

UPPER MORELAND HIGH SCHOOL



Program of Studies 2009-2010

The School District of Upper Moreland Mission Statement

The Upper Moreland Township School District, in partnership with the community, will provide all students with educational opportunities to develop knowledge, skills, and behaviors necessary for excellence and success as critical thinkers, as caring and confident individuals, and as contributing members of society.

School District Of Upper Moreland

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Willow Grove, PA 19090

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Howard Cohen, School Psychologist

**Upper Moreland High School
3000 Terwood Road
Willow Grove PA 19090**

Dear Students:

The Program of Studies has been developed in order to assist you in developing your plan for courses for the next school year. Used properly, this document will guide you in selecting the courses you need to take to meet graduation requirements, college admissions, occupational objectives, and/or vocational interests.

In planning your educational program, you and your parents should closely review all aspects of this booklet and arrive at a decision that that best fits your abilities, interests, and needs. In order to encourage educational growth, students should select a curriculum that is both rigorous and relevant. Education is a cooperative responsibility of all concerned and the staff at Upper Moreland High School is prepared to counsel and advise you during this process. The Upper Moreland Township School District recognizes that the educational needs of the 21st Century are quite different than those of just a few years ago. The explosion of information now available to us has had a dramatic impact on every aspect of our lives. With that in mind we have implemented a framework that continuously examines our curriculum and course offerings. As you will see as you look through this document, we are making every effort to address the standards necessary to be successful in the 21st Century.

Since our staffing needs at the high school are predicated upon course selection, it is extremely important that this process be given appropriate time effort and planning on the part of each student and his/her family. Your selections are a commitment to specific courses; our expectation is that these commitments be honored.

Since requests for schedule changes will be honored only in unusual circumstances, with administrative approval, it is important that serious thought and consideration be given to your selection.

Sincerely,

Robert J. Eckley Ed. D.
Upper Moreland High School Principal

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INTRODUCTION

This *Program of Studies* is a valuable reference for students, parents, and school personnel actively involved in program planning at Upper Moreland High School. It is a complete guide to the course offerings at UMHS for the 2009-2010 school year and is used throughout the scheduling process.

The Scheduling Process

The scheduling process for the ninth, tenth and eleventh grade students at the high school begins in January when the core academic teachers are asked to make recommendations for students in each of their classes for next year. Students then meet individually with their assigned counselors and administrators to review the current edition of the *Program of Studies*. Critical information such as prerequisites, course content, suggested pathways and electives are reviewed as well as critical timelines. The levels and other specific information are explained and new courses and changes from the previous year are highlighted. Students and their parents are encouraged to review the *Program of Studies*, which is published on the school website, www.umtsd.org.

The next step in the process involves individual appointments with the counselors and the students and their families. Parents are encouraged to notify the counselors if they are unable to keep the scheduled appointments and re-schedule a more convenient time. The course selection process requires thoughtful consideration as the course selections are considered firm decisions which reflect course requirements, special interests and future career plans.

At this same time course selection sheets are distributed to the students' current academic teachers to begin making recommendations for next year's selections. The students' electives and agreed upon course of study is the foundation for the students official roster which will be finalized over the next few months. Students are asked to request the required courses they need based on special interests or career plans. The counselors will ask the students to identify alternatives to their primary electives in the event that conflicts and availability limit their first choice. Final course requests are mailed to the students once the process is complete and final schedules are mailed prior to the beginning of the next school year.

Eighth grade students in our Middle School participate in a similar process. The administrators and counselors from the high school go to the middle school and meet with the 8th grade teachers, administrators and counseling staff to describe the course selection process and to explain any changes or additions to high school programming relevant to the process. Eighth grade teachers are given a recommendation sheet and asked to recommend placements for students in the core classes according to the students' abilities, effort and interests.

During the Course Selection night, the scheduling process is explained to the students and their families including the graduation requirements, course sequencing, leveling and grading. Middle school parents and their students are encouraged to schedule an appointment to meet with their counselor at the high school. Just as with other high school students, the incoming 9th graders receive a copy of their course requests and a final schedule prior to the beginning of school.

Families new to the district or current residents transferring into our high school from private placements meet with a counselor during the summer months to develop their student's planned course of study. When possible, every attempt will be made to involve the assigned counselor. New enrollees are expected to bring academic records including grade reports and standardized testing results to assist counselors in making the best choices for these students.

Definition of Academic Levels

Upper Moreland High School offers classroom instruction on various levels to accommodate all students in Language Arts, Mathematics, Social Studies and Science classes. Instructional levels are determined on the basis of teacher recommendation, academic profile and standardized test scores.

The academic level categories are as follows:

- Advanced Placement (AP): The most academically demanding course level possible. Successful completion of the course may eventually lead to college credit. Enrollment is highly selective and an additional 10% weighted credit is applied. Students are expected to take the related AP examination in May.
- Honors (H): Honors courses require a high level of academic maturity, interest, ability, reading and study skills. The pace is rigorous, and enrollment is selective. An additional 10% weighted credit is applied.
- College Preparatory (CP): College preparatory courses that have higher academic demands and requirements than those that offer a core academic curriculum.
- Academic: Courses that provide students with the academic opportunities to master the PA Academic Standards associated with the content.

Determining Credit Value

Courses that meet for one period each day, five days per week, for the entire year have a value of one (1) credit. Courses that meet for one period each day, five days per week, for one semester or one period each day on everyother day for the full year have a value of one-half (.5) credit.

Grade Reporting Process

Report cards are issued on a quarterly basis and are based on classwork, assignments, and examinations. Each quarter represents 20 % of the final grade with the midterm exam and the final exam each representing 10 %. AP and Honors level courses will be increased by 10% in order to compute class rank and honor roll.

The marking scale is:

90-100	=	A
80-89	=	B
70-79	=	C
60-69	=	D
≤ 59	=	F
WP	=	Withdrawn passing
WF	=	Withdrawn failing
I	=	Incomplete

Make Up for Failing A Course – Remedial Summer School/Tutoring

Upper Moreland High School does not conduct a comprehensive summer school program. Students who fail a course may take credit courses at a pre-approved school or through a private appropriately certified

tutor. Any student receiving a final grade of "F" and having a final percentage grade between 40 and 59 may earn credit through remediation. Students falling into this category must attend 60 hours of Summer School or 30 hours of individual tutoring.

Original Credit Summer School

Students interested in gaining original credit in a summer school course for purposes of remediation or enrichment must attend 120 hours of Summer School or 60 hours of individual tutoring.

