functions, an introduction to limits and continuity, derivatives and their applications, integrals and their applications, antiderivatives and the Fundamental Theorem of Calculus, and an introduction to differential equations using slope fields. There is an emphasis on conceptual understanding and working with functions represented graphically, numerically, analytically, and verbally. Proficiency using the TI-84 (TI-89) graphing calculator is expected. Upon completion of this course, students will take the Advanced Placement Examination offered by the College Board. Prerequisite: A- or higher in Pre-Calculus Honors 3351 or teacher recommendation. A summer assignment is required for this course. Grades 11, 12.

3470 AP CALCULUS (BC)**Full Year 1 Credit**

AP Calculus BC includes all of the topics covered in AP Calculus AB, as well as the use of parametric equations and polar functions, and convergence tests for series, Taylor and/or Maclaurin series. Additional topics include arc length, surface area, L'Hôpital's rule, and integration by parts, integration by partial fractions, improper integrals, Euler's method, and differential equations for logistic growth. Proficiency using the TI-84 (TI-89) graphing calculator is expected. Upon completion of this course, students will take the Advanced Placement Examination offered by the College Board. Prerequisite: A- or higher in AP Calculus AB 3460 or teacher recommendation. A summer assignment is required for this course. Grade 12.

3471 PROBABILITY, STATISTICS & DISCRETE TOPICS –HONORS **Full Year 1 Credit**

This course is a study of probability, statistics, and topics in math related to real world applications. Students will study the mathematics of chance, data collection, data analysis, and patterns. Students will understand and apply the mathematical theories and principles to explain events in science, current events, sporting events, games of chance, and everyday occurrences. Students will use technology to aid in their understanding of these principles. Prerequisite: 3351 or 3362. Grades 11, 12.

3462 PROBABILITY, STATISTICS, & DISCRETE TOPICS –COLLEGE PREP
3463 PROBABILITY, STATISTICS, & DISCRETE TOPICS **Full Year 1 Credit**

This course is a study of probability, statistics, and topics in math related to real world applications. Students will study the mathematics of chance, data collection, data analysis, and patterns. The focus will be on understanding mathematics within the context of science, current events, sporting events, games of chance, and everyday occurrences. Students will use technology to aid in their understanding of these principles. Prerequisite: 3362 or 3363. Grades 11, 12.

3480 AP STATISTICS **Full Year 1 Credit**

The purpose of Advanced Placement Statistics is to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students will be exposed to four main statistical themes including data analysis through graphing and numerical descriptions, sampling and experimental techniques, exploring random phenomena using probability and simulation and applying the methods of statistical inference to estimate population parameters and test hypotheses. Prerequisite: B+ or higher in Pre-Calculus Honors 3351 or B+ or higher in AP Calculus AB 3460 or teacher recommendation. A summer assignment is required for this course. Grade 12.

3495 COMPUTER SCIENCE: WEB APPS AND GAMES **One Semester .5 Credit**

Students will learn the fundamentals of computer science while creating their own animations, graphics, and games for the web. In this course students will learn the basics of coding using JavaScript. Students will also enhance their logical thinking and problem solving skills. This course does not require programming experience. Students should be concurrently enrolled in, or have completed, Algebra II or a higher level Mathematics course. Grades 9,10, 11, 12.

3496 COMPUTER SCIENCE: COMPUTER PROGRAMMING **One Semester .5 Credit**

This course will explore the concepts of computer science and programming using Python. Students will understand the building blocks of programming, think computationally and solve problems using data and coding. Students will develop abstract reasoning and problem solving skills. Students should be concurrently enrolled in, or have completed, Algebra II or a higher level Mathematics course. Grades 9, 10, 11, 12.

3490 AP COMPUTER SCIENCE PRINCIPLES**Full Year 1 Credit**

AP Computer Science Principles is an introduction to the central ideas of computer science and the practices of computational thinking. This course focuses on creativity, and the understanding of computational content, computational thinking skills and the impact of computing on the world. Topics covered include: programming, algorithms, the Internet, big data, digital privacy and security and the societal impacts of computing. No prior knowledge of computer science is necessary; however, Introduction to Computer Programming (#3496) is recommended. Mathematics prerequisite is Algebra 2 and students are *strongly encouraged* to take either the 1 semester Web Apps and Games or Computer Programming. Grades 10, 11, 12.

3500 AP COMPUTER SCIENCE A**Full Year 1 Credit**

AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities. AP Computer Science Principles is recommended prior to taking AP Computer Science, however the course is not required. This course may be used to fulfill 1 credit of Science or Math required for graduation. Students are advised to fully discuss this option with their school counselor to determine whether this best suits the student's college or career path.

3497 INTRODUCTION TO CYBERSECURITY**One Semester .5 Credit**

As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that companies and individuals take precautions to protect themselves from the growing threat of cyber-attacks. This course prepares students with crucial skills to be responsible citizens in a digital future. This version is designed for students with some exposure to computer science, but there are no specific course prerequisites. Students will learn foundational cybersecurity topics including digital citizenship and cyber hygiene, the basics of cryptography, software security, networking fundamentals, and basic system administration. Students will complete projects at the end of each module. This is not a coding intensive course, but students will learn basic SQL, and will utilize basic HTML and JavaScript within specific contexts and will be provided support within those contexts.

MUSIC

The two primary goals of Lower Moreland's music curriculum are: (1) the discovery and development of individual aptitudes and (2) increasing students' understanding and appreciation of the art of music, as well as its relevance to the quality of human life.

Lower Moreland's program provides a variety of musical experiences, including an emphasis on the study and performance of selected musical literature representative of a wide range of periods, styles, nationalities, forms, composers, and media. Performing groups including band, orchestra, chorus, and other ensembles render service to the school and community, thus providing an important cultural community resource as well as a significant learning activity. The music department also offers co-curricular groups which include Honor Choir, Treble Choir, Bass Choir, Jazz Ensemble, Jazz Lab Band, Pep Band, Chamber Strings, and the opportunity to participate in the school musical.

7677 CREATIVITY AND COLLABORATION IN THE ARTS One Semester .5 Credit

Team taught, this course offers all students, regardless of talent or ability, the opportunity to engage in critical thinking and creative output in the arts. Students will identify their creative identity and collaborate on projects examining expression, impact, storytelling and reaction. Through learner-centered pedagogies and project based learning design, students engage in both process and product to develop important 21st century skills that can better prepare them for careers in creative fields and opportunities beyond the classroom. The course culminates in a show at the end of each semester. Grades 9, 10, 11, 12. This course is required for graduation.

7875 SYMPHONIC BAND - 10, 11, 12

7895 CONCERT BAND - 9, 10

Full Year 1 Credit

Band is a major subject meeting every day. The group studies and performs music of varying styles and periods of music history, and performs with guest composers, clinicians, and composers. Members are eligible to participate in district and regional band festivals, and perform in the annual concerts throughout the school year. Participation in after-school rehearsals and concerts is required. Entry must be approved by the director. Grades 9, 10, 11, 12.

7178 WIND ENSEMBLE – HONORS- 9,10,11,12

Full Year 1 Credit

This is the top-level concert band ensemble. Students in this course are members of the LMHS Wind Ensemble. These students must audition for the Director prior to acceptance. Students in the Wind Ensemble must have the course on their schedules every day. Members will perform more difficult wind symphony literature and have opportunities for more performances, adjudications and festivals. Participation in after-school rehearsals and concerts is required. Grades 9,10,11,12.

7876 CONCERT CHOIR- 9,10,11,12

Full Year 1 Credit

Concert Choir is a major subject and meets every day. The ensemble studies and performs music of all types, and learns proper singing techniques as well as basic musicianship. Members may participate in district, regional, and all-state events and are involved in the annual winter and spring concerts and various community concerts. Participation in after-school rehearsals and concerts is required. Grades 9, 10, 11, 12.

7888 STRING ORCHESTRA - 9,10,11,12**Full Year 1 Credit**

Orchestra meets every day. The ensemble studies and performs string orchestra music from various time periods and styles. The course also focuses on individual musicianship through ear training, study of theory, technique, creativity, and improvisation. Students are required to attend after-school rehearsals throughout the year and perform for the annual winter and spring Concerts. Student members are eligible to participate in district, regional and state orchestra festivals. Grades 9, 10, 11, 12.

7877 BAND/CHOIR**Full Year 1 Credit**

This program is designed for those students who wish to participate in both band and choir or for those who do not meet the requirements for full credit in either. Students may be involved fully in the activities of both. Time for band and choir is equally divided. Participation in after-school rehearsals and concerts is required. Consent of the directors is required. Grades 9, 10, 11, 12.

7889 STRING ORCHESTRA/CHOIR**Full Year 1 Credit**

This program is designed for those students who wish to participate in both string orchestra and choir or for those who do not meet the requirements for full credit in either. Students may be involved fully in the activities of both. Time for string orchestra and choir is equally divided. Participation in after-school rehearsals and concerts is required. Consent of the directors is required. Grades 9, 10, 11, 12.

7890 BAND/STRING ORCHESTRA**Full Year 1 Credit**

This program is designed for those students who wish to participate in both band and string orchestra or for those who do not meet the requirements for full credit in either. Students may be involved fully in the activities of both. Time for band and string orchestra is equally divided. Participation in after-school rehearsals and concerts is required. Consent of the directors is required. Grades 9, 10, 11, 12.

7778 SINGING AND VOCALIZATION**7978 ADVANCED SINGING AND VOCALIZATION****One Semester .5 Credit**

Would you like to learn how to sing? This class will teach you voice placement, breathing, and pitch relationship so that you will become comfortable with your singing voice. You will be given a diverse selection of songs to work on in solo, duo, trio, and group situations. Beginners, intermediate and advanced levels. Advanced class members must have completed the Singing and Vocalization Class (7778) or be studying voice privately for at least one full year. Grades 9, 10, 11, 12.

7777 GUITAR LAB**One Semester .5 Credit**

Students will learn how to read tabs and chord charts while playing various styles of music. Creativity and improvisation are emphasized as students practice writing their own songs on the guitar and playing with others. School-owned instruments (acoustic and electric guitars) are available for student use. No previous musical knowledge is needed. Books, music, and guitars are provided. Grades 9, 10, 11, 12.

7556 MUSIC PERFORMANCE AND PRODUCTION- 9,10,11,12**One Semester .5****Credit**

This course provides space for students to work on individualized performance targets with the objective of creating high quality recordings as capstone projects. This course is open to both

students interested in recording arts (engineering, producing, live sound) and students looking to work on performing on an instrument or voice in any style and genre. Students will work both individually and collaboratively to improve on technique and creativity in music performance and production. Industry standard tools will be used in all production work, preparing students for careers in the music industry.

Pre-req: This course is open to students who have some instrumental or vocal experience

7775 PIANO LAB

One Semester .5 Credit

This is your chance to learn to play piano. Students are taught in a laboratory/classroom situation on electric pianos. Headsets are attached to each unit so the entire class can play at the same time. Students may be asked to purchase some materials, e.g., a book to suit their ability level. 7775-Piano Lab open to beginners only. Grades 9, 10, 11, 12. 7886-Advanced Piano Lab must have completed Piano Lab.

7886 ADVANCED PIANO LAB

One Semester .5 Credit

This is your chance to learn to play piano. Students are taught in a laboratory/classroom situation on electric pianos. Headsets attach to each unit so the entire class can play at the same time. Students may be asked to purchase some materials, e.g., a book to suit their ability level. 7775-Piano Lab open to beginners only. Grades 9, 10, 11, 12. 7886-Advanced Piano Lab must have completed Piano Lab.

7776 JAZZ INSTRUCTION I

One Semester .5 Credit

This is a course for those students who play instruments and are interested in jazz, fusion, and pop music. This course will cover the techniques used in playing jazz, pop, and fusion, improvisation, study of famous jazz composers and performers (John Coltrane, Miles Davis, Duke Ellington, Ella Fitzgerald), and the history and development of jazz and pop music. Grades 9, 10, 11, 12.

7786 JAZZ INSTRUCTION II

One Semester .5 Credit

This course is a continuation of the studies and performance of jazz improvisation. This class continues the exploration of jazz techniques, as well as putting an emphasis on the memorization of standard jazz repertoire. Students will also analyze, study, and play the improvisation solos of famous jazz musicians such as Sonny Rollins, Dexter Gordon, and Miles Davis. Prerequisite: Jazz Instruction I. Grades 9, 10, 11, 12.

7765 MUSICAL THEATER I

One Semester .5 Credit

This course is designed to introduce the basics of musical theater. Students will learn the fundamentals of acting and singing and will work on scenes, perform monologues, and sing songs from musicals. This course is designed to meet the needs of students who wish to learn more about performing. While this is an interactive course, the students will also study different musicals and learn about putting a musical together. No previous theater knowledge is needed. Music and scripts are provided. Grades 9, 10, 11, 12.

7879 MUSIC MAJOR

Full Year 1 Credit

Would you like to learn how to read and write music for your voice or instrument, how to transcribe the music of your favorite performer while listening to recordings, or to play and sing by reading the music? This course will teach you how to read and write the music you like and to compose original music. It is a full-credit, major course that meets one period every day. You must complete at least one year of music major to be eligible for AP music theory to be added to the course selections next year.

Grades 9, 10, 11, 12.

7870 AP MUSIC THEORY

Full Year 1 Credit

This college-level course introduces students to theory, musical materials, and procedures; and integrates aspects of melody, harmony, texture, rhythm, form, and to some extent, history and style. The student's ability to read and write musical notation is fundamental to such a course. It is also assumed that the student has acquired at least basic performance skills in voice or on an instrument. The ultimate goal of this AP Music Theory course is to 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 is approached by initially addressing fundamental aural, analytical, and compositional skills using both listening and written exercises. Building on this foundation, the course progresses 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, and/or the realization of figured-bass notation. Students enrolled in this course must take the Advanced Placement exam. Teacher recommendation required. A summer assignment is required for this course. Grades 11, 12.

PHYSICAL EDUCATION & HEALTH

The Health and Physical Education Department is committed to providing students with the knowledge and skills necessary to link Health and Physical Education to the foundation of a healthy, productive, and fulfilling life. The emphasis on lifetime activities and the application of health-related content to real-world situations will provide the basis for this goal. The role of individual responsibility in maintaining optimal wellness is the focus of the Health and Physical Education courses.

A healthy body and a healthy mind go hand-in-hand. Research shows that students who are physically active during the school day are often better able to concentrate on their school work and perform better on assessments. A sound social and emotional framework and support system can be developed through the Health and Physical Education experience.

The physical education program has been designed to enhance the physical, intellectual, emotional and social development of participants. Through participation in physical education, students will develop components of fitness and a variety of lifetime sports skills. Physical education is required each year and each student must meet a minimum requirement of 1.0 credit before graduation. Failures or incomplete grades will necessitate attendance in summer school or double scheduling the following year. Failures must be remediated prior to graduation.

The health courses provide students with the knowledge and skills necessary to confront health-related issues. Health is a standards based focused curriculum with the spotlight on accessing information, analyzing influences, decision making, goal setting, interpersonal communication, self management and advocacy. Maintaining a healthy way of life requires a balance of physical, mental, emotional, and social well-being. Health education is required in the ninth and twelfth grade and each student must meet a minimum requirement of 0.5 credits before graduation.

8335 PHYSICAL EDUCATION 9th (3 periods per cycle)

Full Year .25 Credit

This course will challenge students to improve their wellness and increase their knowledge of physical activity and its benefits. Physical activity will center around the fitness facility, team and individual sports and cooperative games. During specific units students will be equipped with

wireless heart monitors in order to provide data that will monitor fitness goals. Fitness assessments that incorporate all fitness components are designed for students to work towards personal goals. Students will create an individualized Health and Physical Education Connections Portfolio and use this to track goals, complete assessments as well as a place to journal and reflect. Grade 9.

8345 PHYSICAL EDUCATION 10th (2 periods per cycle) Full Year .25 Credit

This course offers students the opportunity to learn the skills involved in many individual, team and lifetime sports. Soccer, team handball, floor hockey, volleyball, basketball, and archery are offered in four week units. The ultimate goal of these activities are to provide moderate to vigorous activity to promote optimal wellness. During specific units students will be equipped with wireless heart rate monitors to collect data and work towards their ultimate fitness goals. The social and emotional aspects of wellness are infused in all lessons. Students will continue to use the Health and Physical Education Connections Portfolio to monitor and track their progress. Grade 10.

8375 PHYSICAL EDUCATION 11th and 12th (2 periods per cycle) Full Year .25 Credit

This course emphasizes the importance of overall wellness with a concentration on social and emotional health. Students will incorporate activity units that focus on cardiovascular fitness along with strength training that is designed by the physical education staff to benefit the individual. These activities are designed to teach students the value of physical activity and the benefits of an active lifestyle. During specific units students will be equipped with wireless heart rate monitors to collect data and work towards their ultimate fitness goals. Students will continue to use the Health and Physical Education Connections Portfolio to track progress and goal setting. Grades 11, 12.

8185 ADAPTIVE PHYSICAL EDUCATION (Credit and length of course dependent upon need of student.)

This course is designed to meet the needs of individuals who are unable to participate in the regular program because of a physical handicap, disability, or special needs. A modified and individualized program is designed for each participant through the cooperative planning of the physical education staff. Grades 9, 10, 11, 12.

8435 HEALTH EDUCATION 9 (2 periods per cycle) Full Year .25 Credit

Health Education 9 is given in conjunction with Physical Education 9. The course consists of hands-on activities, cooperative learning activities, class discussion, and research. Topics covered include fitness, human sexuality and STD prevention, HIV and AIDS, human reproduction, drug use, abuse and addiction, 21st century challenges, mental health, suicide prevention, nutrition and personal safety. The course provides students with the knowledge and skills necessary to make healthy life choices. Grade 9.

8455 HEALTH EDUCATION 12 (2 periods per cycle) Full Year .25 Credit

The 12th Grade Health Education curriculum provides students with the tools for coping with modern-day life. This includes navigating 21st century demands, personality traits, healthy/unhealthy relationships, mental wellness and public health. Students will become certified in CPR/First Aid/AED. This course will expose students to skills in self-advocacy, social responsibility, and critical thinking. The class design is a project based learning environment. The goal of the course is to assist in capturing the understanding of a sound body and mind affords a health literate future. Grade 12.