Grade Transfer Procedures for Courses Added or Dropped

Any changes involving course selection have a critical impact on staffing, scheduling and instructional delivery and therefore will only be done when it is absolutely necessary. Students and parents have multiple opportunities to meet with the guidance counselor and discuss their students' plans from the beginning of this process through the end of the school year. The actual deadline for completion of any student generated changes to schedules is June 10th, 2009. **After this date no changes can be made.** Teacher or counselor generated changes, involving movement from course to course, level to level, or teacher to teacher, may occur during this first three weeks of the academic year. Students will not carry the grades from the dropped course into the added course. After the first marking period, if a student is moved from level to level within the same course or from one course to a different course upon a teacher's recommendation, that student's transcript will indicate a *Withdraw Passing (WP)* or *Withdraw Failing (WF)* for the dropped course. The student will not carry the posted grade into the added course and a *No Grade(NG)* will be indicated for the first marking period. The remaining marking period grades will be assessed accordingly. For all 12th grade students, all schedule changes will be reported immediately to all colleges to which they applied.

Scheduling Requirements per Day

The minimum number of course periods per day and the maximum number of open periods per day into which a student must be scheduled are as follows:

<u>Grade</u>	<u>Min # per day</u>	<u>Max # per day</u>
09	7 courses	0 opens
10	7 courses	0 opens
11	6 courses	1 open
12	6 courses	1 open

Students Planning to Participate in College Athletics

High school students who plan to participate in Division I or Division II athletics as college freshmen must be certified by the NCAA. These students should start the NCAA Eligibility Clearinghouse certification process on line at the end of their junior year in high school. For more information on NCAA eligibility requirements, contact your Counselor, the Director of Athletics or visit the NCAA Clearinghouse Website at www.ncaa.org.

Typical Scheduling Requirements for 2009-2010

<u>Grade 9 – Course Requirements</u> 1.0 Language Arts 9 1.0 World History 1.0 Mathematics 1.0 Science 1.0 World Language or elective 1.0 Elective 0.50 P.E. 9 0.50 Health	<u>Grade 10 – Course Requirements</u> 1.0 Language Arts 10 1.0 US History I or AP US History 1.0 Mathematics 1.0 Science 1.0 World Language or elective 1.0 Elective 0.50 P.E. 10 0.50 Health.
<u>Grade 11 – Course Requirements</u> 1.0 Language Arts 11 1.0 US History II or AP US History II 1.0 Mathematics 1.0 Science 1.0 World Language or elective 1.5 Elective 0.50 P.E. 11 (one open period is permitted)	<u>Grade 12 –Course Requirements</u> 1.0 Language Arts 12 0.50 P.E. 12 0.50 Graduation Project 5.0 Electives or any graduation requirements not yet completed (one open period is permitted)

Requirements for Graduation

To earn a Pennsylvania endorsed high school diploma from Upper Moreland High School a student must fulfill the following **minimal** requirements:

- Satisfy one of the following School District of Upper Moreland PSSA requirements:
 - Score “Proficient” or “Advanced” on Reading and Mathematics at the first administration of the PSSA
 - Take the UMHS PSSA course in Reading and/or Mathematics and score “Proficient” or “Advanced” on the State Re-Test or District designed PSSA Test
 - Complete and pass the UMHS PSSA course in Reading and/or Mathematics.

Subject	Credits	Subject	Credits
Language Arts	4	*Electives/World Language	7.5
Social Studies	3	Physical Education	2
Mathematics	3	Health	1
Science	3	Graduation Project	.5
Total Required			24

** Includes World Languages courses (two or more years of the same language taken at the high school are strongly recommended for all college bound students; three or more years are strongly recommended for students who are seeking matriculation at highly competitive colleges or universities).*

Course Offerings in

LANGUAGE ARTS

The Integrated Language Arts program at Upper Moreland High School consists of a four-year, sequential and cumulative program designed to produce effective readers, writers, and speakers. Courses emphasize the standards of literacy measured by local assessments, PSSA's, SAT's, and other standardized tests. A graduate of Upper Moreland High School, having been through the Language Arts program, should have developed a life-long appreciation of the written and spoken word and should reflect the skills of literacy necessary for success.

Of the credits required for graduation, four must be earned in Language Arts. Therefore, every student must schedule Language Arts each year. Levels may be changed from year to year; i.e., as their performance improves, students may move to a more challenging level. In addition to the required sequences of courses in grades 9-12, electives may be chosen at each grade level.

NINTH GRADE LANGUAGE ARTS

Academic **Credit: 1.0**

This course assists students in the basic skills of writing with an emphasis placed on sentence and paragraph development through the process approach to writing. An ongoing vocabulary program that emphasizes reading comprehension is initiated. Reading full-length novels and/or plays, as well as selected short works emphasizing character, plot, setting, and theme is required. An oral presentation is required.

NINTH GRADE LANGUAGE ARTS College Preparatory

Credit: 1.0

This course introduces an intensive process-driven writing program, which teaches the student to vary sentence structure and to combine sentences into coherent paragraphs. This course also initiates a four-year vocabulary program designed for the student who may pursue educational opportunities beyond high school. The reading of selected short stories, poems, and essays, as well as novels and full-length plays, one of which is Shakespearean, is required. An oral presentation is required.

NINTH GRADE LANGUAGE ARTS Honors

Credit: 1.0

This course is the first part of an accelerated four-year sequential program designed for superior students. Concepts and the structure of knowledge is emphasized rather than informational content. Extensive reading is

required in the genres of world literature. A process approach to writing demands that

numerous writing experiences are provided, including a specific research project, determined by the teacher, which necessitates the mastery of basic grammatical and vocabulary skills. An oral presentation is required. Prerequisite readings are required.

TENTH GRADE LANGUAGE ARTS

Academic **Credit 1.0**

This course utilizes a process approach to concentrate on the basic skills of writing, with an emphasis on paragraph development. The vocabulary program that emphasizes reading comprehension is an integral part of this course. The researched speech, with an outline and bibliography, teaches the delivery of the speech. Reading full-length novels and/or plays and selected short stories is required.

TENTH GRADE LANGUAGE ARTS College Preparatory

Credit: 1.0

This course focuses on a process-directed approach which teaches the student to combine paragraphs into the multi-paragraph essay. The researched speech, with an outline and bibliography, is introduced and the delivery of the speech is taught. The vocabulary program, with an emphasis on standardized test performance, is continued. The reading of selected short stories, poems, essays, novels, and

full-length plays, one of which is Shakesperean, is required.

TENTH GRADE LANGUAGE ARTS Honors

Credit: 1.0

This course is the second part of an accelerated four-year sequential program intended for the superior student. It requires extensive reading and identifies major themes in the genres of world literature. The five-paragraph essay is introduced and grammatical and stylistic concepts are presented. The researched speech, with an extensive outline and extensive bibliography, is introduced and the delivery of the speech is taught. Prerequisite readings are required.