8555 HEALTH CONNECTIONS II Full Year .25 Credit

This is a counselor approved course for students who are not able to schedule Health Education 12 in their 12th grade year. The course is completed in a virtual classroom setting and follows the Health Education 12 curriculum.

8315 INTRODUCTION TO SPORTS MANAGEMENT

One Semester .5 Credit

Introduction to Sports Management is designed for those students who enjoy sports and are interested in pursuing a career in athletics, fitness or recreation. The course emphasizes basic management principles as they relate to these sports-related enterprises. A variety of marketing techniques and approaches are analyzed to broaden students' background in these areas and to better allow them to develop effective and comprehensive sports marketing plans. Students will also be given project based learning opportunities to acquire the skills and knowledge to plan, organize, lead, and evaluate many sport/fitness activities, products and services. Example projects include organizing a team practice, budgeting, officiating, treatment of common sports injuries and arranging a special event. Students are also required to attend field day. The course is open to students who have maintained a B+ or higher in physical education in the previous year and are given permission by the instructor. Grades 10, 11, 12.

8316 FITNESS I: TOTAL BODY CHALLENGE

One Semester .5 Credit

This course emphasizes the benefits of working towards and being totally fit. The goal for each student is to achieve a higher fitness level, which will in turn increase energy level and self-esteem. The focus will be on core body strength, increased cardiovascular fitness, flexibility, and muscular endurance and muscle strength. Students will work on student choice and project based learning to evaluate sleep, hydration and nutrition. This program will take the student through the steps of how to merge proper eating habits, good exercise routine and motivational strategies to design an optimum individual health plan. Open to students who have maintained a B+ or higher in physical education in the previous year and are given permission by the instructor. Grades 10, 11, 12.

SCIENCE

The Science Department offers a variety of courses on several ability levels designed to meet the needs of all students. Utilizing Lower Moreland's state-of-the-art laboratory facilities, all of these courses are a blend of inquiry-based exploration and the theoretical underpinnings that inform and explain scientific research.

All students, regardless of interest, ability, or future plans, will find courses geared to their needs and to the needs of an increasingly technological world—a world where a solid foundation in the three basic sciences: biology, chemistry, and physics is growing evermore indispensable. *All students* should plan to take at least one course in each of these three basic sciences while at Lower Moreland. Additional courses include four Advanced Placement courses, an introductory course dealing with the fundamentals of physics and chemistry, and electives.

Students planning on attending a 4 year college should take the following sequence of science courses: Grade 9 – Freshman Chemistry & Physics, Grade 10- Biology, Grade 11 – Chemistry, and Grade 12 – Physics. Many students take more than 4 years by doubling up with electives and A.P. courses. If you plan on taking both A.P. Biology and A.P. Chemistry, it is highly recommended to take A.P. Biology as a junior and A.P. Chemistry as a senior.

4521 FRESHMAN CHEMISTRY & PHYSICS - HONORS

4522 FRESHMAN CHEMISTRY & PHYSICS – COLLEGE PREP

Full Year 1 Credit

This course will consist of elements of chemistry and physics. Students will develop an understanding of matter, formulas, atomic structure, history and use of the periodic table, chemical reactions and principles of waves, light, and sound. This course will offer students many experiences in the laboratory, where they will discover as well as verify scientific principles. Honors level of this course differs from College Prep level in the difficulty of problems and the application of scientific principles learned in this course. Honors students must exhibit very strong analysis and problem solving skills. Grade 9.

4523 FRESHMAN CHEMISTRY & PHYSICS

Full Year 1 Credit

This course will consist of elements of chemistry and physics. Students will develop a basic understanding of matter, chemical formulas, atomic structure, history and use of the periodic table, chemical reactions, compounds, waves, light, and sound. This course offers students extensive use of the laboratory to discover and reinforce scientific principles. Grade 9.

4441 BIOLOGY - HONORS

Full Year 1 Credit

This course studies unity, diversity, and continuity of organisms as they function within their environments. These principles are approached from molecular, cellular, and ecological points of view. Topics such as genetics will focus on traditional concepts as well as current advances in the study of genetic engineering and causes of disease. This course has an emphasis on laboratory study and will use technology for data collection and analysis. Prerequisite: A or B in Honors Freshman Chemistry and Physics and/or teacher recommendations. Grade 10.

4442 BIOLOGY - COLLEGE PREP

Full Year 1 Credit

This course builds from the molecular level to the organism in order to explain diversity and adaptation of organisms to their environment. Chemistry, genetics, and evolution, and ecology are strong components of this course. Students problem solve and apply mathematics through frequent laboratory investigations. Grade 10.

4443 BIOLOGY

Full Year 1 Credit

This course focuses on the principles of biology. Topics include the nature of life, ecology, cells, and genetics. The foundations of chemistry and genetics are taught within the course so students can understand the relationship between plants and animals. Additionally, activities, inquiry based labs and projects are used to reinforce biological concepts. Grade 10.

4460 AP BIOLOGY

Full Year 1 Credit

This course is designed to meet the objectives of a general biology course at the college level. Emphasis is placed on the application of knowledge and concepts. Major topics covered include the chemistry of life, cell structure and function, bioenergetics, cell communication, cell cycle, genetics, evolution, and ecology. Many laboratory investigations include a group research component. The course is open to students who have maintained an A or solid B average in Honors Biology and have teacher recommendations. Students should be highly motivated and able to work well independently. Advanced Placement Biology requires a thorough grounding in the fundamentals of chemistry. No student should elect Advanced Placement Biology in lieu of physics or chemistry. A summer assignment is required for this course. Grades 11, 12. (Must be taken in grade 11, if you intend to take Advanced Placement Chemistry as a senior.)

4351 CHEMISTRY – HONORS

Full Year 1 Credit

This course includes the study of atomic theory, stoichiometry, molecular structure, gas laws, solutions, thermodynamics, rates, and equilibrium as well as nuclear chemistry. The material is presented in theory and reinforced with applications of laboratory experiments and extensive problem solving. The students are expected to use mathematics to understand and apply the principles and concepts of chemistry. Inquiry and analysis are key components of the course. Prerequisite: Completion of Math 3151 or higher. Grade 11.

4352 CHEMISTRY – COLLEGE PREP

Full Year 1 Credit

Designed to fulfill college entrance requirements in chemistry, this course includes concepts such as atomic theory, mole theory, conservation of matter and energy, atomic and molecular structure, states of matter, thermochemistry, kinetics, solution processes, and chemical equilibrium. Additional topics in organic chemistry and nuclear chemistry are covered as time permits. Chemistry is required for college admission in the sciences and related fields. Prerequisite: Completion of Math 3152 or higher. Grade 11.

4343 CHEMISTRY

Full Year 1 Credit

This is an introductory chemistry course in which students study matter, energy, and their interaction. The focus of this course will be a conceptual understanding of matter and energy within the context of real-world life situations. The course includes concepts such as atomic theory, mole theory, conservation of matter and energy, atomic and molecular structure, states of matter, thermochemistry, solution processes, and kinetics. Additional topics in chemical equilibrium, organic chemistry, and nuclear chemistry are covered as time permits. This will be accomplished through lab investigations, projects, and demonstrations. Because of this conceptual nature of this course, the use of mathematics will be limited. Grade 11.

4360 AP CHEMISTRY

Full Year 1 Credit

This college-level course in Advanced Placement Chemistry course is designed to be taken after the successful completion of high school chemistry. Through a strong emphasis on inquiry-based learning, students will study essential concepts surrounding six big ideas: atomic structure, property relations, transformations, kinetics, thermodynamics and equilibrium. Work in the laboratory to develop investigative and communication skills will be a strong component of this course as well. Prerequisites: Successful completion of Chemistry 4351 and recommendation of a teacher. A summer assignment is required for this course. Grade 12.

4361 PHYSICS – HONORS**Full Year 1 Credit**

This introductory, college-preparatory course combines laboratory experience, theory, mathematical models, and problem solving techniques. Students study the laws of physics through traditional and computer-interface labs. Topics include: motion, force, energy conservation laws, electricity and magnetism. Projects will serve as a culminating activity for each major unit. Emphasis is placed on the mathematical underpinnings of physics. Prerequisite: Completion of Math 3351 or higher. Grade 12.

4362 PHYSICS - COLLEGE PREP**Full Year 1 Credit**

Major topics covered in this introductory course include motion, dynamics, energy conservation laws, electricity, and magnetism. The course uses a conceptual, experimental approach rather than a strong mathematical-theoretical approach. Especially emphasized is the understanding of physical concepts rather than the memorization of isolated facts and/or formulae. Students study the laws of physics through traditional and computer-interface lab activities. Projects will serve as a culminating activity for each major unit. Prerequisite Completion of Math 3362 or higher. Grade 12.

4363 PHYSICS**Full Year 1 Credit**

This course is an introductory physics course which includes the study of motion, forces, energy, electricity, and magnetism. The focus will be on a conceptual understanding of the physical world and how the laws of physics explain everyday occurrences. This will be accomplished through lab investigations, projects, and demonstrations. Projects will serve as a culminating activity for each major unit. The course will emphasize understanding of the laws and concepts of physics rather than their mathematical underpinnings. Grade 12.

4390 AP PHYSICS – C Mechanics**Full Year 1 Credit**

Advanced Placement Physics-C Mechanics is a college-level course equivalent to the first semester of physics for science and engineering majors. The content includes an in-depth study of mechanics and a brief survey of electricity and magnetism. Projects will serve as a culminating activity for each major unit. Elements of calculus will be used, as needed, to explain the principles and problem solving. Students enrolling in AP Physics must be taking calculus concurrently and have a strong background in math. Students enrolled in this course must take the Advanced Placement Physics Mechanics exam. Prerequisites include: Successful completion of honors math program through 3460 and taking 3470 concurrently and/or a recommendation of AP Physics Teacher. Grade 12.

4475 ANATOMY AND PHYSIOLOGY**Full Year 1 Credit**

This course deals with the study of the structure and function of human body systems. Dissection is performed primarily on cats, focusing attention on the skeletal, digestive, muscular, circulatory, nervous (integumentary and respiratory) systems. Alternatives to dissection are possible; however, hands-on activities are preferable. No student should elect Anatomy and Physiology in lieu of physics or chemistry. Both are absolute prerequisites to further study biology and/or medicine. Prerequisites include: B- or higher in Biology 4442 or C or higher in Biology 4441 and teacher recommendation. Grades 11, 12.

4380 AP ENVIRONMENTAL SCIENCE**Full Year 1 Credit**

This is a college level course in Environmental Science. The goal of the course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world and to identify and analyze environmental problems such as global warming or ozone depletion. The course will also examine many of the solutions for

resolving and/or preventing environmental problems. Students should have a strong background in biology and chemistry or must be taking chemistry concurrently and must have teacher recommendation. This course should not be taken in lieu of chemistry or physics. A summer assignment is required for this course. Grades 11, 12.

4381 ENVIRONMENTAL SCIENCE - HONORS

Full Year 1 Credit

Do you want to really understand global warming? Is ozone depletion really a problem? Are the products you use at home safe? Is bottled water better than tap water? In this course we will examine these and many environmental issues using scientific principles and methodologies to look at the interrelationships within the natural world and how humans affect it. We will also look at the many solutions already available to address the current environmental problems our world faces. You need to have already taken biology and chemistry or be enrolled concurrently in chemistry. Grades 11, 12.

4476 FORENSICS I

One Semester .5 Credit

This course deals with the fundamentals of collecting and analyzing evidence found at a crime scene. Students will learn how to process crime scenes, analyze lab data, and conduct scientific investigations. Students will use technology to participate in activities as though they are forensic scientists. Students will document their findings through laboratory reports and multimedia presentations. Grade 11, 12, or students taking 4441 concurrently.

4477 FORENSICS II

One Semester .5 Credit

This course will lead to a development of reasoning strategies through examination of case studies; solving real world cases as part of an investigative team. Students will assess and define testing procedures and evidence gathering methods from simple to complex levels; formulate and analyze reasoning strategies as related to forensic science; develop and utilize a range of intellectual abilities, including critical thinking, logical argument, appropriate uses of evidence, and integration of varied types of information (quantitative, qualitative, text, image, etc.). Prerequisite: Forensics I. Grade 11, 12, or students taking 4441 concurrently.

4478 SCIENCE 2.0

One Semester .5 Credit

How do the new 4G wireless networks work? Why are so many dead birds falling from the sky? How long would it take for an organization or nation to develop a nuclear weapon and what materials, knowledge, and technology would it take for them to do so? These are just some of the current issues that this course will tackle. As news happens, students will collaboratively work with the teacher to investigate and understand the science behind the event. Alternate solutions to current problems facing society will also be explored. Students will help choose the topics to be studied. The projects will be problem-based and investigated through the use of technology and lab experiences. Grades 10, 11, 12.

4602 PLTW ENGINEERING ESSENTIALS

Full Year 1 Credit

Engineering Essentials offers a multidisciplinary approach to teaching and learning foundational concepts of engineering practice, providing students opportunities to explore the breadth of engineering career opportunities and experiences and solve engaging and challenging real-world problems. By inspiring and empowering students with an understanding of engineering and career opportunities, Engineering Essentials broadens participation in engineering education and the engineering profession. Prerequisite is successful completion of Algebra I. Grades 9, 10, 11, 12.

SOCIAL STUDIES

The Social Studies curriculum offers a comprehensive program which provides students with a robust background in U.S. and world history and culture while offering an opportunity in the junior and senior years to select courses from the behavioral and social sciences. For the serious and talented student of social studies, there is also the opportunity to select from several Advanced Placement courses, including Advanced Placement Human Geography, Advanced Placement U.S. or European History, Advanced Placement Economics (Micro and Macro), Advanced Placement United States Government and Politics, Advanced Placement Psychology, and Advanced Placement African American Studies.

All students must take an American government course prior to graduation. This requirement may be fulfilled by taking AP U.S. Government and Politics (2570), U.S. Government and Civics (2557) or Introduction to American Government and Civics (2563).

2111 WORLD HISTORY AND GEOGRAPHY- HONORS **Full Year 1 Credit**

2112 WORLD HISTORY AND GEOGRAPHY– COLLEGE PREP **Full Year 1 Credit**

This year-long course in world history and geography is organized both thematically and chronologically. Using various historical thinking skills, students will analyze how events in history illuminate several course themes, including the respect for human dignity cross-culturally. The course will begin with a study of world religions and culminate in an examination of human rights today. The themes of continuity and change, power and influence, and the role of individuals will form the backdrop of the course as students study imperialism, 20th century world conflicts, the Holocaust and other genocides, the quest for national independence and the on-going fight for human rights. Throughout the year, students work to develop geographic literacy, writing, speaking, research, and critical thinking skills. Students are active learners, making extensive use of role-playing, research, simulations, and presentations. The honors level course differs from the college prep level in the frequency and sophistication of writing assignments, some selected reading assignments, and the pace of lessons. Students earn one social studies credit. Grade 9.

1213 WORLD HISTORY AND GEOGRAPHY **Full Year 1 Credit**

This year-long course in world history and geography is organized both thematically and chronologically. Using various historical thinking skills, students will analyze how events in history helped advance the respect for human dignity. The course will begin with a study of world religions and culminate in an examination of human rights today. The themes of continuity and change, power and influence, and the role of individuals will form the backdrop of the course as students study imperialism, 20th century world conflicts, the Holocaust, the quest for national independence and the fight for human rights. Fundamental to this course is the goal of building essential academic skills. Teachers will emphasize individualization in addressing the skills of reading, writing, speaking, and listening for each student.

2121 AMERICAN HISTORY–HONORS **Full Year 1 Credit**

2122 - AMERICAN HISTORY COLLEGE PREP **Full Year 1 Credit**

The American History course presents a chronological survey of American history from the 20th century to the present day. Beginning with World War I, the course will trace the development of American culture during critical periods of history, including, but not limited to, the Great Depression, the World Wars, the Cold War, and post 9/11 America. Students will employ historical thinking skills as they examine how economic, political, and social forces throughout history continue to shape America today. Throughout the course, emphasis will be placed on the diverse experiences of all Americans. Students are active learners, making use of role-playing,

simulations and presentations. Serious attention is also given to writing assignments which are process oriented, varied, and designed to build upon work begun in 9th grade. Students earn one social studies credit for the course. Grade 10.

2123 AMERICAN HISTORY

Full Year 1 Credit

The American History course presents a chronological survey of American history from the 20th century to the present day. Fundamental to this course is a strong emphasis on skill building. Teachers will emphasize individualization in addressing the essential skills of reading, writing, speaking, and listening for each student. Beginning with World War I, the course will trace the development of American culture during critical periods of history, including, but not limited to, the Great Depression, the World Wars, the Cold War, and post 9/11 America. Students will employ historical thinking skills as they examine how economic, political, and social forces throughout history continue to shape America today. Throughout the course, emphasis will be placed on the diverse experiences of all Americans. Students are active learners, making use of role-playing, simulations and presentations. Serious attention is also given to writing assignments which are process oriented, varied, and designed to build upon work begun in 9th grade. Students earn one social studies credit for the course. Grade 10.

2240 10th GRADE ADVANCED PLACEMENT AMERICAN HISTORY

Full Year 1 Credit

This college-level version of American History is intended for the highly motivated and talented student. Following the College Board guidelines for AP U.S. History, the course is an intensive study of American history since the Colonial Period. Much emphasis is placed on interpretive reading and analysis of causes and effects of events and movements throughout the nation's history. In addition to reading the textbook, the student is expected to do extensive reading and research and to lead and participate in class seminars. A significant amount of work outside of the classroom can be expected. Optionally, students take the Advanced Placement examination in May. Admission standards: Multiple admissions standards will be used, including a grade of A- or higher in World History honors **AND** recommendation of current social studies teacher. Students with an A in College Preparatory World Studies may be admitted with an entrance test that emphasizes the skills needed for taking a college-level course in high school. A summer assignment may be required for this course.

2557 UNITED STATES GOVERNMENT AND CIVICS

One Semester .5 Credit

This semester-long course provides students with a background in the foundations of American government and an understanding of the roles and responsibilities of engaged citizens. Students will examine the roots of American government found in essential documents, like the Constitution, and analyze how those documents are still relevant today. In addition to examining the institutions and processes of the three branches of government, students will analyze politics and policy from both a historical and current perspective. Units of study will also include an examination of elections, interest groups, political parties, and the media. Emphasis will be placed on civics by encouraging students to analyze how local, state, and national policies are made and the role those policies play in their lives. Throughout the semester, the course draws parallels between textbook information and contemporary issues. Active citizen engagement will be emphasized throughout the year. This course meets the Civics graduation requirement. Grades 11, 12.