ELEVENTH GRADE LANGUAGE ARTS

Academic

Credit: 1.0

This course focuses on a process approach to writing which teaches the student to combine paragraphs into the multi-paragraph essay in preparation for the term paper. The vocabulary-reading comprehension program is continued in this course. Interacting with text through the reading of full-length novels and/or plays and selected shorter readings is a part of this course. An oral presentation is required.

ELEVENTH GRADE LANGUAGE ARTS College Preparatory

Credit: 1.0

This course continues the focus on a process-directed intensive writing program, with an emphasis on critical thinking and writing in preparation for the critical research paper. Public speaking skills are reinforced by requiring an oral presentation of the critical research paper. Verbal aptitude skills, in a continuation of the vocabulary program, are stressed. A survey of American literature is emphasized. The reading of representative prose and poetry selections, including novels and full-length plays, one of which is Shakesperean, is required.

ELEVENTH GRADE LANGUAGE ARTS Honors

Credit: 1.0

This course is the third part of an accelerated four-year sequential program for the superior student. Extensive reading in the major genres of American literature is required. The continuation of the process approach to writing

develops mastery of the critical essay in both prepared and impromptu assignments, including the comparison/contrast essay. Grammar and vocabulary of the P.S.A.T. preparation program and a challenging supplementary vocabulary program are covered. Mandated is the completion of a critical term paper on the work of an American author of the student's choice. Public speaking skills are developed through an oral presentation of the critical research paper. Prerequisite readings are required.

TWELFTH GRADE LANGUAGE ARTS

Academic

Credit: 1.0

This course continues the process approach to writing with an emphasis on the multi-paragraph essay in preparation for the writing and oral presentation of the career research paper. The vocabulary-reading comprehension program is continued. Full-length novels and/or plays, including Shakespeare's Macbeth, and selected shorter readings are required.

TWELFTH GRADE LANGUAGE ARTS

College Preparatory

Credit: 1.0

This course continues the critical thinking and process approach to writing with an emphasis on the mastery of research techniques and composition skills to be demonstrated in the writing of a formal research paper. The intensive vocabulary program is continued and offers further refinement of oral communication skills. In-depth study of selections from British literature, including novels and full-length plays, one of which is a work of Shakespeare, is required.

TWELFTH GRADE LANGUAGE ARTS

Advanced English Composition Honors

Credit: 1.0

This course emphasizes a mastery of grammar. The study of vocabulary is continued as the student is involved in an intensive program of writing and revising the types of compositions most often required of a first-year college student. Emphasis is placed on the process approach to writing and the development of critical thinking skills with papers based primarily on assigned readings in contemporary literature. The mastery of research techniques and writing skills as demonstrated in the writing of a formal research paper are stressed.

An oral presentation of the paper is required. Prerequisite readings are required.

TWELFTH GRADE LANGUAGE ARTS

Advanced Placement English

Credit: 1.0

Students in this course study the fundamental critical process. They also examine evolving narrative, lyrical and dramatic forms. The course focuses on specific literary genres and nuances of style. Students refine their oral and written communication skills. This course will help prepare students to take the Advanced Placement Exam for English. Prerequisite readings are included.

ENGLISH AS A SECOND LANGUAGE (ESL)

Credit: 1.0

ESL is a course exclusively designed for students in grades 9-12 who are foreign born or whose native dominant language is not English. The primary focus of this course is to develop social and academic language skills in the areas of listening, understanding, speaking, reading, and writing English. In addition, ESL emphasizes and develops an appreciation of America's rich history and diverse culture. Students will receive formal classroom instruction and assistance with academic content areas and standardized tests.

ENGLISH (LEARNING SUPPORT)

9, 10, 11, 12

Credit : 1.0

This English course parallels the material and content provided through the academic English courses taught in grades 9 - 12. It follows the scope and sequence of each grade level course while meeting the individual needs of each student as described in his/her IEP. **Prerequisites: IEP Recommendation**

ENGLISH (EMOTIONAL SUPPORT)

9, 10, 11, 12

Credit: 1.0

This English course parallels the material and content provided through the academic English courses taught in grades 9 - 12. It follows the

scope and sequence of each grade level course while meeting the individual needs of each student as described in his/her IEP. It will also provide a behavior management component to address the needs of each student as described in a current IEP. **Prerequisites: IEP Recommendation**

ENGLISH (FUNCTIONAL LEARNING SUPPORT)

9, 10, 11, 12

Credit: 1.0

This course works on developing and improving fundamental skills in writing. This course also focuses on developing and enhancing daily living skills to create functional citizens within the community. This course is designed to help students become active, successful citizens within the community. **Prerequisites: IEP recommendation**

READING (LEARNING SUPPORT)

9, 10, 11, 12

Credit: 1.0

In this course, skill development is promoted through the Reading/Writing Connection. The program is created to fit the students' reading and writing needs as identified in his/her Individual Education Programs. Instruction stresses various levels of comprehension and vocabulary as well as critical, inferential and interpretive reading strategies. Because the program emphasizes skill building and continuous progress, a student may take this course more than one time.

Prerequisites: IEP recommendation

READING (FUNCTIONAL LEARNING SUPPORT) 9,10,11,12

Credit: 1.0

This course works on developing and improving fundamental skills in reading. This course also focuses on developing and enhancing daily living skills to create functional citizens within the community. This course is designed to help students become active, successful citizens within the community.

Prerequisites: IEP Recommendation

Language Arts Electives

In addition to the required Language Arts course sequence in grades 9-12, students may choose additional or alternative courses from the following electives:

LANGUAGE ARTS Effective Oral

Communications **Credit 0.5**

Students prepare for various public speaking engagements with constant, varied practice. Students are introduced to speech rubrics and continue to apply concepts from Language Arts courses to projects.

LANGUAGE ARTS Effective Written

Communications **Credit: 0.5**

This course focuses on the elements of effective writing in various genres including journalism, creative writing, and technical writing. Preparation, practice, and publishing are elements of the course.

COMPREHENSIVE READING STRATEGIES FOR CONTENT READING

Credit: 0.5

This course is recommended for students interested in bolstering their college level vocabulary and critical reading skills. Students will learn strategies for learning to learn, effective study, and successful test-taking. Computer resources will be used to supplement class instruction. Students will compile a portfolio of essays suitable for college admission applications. This course is recommended for students who intend to pursue post-secondary education.