2558 BEHAVIORAL ECONOMICS

One Semester .5 Credit

This semester-long elective course will introduce students to the field of behavioral economics which focuses on the study of psychology as it relates to the economic decision-making

processes of individuals and institutions. The course will draw on psychology and economics to explore why people sometimes make irrational decisions, and why and how their behavior does not follow the predictions of economic models. The course will be built around several core books on behavioral economics and supplemental readings from scholarly journals. The course will require rigorous amounts of reading and active class discussion. Grades 11,12.

2564 INTRODUCTION TO AMERICAN GOVERNMENT AND CIVICS **Full Year 1 Credit**

This yearlong, skill-oriented course offers a practical approach to examining the foundations of American government and the roles of citizens. With an ongoing focus on developing reading comprehension, writing skills and oral expression, students explore practical issues in American government. The course applies a hands-on approach to citizenship issues by studying the voting process, tracking political issues, making political choices, learning to use government services effectively, and dealing with government agencies. Students will also learn to apply the skills acquired in this course to contemporary issues. This course has been designed as a follow-up to World History and Geography(1233) and American History (1243). Admission is by recommendation of a previous social studies instructor. This course meets the Civics graduation requirement. Grade 11.

2665 CRIMINAL JUSTICE **One Semester .5 Credit**

This semester-long elective course provides students with a practical understanding of the American criminal justice system. Students will develop an understanding of the various phases in the criminal justice process, including the court system, the investigation of crimes, the trial process, and the corrections system. Specific units will focus on the state and federal court systems, identifying types of crimes, assessing forms of punishment, analyzing the rights of the accused, and debating current issues in criminal justice. In addition to the traditional units of study, students will participate in a mock trial, and when possible, take a class trip to the county courthouse. Grade 11, 12.

2667 INTRODUCTION TO PSYCHOLOGY & SOCIOLOGY **One Semester .5 Credit**

This semester-long elective course combines psychology and sociology in a course designed to provide students the tools and insights of these two major social sciences. Although both disciplines study human behavior, the focus of sociology is the study of human interactions and relationships; psychology emphasizes the individual. The course will examine major topics such as culture, socialization, class and stratification, race and ethnicity, gender, social institutions, personality development, and abnormal behavior. Readings, observations, films, and projects will enhance the discussions. Grades 11, 12.

2664 REEL HISTORY **One Semester .5 Credit**

In this semester-long elective course, students will examine and debate different topics in American history and American society through the prism of film, including Hollywood movies and documentaries. These topics could include, but are not limited to: modern muckrakers, the security state since 9/11, how Hollywood depicts war, civil rights, topics in government and politics, as well as different interpretations of the American dream. Students will be expected to read relevant pieces from newspapers and magazines as companion pieces to the films and will write short essays for each unit. Grades 11, 12.

2663 HISTORICAL BOOK STUDY **One Semester .5 Credit**

This semester-long elective course will use novels and fiction to examine both historical facts and the power of narrative storytelling. The focus will be on exploring the stories of underrepresented groups in the telling of American history. The texts will be selected from major

American works. The course will explore in equal parts the history and the ability to have meaningful storytelling in the non fiction genre. The course that will require significant in class and out of class reading. Grades 11, 12.

2150 AP HUMAN GEOGRAPHY

Full Year 1 Credit

The college-level AP Human Geography course focuses on the patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students will use spatial concepts like maps and analysis of landscape data to examine human social organization and its environmental consequences. They will also learn about the methods and tools geographers use in their science and practice. This AP course is designed for highly motivated 10th graders who want to begin to explore the AP curriculum and take an additional social studies credit beyond the required World and American History courses. The course is also available to juniors and seniors who meet the admission requirements. Admission standards: Grade of B+ or higher in prior AP or honors social studies course or an A in prior College Preparatory social studies course **AND** recommendation of previous social studies teacher. A summer assignment may be required for this course. Grades 10, 11, 12.

2550 AP U.S. HISTORY

Full Year 1 Credit

A college-level course for the highly motivated and talented student, this course is an intensive study of U.S. history since the Colonial Period. Intended for students who have already taken 10th grade American History, the course will be organized to emphasize pre-20th century America while also meeting the College Board expectations for the AP course. Much emphasis is placed on interpretive reading and analysis of causes and effects of events and movements throughout the nation's history. In addition to reading the textbook, the student is expected to do extensive reading and research and to lead and participate in class seminars. A significant amount of work outside of the classroom can be expected. Students may take the Advanced Placement examination in May. Admission standards: Grade of B+ or higher in American Studies honors, B or higher in previous AP Social Studies course, A in College Preparatory social studies **AND** recommendation of current social studies teacher. A summer assignment may be required for this course. Grades 11, 12.

2660 AP EUROPEAN HISTORY

Full Year 1 Credit

This college-level course is an intensive study of European History since 1450. Considerable emphasis is placed upon the interpretation and analysis of movements and events throughout the history of Europe. Along with the basic reading from the textbook, the student is expected to do library research and to participate in class seminars. Students may take the Advanced Placement examination in May. Admission standards: Grade of B+ in honors social studies course; or a B or higher in a previous AP social studies course, A in College Preparatory social studies **AND** recommendation of current social studies teacher. A summer assignment may be required for this course. Grades 11, 12.

2570 AP U.S. GOVERNMENT AND POLITICS

Full Year 1 Credit

Advanced Placement Government and Politics provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. political reality. Students may take the Advanced Placement examination in May. Admission Standards: Students must have achieved a B+ or higher in honors social studies course, or B or higher in a

previous AP course, A in College Preparatory social studies AND recommendation of a current social studies teacher. This course meets the Civics graduation requirement. A summer assignment may be required for this course. Grades 11, 12.

2590 AP MICROECONOMICS

Full Year 1 Credit

This full year course will cover basic economic concepts, the nature and functions of product markets, factor markets, and the role of government in a market economy. Admission standards: Grade of B+ or higher in honors social studies courses, B or higher in a previous AP social studies course, or a B or higher in Honors Algebra II course, an A in previous College Preparatory social studies courses and the recommendation from previous Social Studies teacher, or, at the discretion of the AP Economics teacher, a score of 80% or higher on an entrance exam. Students may take the Advanced Placement examination in May. A summer assignment may be required for this course. Grades 11, 12.

2580 AP MACROECONOMICS

One Semester .5 Credit

Macroeconomics includes the study of measurements of economic performance, such as GDP, inflation and unemployment, national income and price determination. International economics is also taught in this course. Admission standards: Grade B+ or higher in previous honors social studies course, B or higher in a previous AP social studies, A in College Preparatory social studies course and recommendation of the teacher, or a B or higher in Honors Algebra II course, or a score of 80% or higher on an entrance exam administered by the AP Economics teacher. Students may take the Advanced Placement examination in May. A summer assignment may be required for this course. Grade 12.

2670 AP PSYCHOLOGY

Full Year 1 Credit

AP Psychology is a college-level course designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Some major areas of study include: the methods and theories of psychology, the biological basis of behavior, learning and cognition, developmental psychology, personality development, abnormal psychology, and social psychology. In addition to a significant amount of reading from a college-level textbook, students are expected to complete additional readings and activities that contribute to a deeper understanding of the content. Moreover, active participation in classroom activities and discussions is essential. Students may take the Advanced Placement examination in May. Admission standards: Grade of B+ or higher in previous honors-level social studies class, or B or higher in previous AP social studies course, A in College Preparatory social studies AND recommendation of current social studies teacher. A summer assignment may be required for this course. Grades 11, 12.

2650 AP AFRICAN AMERICAN STUDIES

This year-long Advanced Placement course is an interdisciplinary course that examines the diversity of the African American experience through a variety of sources. As an interdisciplinary course, students will develop skills across multiple fields including data analysis and historical and literary thinking skills. The diversity of Black communities in the United States and contemporary issues will be placed in a broader historical and cultural context. Students will have the opportunity to take the Advanced Placement exam in the spring. Admission standards: Grade of B+ or higher in previous honors-level social studies class, or B or higher in previous AP social studies course, A in College Preparatory social studies AND recommendation of current social studies teacher. Grades 11, 12.

WORLD LANGUAGE

The World Language Department offers students the opportunity to develop fluency in two major world languages: French, and Spanish (*complete list of course sections in table below*).

Studies have shown that students who continue study of a world language (or world languages) beyond a bare minimum of two or three years, not only perform better on the World Language Achievement Tests, but generally also score higher on the verbal portion of the SAT and on tests of English composition. Most importantly, those students who continue world language study will be better prepared to live and work in the global community of the 21st century.

The President's Commission on World Language and International Studies states that "four years is considered a minimum prerequisite for usable language competence."

LEVEL I - FRENCH, SPANISH

Full Year 1 Credit

This course is the student's first complete year of world language instruction. To a great extent, the course is built around audio activities, videos, and other visuals, thus making it both audio-visual and audio-lingual. The development of proper speech patterns and elementary conversation in the language are the primary goals of this course. In addition, students are introduced to the reading, writing, and grammar of the language studied. Students dramatize dialogues and role plays and create their own skits. Cultural projects, games, and songs play an important role in the Level One course. Grades 9, 10, 11, 12.

LEVEL II - FRENCH, SPANISH

Full Year 1 Credit

In French, and Spanish II, students build upon foundations laid in the previous course. In Level Two, students increase vocabulary and comprehension. They are able to say more about a wider variety of subjects. In addition to dialogues and texts dealing with the everyday world and the student's immediate environment, texts and conversations are used that cover various aspects of geography, history, and culture of the countries and people studied. Grades 9, 10, 11, 12.

LEVEL III - FRENCH, SPANISH - HONORS

LEVEL III - FRENCH, SPANISH - COLLEGE PREP

Full Year 1 Credit

This course is open to all students who have satisfactorily completed Level Two. The third-year course continues to develop the four major language skills: listening, speaking, reading, and writing. Much of the basic grammar of a particular language will have been introduced by the conclusion of this course. A summer assignment is sometimes required for these courses. Grades 9, 10, 11, 12.

LEVEL IV - FRENCH, SPANISH - HONORS

LEVEL IV - FRENCH, SPANISH - COLLEGE PREP

Full Year 1 Credit

This course is open to all students who have satisfactorily completed Level Three. At the fourth level, students continue to develop vocabulary and oral and written comprehension. Major points of grammar are reviewed in this course. Students move from simple, highly directed conversation and composition to more complex forms. The content of the various reading texts becomes increasingly important. As students read, they gain valuable insight into the geography, history, art, music, and literature of the particular countries. Grades 10, 11, 12.

LEVEL V - FRENCH, SPANISH - HONORS

LEVEL V - FRENCH, SPANISH - COLLEGE PREP

Full Year 1 Credit

This course is open to all students who have satisfactorily completed Level Four. The fifth year course is designed to further augment student vocabulary and to increase student ability to understand as well as generate spoken and written French, or Spanish. Formal grammar instruction is limited to correcting specific problems which may exist. There is increased emphasis on the culture and civilization of the particular countries. Grades 11, 12.

LEVEL VI - FRENCH,SPANISH - HONORS**LEVEL VI - FRENCH,SPANISH - COLLEGE PREP****Full Year 1 Credit**

This course is open to all students who have successfully completed French, German, or Spanish V. It is intended for those students who wish to continue world language study through the end of their senior year. The College Prep and Honors curriculum are similar in scope, but the honors course requires more student presentations and a greater focus on student writing. The Level VI course continues to develop language skills, increase vocabulary, and refine grammar for both levels. Here students gain increased knowledge of the culture and civilization of the countries whose language they are studying. Reading, while often literary in nature, is done primarily for comprehension. Grade 12.

AP LANGUAGE - FRENCH,SPANISH**Full Year 1 Credit**

All students who have satisfactorily completed Level Five Honors or its equivalent are eligible for the Advanced Placement course. This is a college level course, for which many colleges and universities grant college credit. Students are urged to consult prospective colleges regarding credit for Advanced Placement courses. In the Advanced Placement courses, students continue to develop and refine the various language skills. Students study a small number of longer works, e.g., novels and dramas, as they prepare for the Advanced Placement Examination which is given in the spring of each year. Along with knowledge of the literature, the student develops a greater understanding of the world language, culture, and people. A summer assignment is required for the AP level Spanish Language and Culture courses. Grade 12.

AP LITERATURE - SPANISH**Full Year 1 Credit**

Those students who have successfully completed the Spanish V (Honors) course are eligible to further their studies in Spanish with the AP Spanish Literature course. The course is reading and writing intensive with a goal of critiquing students' analytical skills and broadening their scope of Spanish and Latin-American texts. This course analyzes diverse texts from the Medieval and Golden Age and the nineteenth and twentieth centuries. The reading list is comprised of poems, short stories, and chapters from larger texts. After successful completion of this course, students will have the necessary tools to analyze and appreciate Peninsular and Latin-American literature. A summer assignment is required for this course. Grade 12.

World Language Course Selections

5375 Spanish I	5175 French I
5385 Spanish II	5185 French II
5331 Spanish III H	5131 French III H
5332 Spanish III-CP	5132 French III-CP
5341 Spanish IV H	5141 French IV H
5342 Spanish IV-CP	5142 French IV-CP
5351 Spanish V H	5151 French V H
5352 Spanish V-CP	5152 French V-CP
5361 Spanish VI-H	5161 French VI-H

5362 Spanish VI-CP	5162 French VI-CP
5360 AP Spanish Language	5160 AP French Language
5370 AP Spanish Literature	

Eastern Center for Arts and Technology **2024-2025 High School Program Offerings**

Arts, Human Services and Hospitality Career Cluster

Cosmetology
Culinary Arts
Design Photography and Illustration

Business, Computer and Public Safety Career Cluster

Business and Technology Professional
Networking and Cybersecurity
Protective Services

Construction Career Cluster

Construction Technology
Electrical Technology
Heating, Ventilation and Air Conditioning

Health Sciences Career Cluster

Allied Health
Exercise Science and Rehabilitation
Veterinary Science

Transportation and Manufacturing Career Cluster

Automotive Technology
Collision Repair Technology
Robotics and Automated Technology
Welding Technology

2024-2025 PROGRAMS AT EASTERN CENTER FOR ARTS AND TECHNOLOGY

EASTERN is accredited by the Middle States Association of Colleges and Schools. The campus is located in Willow Grove and is owned by nine school districts in Eastern Montgomery County. Districts include Abington, Bryn Athyn, Cheltenham, Hatboro-Horsham, Jenkintown, Lower Moreland, Springfield, Upper Dublin and Upper Moreland. More information about EASTERN is available at www.eastech.org.

Programs taken at EASTERN are considered part of the high school program and count as elective credit toward graduation. Programs enrich the student's high school experience. They give students the opportunity to reinforce their career path after high school, get a head start in collegiate studies in that field and get ready for employment. Most of the half-day programs offer advanced placement college credit opportunities for students continuing their education after high school in similar majors.

Career programs are scheduled 5 days a week for 2 hours 45 minutes from 7:45 a.m.–10:30 a.m. or 12:00 p.m. to 2:45 p.m. in 15 career areas and are primarily offered to 11th and 12th grade students. They are recommended as a two-year sequence for students, except Allied Health, which is a senior-only option. If space is available, one-year seniors are accepted into all programs.

-A work experience program is available to qualified second-year students incorporating on-site job experiences with classroom learning.

-Many programs offer advanced placement/college credit options at colleges like Pennsylvania College of Technology, Penn State Abington, Harcum College, Universal Technical Institute and Montgomery County Community College.

EASTERN students may qualify for up to 12 free college credits through Perkins statewide articulation agreements. All statewide articulation agreements can be found at www.collegetransfer.net/Search/PABureauofCTESOARPrograms/tabid/3381/Default.aspx

Students/parents will be solely responsible for tuition and fees for MCCC dual enrollment.

Please note that there are course material fees for tools of the trade and required clothing related to several programs. Families with a financial need should contact Ferne Andre, 215-784-4800 Ext. 314, or Amy Shields at 215-784-4806.

Arts, Human Services and Hospitality Career Cluster

COSMETOLOGY

Save thousands of dollars by taking this program in high school! This two-year program will provide the skills necessary to begin a career in the cosmetology field. In Pennsylvania, as well as other states, cosmetologists must be licensed to practice in the field. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for a career as a cosmetologist. After obtaining a cosmetology license, graduates can find opportunities in occupations such as a salon, salon management, teaching, product representation, and development and design.
- Postsecondary/Advanced Placement: Students have continued their education at Bucks County Community College, Community College of Philadelphia, and Bucks County School of Beauty Culture.
- Industry Certifications: After completion of 900 hours, students can take the Pennsylvania State Board of Cosmetology licensing exam. When students pass the exam, they will receive their license at the completion of the required 1,250 hours.
- Materials and fees: Approximately \$500 - \$650

CULINARY ARTS

Don't be afraid to take whisks! Build your culinary skills and techniques at EASTERN so you can compete in this field. Students also have the potential to earn up to nine transferable college credits through a statewide articulation agreement with Montgomery County Community College. This two-year half-day program enables students to acquire a variety of

skills including soup and sauce preparation, preparation of meat, fish and poultry entrees, baking, kitchen sanitation, purchasing and inventory controls. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as a prep cook, cook, or chef. With further education and experience, students can find opportunities in occupations such as food and beverage management, grocery and retail prepared foods, country club food services, cafeteria production and fast food franchise food production.
- Postsecondary/Advanced Placement: Students have continued their education at Bucks County Community College, Culinary Institute of America, Indiana University of PA, Delaware Valley College, Johnson and Wales University, Millersville University, Montgomery County Community College, Penn State, Temple University, Walnut Hill College, and Widener University.
- Industry Certifications: Students can earn ServSafe Food Handlers certification, which is an entry-level food safety training and certificate program administered by the National Restaurant Association; ServSafe Manager certification, which is required in a food services supervisory role; and S/P2 – Culinary, which is an online certification that teaches safety, sanitation, and career readiness skills.
- Materials and fees: Approximately \$135 - \$150

DESIGN, PHOTOGRAPHY, AND ILLUSTRATION

You'll develop your own portfolio! This two-year career program covers everything from conceptual drawing and design to a professional portfolio. Students learn the value and application of their unique styles in both design and illustration and how to use industry-standard software on the Macintosh platform. Core software includes Adobe InDesign, Adobe Photoshop and Adobe Illustrator. Upon completion of the program, students will have a portfolio consisting of items for entry into their postsecondary school of choice as well as National Portfolio Day. Senior students will have their portfolios reviewed by art school representatives. One-year seniors will be considered if space is available.