READING/WRITING **Credit: 0.5**

In this course, skill development is promoted through the Reading/Writing Connection. An individual program is created to fit the students' reading and writing needs, as evidenced through diagnostic testing. Instruction stresses various levels of comprehension and vocabulary as well as critical, inferential and interpretive

reading and writing. Writing is enhanced through strategies and in computer application. Students preparing to take PSAT and SAT may request practice in high-level comprehension, vocabulary and analogies test strategies. Because the program emphasizes skill building and continuous progress, a student may take this course more than one time.

SAT PREPARATION (VERBAL)

Credit: 0.25

This course is recommended for students interested in improving their SAT scores and their test-taking strategies. Emphasis will be placed on the SAT Reasoning test. This course will include enriching vocabulary, utilizing root words, prefixes, enhancing critical reading strategies, and strengthening skills for recognizing and solving analogies and sentence completions.

NOTE: This course alternates on an A/B schedule with the SAT Math course. (Total combined credit = .50)

PSSA READING ADDITIONAL SUPPORT

Credit: 0.25

This course is a required course for non-IEP students who scored below the "proficient" level on the April, 2009 11th grade PSSA reading test. Twelfth grade students will be enrolled in this course as test results are received by the High School in July, 2009. Students attending this course will receive additional support to help them master the Pennsylvania Academic Standards for Reading.

NOTE: This course alternates on an A/B schedule with the PSSA Math Support course when needed. for a total combined credit of .50)

Course Offerings in

SOCIAL STUDIES

The goal of the Social Studies Program at UMHS is to develop citizens who will be able to participate in a culturally diverse, democratic, global society. The Social Studies Program provides an integrated study of history, geography, civics, economics, and related social science disciplines. The program emphasizes active learning strategies, research and inquiry skills, as well as critical thinking, reading, and writing. A wide variety of electives is offered so that students may explore areas of interest in the various social studies.

Students who are interested in pursuing studies in the humanities after high school are strongly encouraged to consider selecting an elective path that consists of related elective courses geared towards specific fields in the social sciences. All Social Studies electives are open to all students who meet the grade level and academic pre-requisites.

Required Social Studies Course Sequence

To satisfy graduation requirements, students must earn three credits in the core courses, which consist of one course in modern World History, and two courses in post Civil War United States History. These credits must be earned in an established three year sequence of the core courses.

Grade 9	Grade 10	Grade 11
World History College Preparatory or World History Honors	U.S. History I College Preparatory or U.S. History I Honors or *AP US History (Part I)	U.S. History II Academic or U.S. History II College Preparatory or U.S. History II Honors or *AP US History (Part II)

* Advanced Placement United States History is offered as a two year sequential course that may be taken in lieu of *U.S. History I* and *U.S. History II*. Any student who elects this option must complete the sequence to receive the mandatory two credits in American History. Students enrolling in this course are strongly encouraged to participate in Advanced Placement Testing at the conclusion of the two-year sequence.

Electives - All electives are open to the students in the indicated grade level.

9 th Grade	10 th Grade	11 th Grade	12 th Grade
Criminology and the American Justice System	Criminology and the American Justice System	Criminology and the American Justice System	Criminology and the American Justice System
Conflict and Society	Conflict and Society	Conflict and Society	Conflict and Society
History Through the Media	History Through the Media	History Through the Media	History Through the Media
The American Political System	The American Political System	The American Political System	The American Political System
	Macroeconomics and Personal Finance	Macroeconomics and Personal Finance	Macroeconomics and Personal Finance
	A.P. European History	A.P. European History	A.P. European History
	General Psychology	General Psychology	General Psychology
	Contemporary Issues	Contemporary Issues	Contemporary Issues
		AP Psychology	AP Psychology
		A.P. U.S. Government and Politics	A.P. Government and Politics
			Research Methods in Psychology

Interest Pathways - All electives are open to the students in the indicated grade level. If a student has a special interest in Behavioral Science, Public Administration, or History, he/she can select electives from a pathway that will provide courses that focus on his/her interest.

History Pathway	Public Administration Pathway	Behavioral Science Pathway
A.P. U.S. History I and II	A.P. U.S. Government and Politics	A.P. Psychology
A.P. European History	American Political System	Research Methods in Psychology
History in the Media	Criminology and the American Justice System	General Psychology
Conflict and Society	Macroeconomics and Personal Finance	Criminology and the American Justice System
	Contemporary Issues	

WORLD HISTORY-Industrialization to the Present (Grade 9, College Preparatory)

Credit 1.0

This course focuses on world history from circa 1770 to the present. Topics covered in this course will include Industrialization, Nationalism, Imperialism, and Totalitarianism. Connections will be made between the events of this time period to present events. The role of geography, economic development, and governmental systems will be integrated. Students will be able to analyze social studies information presented, identify cause and effect relationships, and provide defensible explanations for modern events based on past experiences.

WORLD HISTORY – Industrialization to the Present (Grade 9, Honors)

Credit: 1.0

This course focuses on world history from circa 1770 to the present. Topics covered in this course will include Industrialization, Nationalism, Imperialism, and Totalitarianism. Connections will be made between events of this time period and the present. The role of geography, economic development, and governmental systems will be integrated. Students will be expected to analyze social studies information presented, identify cause and effect relationships, and provide explanations for modern events based on past experiences. Students will be able to synthesize the information into defensible positions regarding past and present events, and to formulate plausible predictions.

U. S. HISTORY I - Industrialization to the End of World War II (Grade 10, College Preparatory)

Credit: 1.0

This course focuses on the history of the United States from 1877 to 1945. Topics covered in this course include American industrialization, Interventionism vs Isolationism, new citizens, the changing role of government, and the transformation of American culture. Connections will be made between the events of this time period and the present. The role of geography, economic development, and governmental systems will be integrated. Students will be able to analyze social studies information presented, identify cause and effect relationships, and provide explanations for modern events based on past experiences.

U.S. HISTORY I - Industrialization through World War II (Grade 10, Honors)

Credit: 1.0

This course focuses on the history of the United States from 1877 to 1945. Topics covered in this course include American industrialization, intervention vs. isolationism, new citizens, the changing role of government, and the transformation of the American culture. Connections will be made between the events of this time period and the present. The role of geography, economic development, and governmental systems will be integrated. Students will be able to analyze social studies information presented, identify cause and effect relationships, and provide explanations for modern events based on past experiences. Students will be able to synthesize historical information into defensible positions regarding past and present events, and to formulate plausible predictions.

Note: AP US History can be taken in lieu of the Honors level course to meet the 10th grade requirement in Social Studies.

Social Studies Electives

In addition to the required Social Science course sequence in grades 9-11, students may choose additional courses from the following electives:

Advanced Placement Electives

Advanced Placement electives offered by the Department of Social Studies are designed to provide students with the information needed to prepare for the Advanced Placement examinations. The course work – which includes classroom presentation, reading materials, analysis papers, and other projects is intended to give the student academic experiences similar to those that are found at the college level. Only students who have a sincere interest in the subject matter and who are willing to put in the time and effort that a rigorous academic program requires should consider taking Advanced Placement courses. All students who take an Advanced Placement course are encouraged to take the Advanced Placement exam.

ADVANCED PLACEMENT UNITED STATES HISTORY I & II

Credit: 1.0

A.P. U.S. History is a comprehensive survey of U.S. history from Columbus to the present. In order to provide for a more in-depth examination of the key events and experiences in American history the Advanced Placement U.S. History program is divided into two parts: A.P. U.S. History I, which will cover the colonization of America to Reconstruction, and A.P. U.S. History II, which will cover the post Reconstruction era to the present. While students will be exposed to the breadth of US history, they will also be cognizant of the recurring themes of freedom, equality, competing visions of American society, federal versus states rights and change versus continuity. The AP US History course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with American History. Students will be able to analyze primary and secondary documents, identify cause and effect relationships and formulate predictions based on past events. An important component of the class is the critical reading of historical interpretations usually generating lively class discussions. The A.P. United States History program will prepare the students to take the Advanced Placement United States History Exam. This course meets the 10th and 11th grade core requirements in U.S. History.

ADVANCED PLACEMENT UNITED STATES GOVERNMENT & POLITICS

Credit: 1.0

This course will provide students with a comprehensive understanding of the functions and operation of the various layers of government of the United States of America. The student will develop analytic perspectives for interpreting, understanding, and explaining past and current political events in the United States and, to some extent, the world community. To accomplish these goals students will examine the following topics: The Role and Workings of Government Within the Context of Society, Constitutional Underpinnings of the American Political System, Political Beliefs and Behaviors, Political Parties and Interest Groups, The Institutions of the National Government, The Creation and Implementation of Public Policy, and Civil Rights & Civil Liberties. The A.P. United States Government and Politics course will prepare the student to take the Advanced Placement exam.

ADVANCED PLACEMENT EUROPEAN HISTORY

Credit: 1.0

This course offers an in depth examination of European History from the Renaissance to the modern era. Topics of study include the Renaissance, the Protestant Reformation, the Age of religious wars and Counter Reformation, the rise of absolute monarchies, the Age of Reason and Enlightenment, The French Revolution and Napoleon, the Age of Revolutions, the Industrial Revolution, the rise of European nationalism and expansionism, World War I, the rise of Fascism,

World War II, the Cold War, and modern Europe. The role of geographic, social, economic, and political development will be integrated into the topics covered. The Advanced Placement European History course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with European history. Students will be able to analyze primary and secondary documents, identify cause and effect relationships, and provide explanations for current issues facing European people based on past experiences. Students will be able to synthesize information into defensible positions regarding past events, and to formulate plausible predictions based on past events. Students will be able to present reasons and evidence clearly and persuasively in essay format. Students who complete the Advanced Placement European History course are encouraged to take the Advanced Placement European History exam.

ADVANCED PLACEMENT PSYCHOLOGY

Credit: 1.0

The Advanced Placement Psychology course is designed to introduce students to the systematic and scientific study of behavior and mental processes of human beings and other animals. The course content reflects a rigorous college introductory course covering a broad range of topics in psychology as well as specific methods used by psychologists in their science and practice. Students will be involved in original research using naturalistic observations, experimentation, interview, or survey by random sampling. The course is designed to give students analytical and interpretive skills with college level journal reading. Students will be prepared for the Advanced Placement exam given in May.

Prerequisite: Students must be recommended by core Social Studies teacher.

Behavioral Science Electives

In addition to the core social studies course sequence in grades 9-11, students may choose additional or alternative courses from the behavioral science pathway:

CRIMINOLOGY AND THE AMERICAN JUSTICE SYSTEM (College Preparatory)

Credit: 1.0

This course has as its focal point the study of crime and deviant behavior in society. Topics covered in this course include: deviance, types of crime, (violent, white collar, victimless, etc.) criminal psychology, the criminal justice system, issues in juvenile justice, the prison system, and crime scene investigation. Connections will be made between the material being studied in class and the students' everyday lives. Students will be able to analyze primary source information presented, identify cause and effect relationships, and provide explanations for current criminal justice issues facing the United States.

GENERAL PSYCHOLOGY (College Preparatory)

Credit: 1.0

During the first half of the course the students study how human society relates to social groups (family, peers, social, etc.) The second half of the course deals with the social aspects of the individual and how the group affects the behavior of the individual. This will be an

introductory course in which major fields/aspects of this subject will be viewed. Improving observation skills will be emphasized. Students will be kept abreast of current research and theory. Students are able to directly apply knowledge gained from this class to their daily lives. The development of a portfolio on self-concept is a component of the course.

RESEARCH METHODS IN PSYCHOLOGY

(Honors)

Credit: 1.0

The course is designed in two parts: First, students will be assisting researchers at a major university in Philadelphia in their quest to measure the ability levels of those with normal brains so the data can be compared to those with abnormal brains. This course provides a unique opportunity for both institutions. High school students will be involved in conducting research, analyzing data, and presenting their findings. Second, this course focuses on the theoretical and practical experience with original research. Students will actively participate in every aspect of the research process

including: problem recognition, research methodology and execution, thesis composition, theoretical/practical application, professional presentation and defense. This course will include the ethical implications in research. This course parallels college courses in research.

Prerequisite: Currently is enrolled in Advanced Placement Psychology or has completed Advanced Placement Psychology. It is also suggested that students consider taking general statistics or Advanced Placement Statistics.

Public Administration Electives

In addition to the core social studies course sequence in grades 9-11, students may choose additional or alternative courses from the public administration pathway:

CONTEMPORARY ISSUES IN SOCIETY (College Preparatory) Credit: 0.5

The focus of this course is an in-depth study of issues in today's society. Topics covered in this course include political and social controversies such as immigration policy, the role of the United States in world affairs, terrorism, and the election cycle. Students will be able to analyze information presented, identify cause and effect relationships, and provide explanations for current issues facing the United States and the world. Students will be able to research and debate the headlines of the day. Students will be able to develop policy statements in response to current challenges facing the American people.

THE AMERICAN POLITICAL SYSTEM (College Preparatory) Credit: 0.5

In this course the students will study the political system of the United States through an in depth examination of the Constitution. Topics will include: the philosophical backgrounds of the American political system, the Constitutional Convention, the structure of the American government: Articles I – III,

American federalism, the workings of the three branches of government, and civil rights and responsibilities.