- Career Pathways: The program prepares students for careers in commercial illustration, image editing and graphic design. With further education and experience, students can find opportunities in occupations such as graphic design, commercial illustration, digital imaging design, animation, computer-generated graphic art, and multimedia specialist.
- Postsecondary/Advanced Placement: Students have continued their education at Fashion Institute of Technology, Full Sail University, Hussian College, IUP, Kutztown University, Marywood University, Montgomery County Community College, Pennsylvania College of Art and Design, Penn State Abington, Temple/Tyler School of Art, University of the Arts and West Chester University. Students may qualify for advanced placement college credits at Kutztown University, Pennsylvania College of Art and Design, and Hussian College.
- Industry Certifications: Students can take the Adobe Certified Associate (ACA) certification exam in Photoshop, Illustrator or InDesign. ACA certification offers students a foundation for success by validating their digital skills.

- Materials and fees: Approximately \$125 - \$155.

Business, Computer and Public Safety Career Cluster

BUSINESS AND TECHNOLOGY PROFESSIONAL

Earn college credits and explore the possibilities of professionalism! Some of the best paying jobs in the U.S. are those that require computer skills, professionalism and communication skills. The Business and Technology Professional program will prepare students for a career in a professional business environment. In this two-year half-day program, students study the current Microsoft Office applications including Word, Excel, PowerPoint, Outlook, and other communications technologies. Students will leave the program well-versed on creating spreadsheets, composing correspondence, managing databases, creating presentations, document management and project planning/management. Students will enhance their communication, independent thinking, problem-solving, interpersonal, and soft skills. One-year seniors will be considered if space is available.

- Career Pathways: Program prepares students for entry level employment as data input specialist, customer service representative and department coordinator. . With further education and experience, students can find opportunities in occupations such as human resources, legal office manager, health records management, accounting clerk and office manager.
- Postsecondary/Advanced Placement: Students have continued their education at Clarion University, Community College of Philadelphia, Johnson and Wales University, Montgomery County Community College, Northampton Community College, Pennsylvania College of Technology and Temple University, Millersville University, Bloomsburg University and Shippensburg University.
- Business and Technology Professional students may participate in dual enrollment with Montgomery County Community College for 9 transferable college credits.
- Industry Certifications: Students will obtain Microsoft Office Specialist - Word and Excel certification and OSHA General Industry.
- Materials and fees: Year 1 - approximately \$400; Year 2 – approximately \$200. Fees are subject to change based on MCCC tuition rates. Access to a working computer (Windows) is a must.

NETWORKING AND CYBERSECURITY

Be a college student while still in high school! While in EASTERN's Networking and Cybersecurity program, you can choose to enroll in Montgomery County Community College for up to 12 transferable credits! In this two-year half day program, students must pass the TestOut Windows Server Certification in the first year of the program and are prepared for other industry certification exams. One-year seniors will be considered if space is available in the program. More and more businesses need network administrators now. Get your start here!

- Career Pathways: Program prepares students for careers in network and systems administration, and cyber security. With further education and experience, students can find opportunities in occupations such as network and computer administrator, computer network support specialist, network engineer and security.

- Postsecondary/Advanced Placement: Students have continued their education at Montgomery County Community College, Penn State Abington, Pennsylvania College of Technology, Temple University, Drexel University, and IUP. Students may participate in dual enrollment for up to 12 transferable college credits at Montgomery County Community College.
- Industry Certifications: Students can obtain, TestOut Microsoft Server, CompTIA ITF+, CompTIA A+, CompTIA Network+, CompTIA Security +, Cisco CCT, and Cisco Network Security Badge.
- Prerequisites: Strong math background recommended.
- Materials and fees: Approximately \$400-\$600 per year (includes college tuition and books). Access to a working computer (Windows) is a must.

PROTECTIVE SERVICES

Action, adventure and saving lives! You'll earn several certifications to give you a head start on careers in this field. This two-year half-day class is a multi-disciplined program developed in consultation with a countywide advisory committee of law enforcement, fire science, security professionals and post-secondary institutions. Detailed instruction is provided on leadership, criminal, motor vehicle crash and fire investigation, first responders, security systems, terrorism, firefighting, hazardous materials and emergency communications. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for careers in firefighting, security, emergency medicine, law enforcement, and corrections. With further education and experience, students can find opportunities in occupations such as fire marshal or fire line officer, police department administrator or police line officer, industrial security administrator, corrections, Emergency Medical Services (EMS), Transportation Security Administration (TSA), or commercial security administrator.
- Postsecondary/Advanced Placement: Students have continued their education at Alvernia University, Bloomsburg University, Community College of Philadelphia, Bucks County Community College, Kutztown University, Lock Haven, Millersville University, Montgomery County Community College, Penn State, Shippensburg University and all branches of the U.S. Military.
- Industry Certifications: Students can earn Hazardous Materials Awareness and Operations through testing by Bucks County Community College, and CPR, First Aid, and Emergency Medical Responder through testing by the American Red Cross or American Heart Association. Students also earn certificates in the National Incident Management System levels 100, 200, 700 and 800.
- Materials and fees: Approximately \$200

Construction Career Cluster

CONSTRUCTION TECHNOLOGY

Lay the foundation for a towering future! Get satisfaction from building projects and working with current materials used in the field to refine your construction skills. This two-year career program is the first step for students interested in pursuing a successful career in the construction field. Students will work on both residential and commercial construction in the school's lab area. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as carpenter pre-apprentice, exterior remodeling and installation, and roofing and siding. With further education and experience, students can find opportunities in occupations such as general contractor, renovations and remodeling specialist, architect, finish carpenter or specialty contractor.
- Postsecondary/Advanced Placement: Students have continued their education at Montgomery County Community College, Pennsylvania College of Technology, Penn State Abington, Thaddeus Stevens College of Technology and Williamson Trade School. Students may qualify for advanced placement college credit at Pennsylvania College of Technology or want to consider an apprenticeship program after high school.
- Industry Certifications: Students can earn Occupational Safety and Health Administration 10 certification, and S/P2 – Construction, which is an online certification that teaches safety and career readiness skills.
- Materials and fees: Approximately \$85 - \$100

ELECTRICAL TECHNOLOGY

A world without electricity is hard to imagine! Our training will provide the essential hands-on and safety skills that a student needs to pursue a rewarding career in the electrical construction industry. This two-year multi-faceted career program enables the student to learn the basics of electricity as well as residential and commercial wiring, data cabling and basic fiber optic installation and residential and commercial lighting control systems. New to the program is an Emergency Systems Demonstration area, including the operation and maintenance of a generator. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as electrician's helper, maintenance helper, or electrician upon completion of the Journeymen's certification. With further education and experience, students can find opportunities in occupations such as residential or commercial electrician, and electrical engineering.
- Postsecondary/Advanced Placement: Students have continued their education at Bucks County Community College, EASTERN's Continuing Education Electrician Program, Montgomery County Community College, Pennsylvania College of Technology, Temple University, Thaddeus Stevens College of Technology and Williamson Trade School. Students may also qualify for advanced placement college credit at Pennsylvania College of Technology or want to consider an apprenticeship program after high school.
- Industry Certifications: Students can earn their Occupational Safety and Health Administration 10 certification, Mobile Ladder Safety Articulated Ladder Safety, Single and Extension Ladder Safety, and Step Ladder Safety Training provided by the

American Ladder Institute, and S/P2 – Construction, an online certification that teaches safety and career readiness skills.

- Prerequisites: Students must have good color vision and the ability to climb moderate heights on a ladder.
- Materials and fees: Approximately \$75

HEATING, VENTILATION AND AIR CONDITIONING

A cool career in a hot industry! Everyone wants to be comfortable in their home or place of business. Maintaining proper cooling and heating are not luxuries – they are necessities. There is always a demand for these services. This two-year career program provides a comprehensive foundation of the basic theories and principles of heating, air conditioning and heat pump systems. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as heating and air conditioning installation technician, heating and air conditioning service technician, retail sales, and heating and air conditioning helper. With further education and experience, students can find opportunities in occupations such as residential heating, air conditioning and building maintenance.
- Postsecondary/Advanced Placement: Students have continued their education at Orleans Technical College, Pennsylvania College of Technology, Penn State Abington, and Thaddeus Stevens College of Technology.
- Students may also qualify for advanced placement college credit at Pennsylvania College of Technology. Through a college credit articulation agreement with University of Northwestern Ohio, students can earn up to 6 credits for Service and Procedures.
- Industry Certifications: Students can earn Occupational Safety and Health Administration 10, Tracpipe, Gastite Certification, Environmental Protection Agency Refrigerant Handling, and SP/2 - Construction, which is an online certification that teaches safety and career readiness skills.
- Materials and fees: Approximately \$95 - \$145

Health Sciences Career Cluster

ALLIED HEALTH

Be sure a career pathway in healthcare is right for you! This one-year senior-only program is designed for students with rigorous academic preparation who plan to continue their education in college to prepare for a career in the health field. Students have the opportunity to explore careers in the healthcare field through job shadowing, guest speakers, and facility tours. Opportunities are dependent upon availability of the clinical sites and speakers. This program offers the potential of earning college credits at Montgomery County Community College at a reduced tuition rate. This unique opportunity provides students with a first-hand look at the many healthcare careers available to them.