MACROECONOMICS AND FINANCE (College Preparatory) Credit: 1.0

In this course, students will examine the basic economic principles that go into the formation of economic policy including taxation, fiscal policy, monetary policy, and economic indicators. The students will examine the basic tools of finance, such as the banking system, the stock market, real estate, and other investment tools. The goal of the course is to provide the students with an understanding of how the government develops economic policies, where their money will go as they enter the world of work, and how to develop strategies to prepare for their economic future.

Course offerings in

MATHEMATICS

Three of the credits required for graduation must be earned in mathematics. Each student is expected to schedule a course appropriate to his/her level of achievement and vocational interests. A student should select the course that is most appropriate to his/her current math skills. It is strongly recommended by the department that all students have their own calculator. Because of the personal and professional challenges that will face the UMHS graduates, the Mathematics Department encourages all students to keep mathematics in their high school program all four years.

Note: Any student scheduling math courses at the Algebra II level or higher must have their own graphing calculator (TI 83 or TI 84) Parents of students for whom this represents a true financial hardship should contact the building Principal.

Typical Four Year Mathematics Course Sequences

<u>Grade 9</u>	<u>Grade 10</u>	<u>Grade 11</u>	<u>Grade 12</u>
Geom (H)	Analysis & Trig (H)	AP Calculus AB Calculus (H) Pre-Calculus (CP)	AP Calculus AB AP Statistics
Alg II (H)	Geom (H)	Analysis & Trig(H)	AP Calculus AB Calculus (H) AP Statistics Statistics (CP) Pre-Calculus (CP)
Alg II (CP)	Geom (CP)	Analysis & Trig(CP)	AP Calculus AB Calculus (H) AP Statistics Statistics (CP) Pre-Calculus (CP)
Alg I	Alg II (CP)	Geom (CP)	Analysis& Trig(CP) Statistics (CP)
Integrated Algebra I	Integrated Algebra II	Integrated Geometry	Analysis & Trig(CP) Statistics (CP)
Problem Solving I	Problem Solving II	Consumer/ Career Tech	

PROBLEM SOLVING I Credit: 1.0

This course is designed primarily for students in ninth grade. The Problem Solving sequence emphasizes applications in real world situations. Topics for this course include using a calculator for computations and applications; learning problem solving techniques, estimating answers; using graphs, charts, tables; using ratios and proportions; introduction to two and three dimensional shapes, operations with signed numbers and solving one and two operation equations.

PROBLEM SOLVING II Credit: 1.0

The Problem Solving sequence emphasizes applications in real-world situations. Topics for this course include using formulas, using exponents and roots, solving equations, probability, statistics, and right triangle trigonometry.

Prerequisites: Successful Completion of Problem Solving I.

INTEGRATED ALGEBRA Credit: 1.0

The design of this course is to introduce algebra and geometry topics and to develop an understanding of the fundamental concepts of algebra. The course includes the language and symbolism of algebra, numbers and operations, probability and statistics, and measurement strands integrated throughout. Problem-solving strategies are ongoing throughout the course.

Prerequisite: Successful completion of Pre-Algebra

INTEGRATED ALGEBRA II Credit: 1.0

This course develops algebra and geometry topics. Numbers and operations, probability and statistics, and measurement strands are integrated throughout. It also introduces systems of equations, quadratics, radicals, and matrices. Problem solving strategies are ongoing throughout the course.

Prerequisite: Successful completion of Integrated Algebra I or less than proficiency in Algebra I.

INTEGRATED GEOMETRY Credit: 1.0

This course reinforces algebra and geometry topics. Numbers and operations, probability and statistics, and measurement strands are integrated throughout. It develops an understanding of triangles, quadri-laterals, and other polygons. Conic sections are introduced.

Problem-solving strategies are ongoing throughout the course.

Prerequisite: Successful completion of Integrated Algebra II or less than proficiency in Algebra II or Geometry

ALGEBRA I Credit: 1.0

The design of this course is to develop an understanding of the fundamental concepts of algebra and the ability to use the processes involved. The course includes the language and symbolism of algebra, properties of the real number system, equations and inequalities, graphing, word problems, rational expressions, factoring and radical expressions.

Prerequisites: Earn a minimum grade of 80% in Pre-Algebra and score a minimum grade of 85% on the UMTSD Pre-Algebra Proficiency Exam or a minimum of 85% on the Pre-Algebra final exam or teacher recommendation.

ALGEBRA II (College Preparatory) Credit: 1.0

Students in this course will develop a higher degree of skill and accuracy in algebraic techniques and their applications. The course content includes the complex number system, conic sections, functions and polynomials.

Prerequisite: Earn a minimum grade of 80% in Algebra I; and earn either a minimum grade of 85% on the UMTSD Algebra I Proficiency Exam or a minimum of 85% on the Algebra I final exam or teacher recommendation.

ALGEBRA II (Honors) Credit: 1.0

The course includes an in-depth study of the real and complex number systems, a study of conic sections, functions, and polynomials. Students will have the opportunity for enriched mathematical study as they learn Algebra II concepts in greater depth and at a faster pace.

Prerequisite: Earn a minimum grade of 90% in Algebra I; or earn a minimum grade of 80% in Geometry (H); and earn a minimum of 85% on the UMTSD Algebra I Proficiency Exam, or a minimum of 85% on the Algebra I Final Exam or teacher recommendation.

GEOMETRY (College Preparatory) Credit: 1.0

This course provides an integrated study of plane and solid geometry. Using an appropriate combination of problems and formal proofs, this course is designed to meet the needs of those

students planning to enroll in Analysis and Trigonometry.

Prerequisite: Earn a minimum grade of 80% in Algebra I; and earn either a minimum of 85% on the UMTSD Algebra I Proficiency Exam or a minimum of 85% on the Algebra I Final Exam or teacher recommendation.

GEOMETRY (Honors) Credit: 1.0

The course includes a study of Euclidean plane and solid geometry with an emphasis on logical thinking and well-organized proofs. Students will be introduced to coordinate geometry.

Prerequisites: Earn a minimum grade of 90% in Algebra I or Algebra II(CP) and earn a minimum grade of 80% in Algebra II(H) and score a minimum of 85% on the UMTSD Algebra I Proficiency Exam or a minimum of 85% on the Algebra I final exam or teacher recommendation.

ANALYSIS & TRIGONOMETRY (College Preparatory) Credit: 1.0

The course includes the study of triangle trigonometry, trigonometry and its relation to unit circle, and trigonometric equation solving. In the Analysis section, students will study sequences and series, polynomial equations, and exponential and logarithmic functions.

Prerequisite: Earn a 70% or higher in Geometry and Algebra II (CP) or teacher recommendation.

ANALYSIS & TRIGONOMETRY (Honors) Credit: 1.0

The course includes an intensive study of triangle trigonometry, trigonometry and its relation to unit circle, and trigonometric equation solving. In the Analysis section, students will study sequences and series, polynomial equations, and exponential and logarithmic functions. Students will also be introduced to limits and other Pre-Calculus topics.

Prerequisites: Earn a minimum grade of 90% in Geometry and Alg II (CP) or earn a minimum average of 80% in Geometry and Alg II (H) or teacher recommendation.

PRE-CALCULUS (College Preparatory)

Credit: 1.0

This course includes the study of various topics including conic sections, polar coordinates, parametric equations, matrices, exponential growth and decay, binomial expansion, limits and an introduction to differentiation.

Prerequisites: Successful Completion of Analysis/Trigonometry (CP) or teacher recommendation.

CALCULUS (Honors) Credit: 1.0

This course involves the study of limits, differentiation and integration formulas with applications, and related topics. Students will work with functions represented graphically, numerically, analytically and verbally as they study derivatives and integrals.

Prerequisites: Earn a minimum grade of 90% in Analysis and Trig (CP) or earn a minimum average of 80% in Analysis and Trig (H)

AP CALCULUS AB Credit: 1.0

This course is extremely rigorous and is meant to prepare students for the Advanced Placement Calculus AB test in a 27 week period. This course provides an intensive study of limits, continuity, derivatives and their application, methods of integration and their applications and related topics. Students who take this course are encouraged to take the Advanced Placement Calculus Test.

Prerequisite: Earn a minimum grade of 90% in Analysis and Trigonometry (H); or earn a minimum grade of 95% in Analysis and Trigonometry (CP); or earn a minimum grade of 95% in Pre-Calculus or teacher recommendation.

MATHEMATICS (LEARNING SUPPORT)

9,10,11,12 Credit: 1.0

This course parallels the material and content taught in the various mathematics courses including; Problem Solving, Consumer Math, Pre-Algebra, Algebra I, and Geometry with an emphasis on developing basic math skills and their applications to real life situations, while also preparing students for post secondary education, yet meeting the individual needs of each student as described in his/her IEP.

Prerequisites: IEP Recommendation

**MATHEMATICS (EMOTIONAL SUPPORT)
9,10,11,12 Credit: 1.0**

This course parallels the material and content taught in the various mathematics courses including; Problem Solving, Consumer Math, Pre-Algebra, Algebra I, and Geometry with an emphasis on developing basic math skills and their applications to real life situations, while also preparing students for post secondary education, yet meeting the individual needs of each student as described in his/her IEP. It will also provide a behavior management component to address the needs of each student as described in a current IEP.

Prerequisites: IEP Recommendation

MATHEMATICS (FUNCTIONAL LEARNING SUPPORT) 9,10,11,12 Credit: 1.0

This course will teach and reinforce basic math skills, teach and review consumer mathematic concepts, and develop problem solving skills to be successful in employment upon graduation. This course places an emphasis in developing math skills that will create citizens that are successful in completing daily real life activities that involve the use of math. **Prerequisites: IEP Recommendation**

Mathematics Electives

In addition to the standard Mathematics course sequence in grades 9-11, students may choose additional or alternative courses from the following electives:

STATISTICS (College Preparatory)

Credit: 1.0

This course is a step by step approach to elementary statistics. Designed for students who enjoy math but may not want to take Pre-Calculus or Calculus just yet. Topics include: frequency distributions and graphs, probability, normal distribution, correlation and regression, sampling and simulation and hypothesis testing.

Prerequisites: Successful completion of Algebra II (CP) or teacher recommendation.

ADVANCED PLACEMENT STATISTICS

Credit: 1.0

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, sampling and experimentation, anticipating patterns and statistical inference. This course will be very helpful for anyone enrolled in AP Psychology. This course will help prepare students to take the Advanced Placement Statistics test.

Prerequisites: Earn a minimum grade of 90% in Analysis and Trigonometry (H) or earn a minimum grade of 95% in Analysis and Trigonometry (CP) or PreCalculus or teacher recommendation.

SAT PREPARATION LAB (MATH)

Credit: 0.25

This course is recommended for students interested in improving their SAT scores and their test taking strategies. Emphasis will be placed on the SAT I test. This course will include a review of Algebra I and Geometry concepts, problem solving, and test taking strategies. Authentic SAT practice tests will be administered and utilized for instruction. Preparation for the SAT Verbal portion is included in the curriculum for this course. *NOTE: This course alternates on an A/B schedule with the SAT Verbal course for a total combined credit of .05.*

PSSA ADDITIONAL SUPPORT Credit: 0.25

This course is a required course for non-IEP students who scored below the "proficient" level on the April, 2009 11th grade PSSA test in Mathematics. Twelfth grade students will be enrolled in this course as test results are received by the High School in July, 2009. Students attending this course will receive additional support to help them master the Pennsylvania Academic Standards for Mathematics.

NOTE: This course alternates on an A/B schedule with the PSSA Reading Support course when needed for a total combined credit of .50.

Course Offerings in

SCIENCE

Science and technology heavily influence the world in which we live. In order to fully realize their potential, students must understand and appreciate the natural and physical worlds. Consequently, all students must pass one physical science course, one biological science course, and a third (elective) science course in order to graduate. The science staff recommends taking as many science courses as possible to fully enjoy and benefit from living in a technological society.

Four Year Course Sequence Options in Science

<u>Levels</u>	<u>Grade 9</u>	<u>Grade 10</u>	<u>Grade 11</u>	<u>Grade12</u>
HONORS (H)	Biology (H)	Chemistry (H) Human Anat(CP) Microbiology/ Genetics (H)	Physics (H) AP Biology AP Chemistry Human Anat(CP) Microbiology/ Genetics (H)	AP Biology AP Chemistry AP Physics Human Anat(CP) Microbiology/ Genetics (H)
COLLEGE PREP (CP)	Physical Science(CP)	Biology (CP)	Chemistry (CP) Human Anat(CP) Microbiology/ Genetics (H) Ecology (CP)	Physics (CP) AP Biology AP Chemistry Human Anat(CP) Microbiology/ Genetics(H) Ecology (CP)
ACADEMIC	Physical Science (A)	Biology (A)	Ecology (A) Conceptual Physics(A) Conceptual Chemistry (A)	Ecology (A) Conceptual Physics (A) Conceptual Chemistry (A)

ACADEMIC PHYSICAL SCIENCE Credit: 1.0

This course will focus on providing a basic foundation in the fundamentals of chemistry and physics. Emphasis will be placed on knowledge of scientific concepts and careers, acquisition and use of laboratory skills, and the influence of technology on society. The student will work in the lab where skills are gained in handling equipment, making observations and understanding the scientific process. Problem-solving using mathematical relationships will be stressed. It is designed for the student who needs assistance in reading, mathematical, and independent work skills.