- Career Pathways: Students prepare for a career in the health field requiring postsecondary education. With further education and experience, students can find opportunities in occupations such as nurse, radiology technologist, physician's assistant and licensed practical nurse.
- Postsecondary/Advanced Placement: Students have continued their education at Bloomsburg University, Delaware State University, Villanova University, University of Pittsburgh, Gwynedd Mercy University, Holy Family University, Jefferson School of Medicine, LaSalle University, Montgomery County Community College, Penn State University, West Chester University and Widener University.
- Students can also earn up to 6 transferable credits at Montgomery County Community College through dual enrollment for Medical Terminology and Medical Law & Ethics Courses.
- Industry Certifications: Students can earn CPR, AED, and First Aid Training through the Emergency Care and Safety Institute (ECSI)
- Prerequisites:-Lab based science or AP Biology
-High level math (post Algebra II)
- Recommendations:
-High School GPA of 2.5 or higher
-No disciplinary issues at the participating high school
- Job Shadowing Requirements:
 - Physical exam
 - Police check as mandated by state law
 - Child abuse clearance
 - PPD (tuberculosis skin test)
 - Flu shot required

Materials and fees:Approximately \$350 - \$375 (not including MCCC tuition)

EXERCISE SCIENCE AND REHABILITATION

Turn your love of exercise, training, and wellness into an exciting and lucrative career! EASTERN's newest program, Exercise Science and Rehabilitation, will provide an in-depth look at the many career opportunities in this field, learn how to treat sports-related injuries and provide personal training. This program will involve studying the body under physical stress such as exercise, physical sports, or occupational therapy. This helps physical therapists, coaches, and trainers ensure the safety and health of their patients and clients. One-year seniors will be considered if space is available in the program.

- Career Pathways: Whether you choose an entry-level position, earn a bachelor's degree or certification, or continue on to medical school, there's a unique path for everyone in this field. The program will help prepare students for careers in physical therapy, athletic training, personal fitness, and sports medicine. Topics include routine rehabilitation, the roles and responsibilities of rehabilitation providers, anatomy and physiology, nutrition and wellness, and therapeutic techniques.
- Postsecondary/Advanced Placement:The employment outlook for careers in this field show continued growth. Our goal is to ensure our students are ready for a related post secondary program or able to confidently enter the field in an entry-level position. Local

related postsecondary programs are available at Thomas Jefferson University, Temple University, and Rutgers University.

- Industry Certifications: Students can potentially earn OSHA Healthcare, CPR/ First Aid, ACSM Certified Personal Trainer, and AMCA Physical Therapy Aide and the classroom preparation needed for ACSM Certified Personal Trainer (requires a high school diploma to sit for certification)
- Materials and fees: Approximately \$100 - \$375

VETERINARY SCIENCE

Turn your love of animals into an exciting career! Veterinary Science provides the opportunity to prepare for careers in the animal care industry and will provide students with a working knowledge of small animal industries. In this two-year half-day program, students will learn to support veterinarians by providing assistance during animal examinations; treatment administration and monitoring; managing animal and related health record information; and how to perform a range of selected practice-related duties. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment in pet and pet supply stores, grooming salons, kennel, animal humane societies, farms and ranches. With further education and experience, students can find opportunities in occupations such as veterinary technician, veterinary assistant, and animal research.
- Postsecondary/Advanced Placement: Students have continued their education at Harcum College, Manor College and Delaware Valley University. Students who successfully complete EASTERN's Veterinary Science program with an average grade of "B" or better may receive 3 credit hours for Harcum College's ACM 101 – Introduction to Animal Center Management.
- Industry Certifications: Students can earn Occupational Safety and Health Administration 10 – Healthcare.
- Prerequisites:
 - - Grade of 'C' or better in Algebra I and II
 - - Grade of 'C' or better in Biology or Advanced Science Course (College Prep Level)
 - - High school GPA of 2.5 or higher
 - - No Animal Allergies
 - - No disciplinary issues at the participating high school
 - - Good attendance
- Materials and fees: Approximately \$100 - \$375

Transportation and Manufacturing Career Cluster

AUTOMOTIVE TECHNOLOGY

Fast cars...great jobs! Automotive is a complex and technology-driven industry that is constantly changing. This two-year career program is designed for the student who is serious about working in the automotive industry. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as automotive technician trainee, maintenance and light repair, and under car specialist. With further education and experiences, students can find opportunities in occupations such as automotive service, engineering and design, manufacturer representative, and automotive insurance industry/damage appraisal and testing.
- Postsecondary/Advanced Placement: Students have continued their education at Automotive Training Center, Lincoln Tech, Ohio Technical College, Pennsylvania College of Technology, Thaddeus Stevens College of Technology, Universal Technical Institute, and University of Northwestern Ohio. Students have worked at dealerships that offer training/employment of students getting them right into their field. Postsecondary is particularly important if students want to pursue diesel, heavy equipment, racing, powersport or marine. Students qualify for advanced standing through an articulation agreement with Pennsylvania College of Technology. EASTERN has established college credit articulation programs with Ohio Technical College, Universal Technical Institute, and University of Northwestern Ohio.
- Industry Certifications: Students can earn Valvoline Oil, SP/2 in Automotive Service Safety, SP/2 in Automotive Service Pollution Prevention, Resume Building, and Automotive Lift Institute Certification. Students will prepare to sit for the Automotive Series exams in the ASE entry-level certification program. Students can test for a two year ASE entry level certification in 8 ASE Auto Mechanic Certifications. Students are also prepared to sit for the PA State Inspection and PA State Emissions Licenses. Per Pennsylvania State regulations, students must be 18 years old and register at an approved testing facility. Dealerships offer factory certifications to students.
- Materials and fees: Approximately \$100 - \$150

COLLISION REPAIR TECHNOLOGY

Customize your future! You'll meet industry standards to be a success in this field. A student enrolled in this two-year career program benefits from a combination of classroom instruction and hands-on experience needed to carry out repairs on motor vehicles. Students benefit

from the use of I-Car (Inter-Industry Conference on Auto Collision Repair) enhanced curriculum. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as automotive refinisher, sheet metal/cosmetic repair, frame/structural repair, and automotive refinisher's helper. With further education and experience, students can find opportunities in occupations such as automotive manufacturing representative, insurance industry damage appraisal and testing, metal fabrication, safety design engineering, and collision test engineering.
- Postsecondary/Advanced Placement: Students have continued their education at Automotive Training Center, Lincoln Tech, Ohio Technical College, Pennsylvania College of Technology, Universal Technical Institute, and WyoTech. Students may qualify for advanced placement college credit at Pennsylvania College of Technology. Through a college credit articulation agreement with Ohio Technical College, Collision Repair Technology students can earn up to two Auto Body courses.
- Industry Certifications: Students can earn PPG Refinishing, 3M Collision Repair, and SP/2, which is an online certification that teaches safety and career readiness skills.
- Materials and fees: Approximately \$130 - \$175

ROBOTICS AND AUTOMATED TECHNOLOGY

Are you inspired by innovation and new technology? In this two-year program, you will learn to design and build robotic devices and diagnose and repair state-of-the-art automated equipment. Students will perform activities and obtain knowledge in areas such as electronics, robotics, mechanical systems, fluid power systems, programmable logic controllers, and control systems. One-year seniors will be considered if space is available.

- Career Pathways: Students prepare for a career in the robotics and automated technology field or prepare for postsecondary education in mechatronics engineering. With further education and experience, students can find opportunities in occupations such as Mechatronics Technician, Mechanical Engineer, Electrical Controls Engineer, and Manufacturing Engineer.
- Postsecondary/Advanced Placement: Students can continue their education at postsecondary schools such as Montgomery County Community College, Delaware County Community College, Penn State University, Lehigh University, University of Pennsylvania, Temple University, and Widener University.
- Industry Certifications: Students can potentially earn OSHA 10-Hour General Industry Manufacturing Certification, and Universal Robotics 32 Hour ANSI/IACET Cobot certification.
- Materials and fees: Approximately \$75

WELDING TECHNOLOGY

Good welders make good money...learn how at EASTERN! This two-year career program is designed for the student who is interested in the industrial engineering field. Students will learn about the properties of different types of metals and how to join them using state-of-the-art welding equipment. One-year seniors will be considered if space is available in the program.

- Career Pathways: Program prepares students for entry level employment as combination welder and welding production assistant. With further education and experience, students can find opportunities in occupations such as mechanical, aerospace or industrial engineering, business owner, equipment sales and welding engineer.
- Postsecondary/Advanced Placement: Students have continued their education at Divers Academy International, Lincoln Tech, Penn College of Technology, and Thaddeus Stevens. Students may also qualify for advanced placement college credit at Pennsylvania College of Technology.
- Industry Certifications: Students can earn Occupational Safety and Health Administration 10 and S/P2, and students that meet program task requirements have the opportunity to take the American Welding Society D1.1 qualification test to certify them for welding on structural steel.
- Materials and fees: Approximately \$260