COLLEGE PREPARATORY PHYSICAL SCIENCE Credit: 1.0

This course will focus on providing a basic foundation in the fundamentals of chemistry and physics. Emphasis will be placed on knowledge of scientific concepts and careers, acquisition and use of laboratory skills, and the influence of technology on society. The student will work in the lab where skills are gained in handling equipment, making observations and understanding the scientific process. Problem-solving using mathematical relationships will be stressed. It is designed for the student who needs assistance in reading, mathematical, and independent work skills.

ACADEMIC BIOLOGY Credit: 1.0

This inquiry-based course is designed to provide students with a study of the major biological concepts and their importance to society and the individual. Students will learn many aspects of the structure and function of living things, as well as relationships between these living things. Topics to be studied include the cell, genetics, evolution, classification, biochemistry, and ecology.

Prerequisites: Successful completion of Physical Science

COLLEGE PREPARATORY BIOLOGY Credit: 1.0

This inquiry-based course is designed for students who desire a comprehensive study of the major biological concepts and their importance to society and the individual. This course is strongly recommended for students planning to attend college. Students will learn many aspects of the structure and function of

living things, as well as relationships between these living things. Topics to be studied include the cell, genetics, evolution, classification, biochemistry and ecology.

Prerequisites: Successful completion of Physical Science

HONORS BIOLOGY Credit: 1.0

This inquiry-based course is designed for students who desire a comprehensive study of the major biological concepts and their importance to society and the individual. This course is strongly recommended for students planning to attend college. Since this is an honors level course, the pace will be fast and the course will emphasize a depth of understanding of the major themes and concepts of biology. Students will learn many aspects of the structure and function of living things, as well as relationships between these living things. Topics to be studied include the cell, genetics, evolution, classification, biochemistry, physiology, and ecology.

Prerequisites: Successful completion of 8th grade science with teacher recommendation or Physical Science

ADVANCED PLACEMENT BIOLOGY**Credit: 1.0**

This inquiry-based course is designed for students who desire a comprehensive study of the major biological concepts and their importance to society and the individual. Since this is an advanced placement course, the pace will be fast and the course will emphasize a depth of understanding of the major themes and concepts of biology. Students will learn many aspects of the structure and function of living things, as well as relationships between these living things. Topics to be studied include the cell, genetics, evolution, classification, biochemistry, physiology, and ecology. Students will need to complete additional study outside of class to prepare for the National College Board Advanced Placement Test for Biology.

Prerequisites: Successful completion of Chemistry (CP or H)

ACADEMIC CONSUMER CHEMISTRY

Credit: 1.0

Consumer Chemistry is an exciting way to learn the fundamentals of chemistry and related societal issues whether a student is destined to a future in a science career or not. This is an introductory chemistry course which follows a thematic based curriculum. Topics will include such things as nutrition, drug abuse, genetic engineering, agriculture, water resources, the atmosphere, material goods, and our energy supplies. This inquiry-based course is designed to develop the capacity to reason, problem-solve, and develop skills in computing quantitative and qualitative relationships. Students will work in collaborative groups for both small group discussion and laboratory experiences.

Prerequisites: Successful completion of 2 years of Math and Science

COLLEGE PREPARATORY CHEMISTRY

Credits: 1.0

This inquiry-based course is designed to develop the capacity to reason, problem-solve, and develop skills in computing quantitative and qualitative relationships. Through laboratory experiences students will learn about the composition, structure and interactions between substances. College Preparatory Chemistry will provide students with a sound base from which they can pursue further course work in science in a two or four year college or university.

Prerequisites:

1. **Successful completion of Biology (H) or Biology (CP)**
2. **Successful completion or concurrent enrollment in Algebra II (CP or H)**

HONORS CHEMISTRY

Credit: 1.0

This inquiry-based course is designed with an emphasis on higher order thinking skills to develop the capacity to reason, problem-solve, and develop skills in computing quantitative and qualitative relationships. This course provides a solid background in Chemistry and is intended for college bound students interested in taking other science courses, as well as pursuing a career in a scientific or technical field.

Prerequisites:

1. **Successful completion of Algebra II (CP or H) and Geometry (CP or H)**
2. **Successful completion of biology (CP or H)**

ADVANCED PLACEMENT CHEMISTRY

Credit: 1.0

Advanced Placement Chemistry is a challenging, fast-paced course that will cover the topics of matter, states of matter, chemical reactions, descriptive chemistry, kinetics, equilibria, and thermodynamics. An emphasis on laboratory work and analysis is required to prepare for the AP test. College credit depends upon the AP test score and the college of choice. Students will need to complete additional study outside of class to prepare for the National College Board AP test.

Prerequisites:

1. **Successful completion of a previous Chemistry course (H or CP)**
2. **Successful completion of Algebra II (CP or H)**

ACADEMIC CONCEPTUAL PHYSICS

Credit: 1.0

Conceptual Physics incorporates various hands-on activities utilizing computer based laboratory equipment and software simulations. This course is designed to expose students to the laws of physics and how those laws govern our daily lives. Students will explore topics ranging from speed and acceleration to light and color. This course challenges students' problem-solving skills through hands-on projects, experiments and Science Olympiad type competitions.

Prerequisites: Successful completion of 2 years of Math and Science

COLLEGE PREPARATORY PHYSICS

Credit: 1.0

College Preparatory Physics is the study of mechanics. Motion, energy, forces, and momentum will be studied and analyzed through the exploration of laboratory experiments, demonstrations, and mathematical derivations. An emphasis on the use of mathematics to describe the natural laws of the universe will be employed to further students' knowledge. Students will be introduced to trigonometry, and should have algebra as a course prerequisite.

Prerequisites: Successful completion of Chemistry (CP) and Geometry (CP)

HONORS PHYSICS

Credit: 1.0

Honors Physics is the study of mechanics. Motion, energy, forces, and momentum will be studied and analyzed through the exploration of laboratory experiments, demonstrations, and mathematical derivations. An emphasis on the use of mathematics to describe the natural laws of the universe will be employed to further students' knowledge. Students should be proficient in trigonometry, and will be introduced to calculus; they should have a strong background in science as a course prerequisite.

Prerequisites:

1. **Successful completion of a previous (H or CP) Chemistry course**
2. **Successful completion of Algebra II (CP or H)**

ADVANCED PLACEMENT PHYSICS

Credit: 1.0

Advanced Placement Chemistry is a challenging, fast-paced course that will cover the topics of matter, states of matter, chemical reactions, descriptive chemistry, kinetics, equilibria, and thermodynamics. An emphasis on laboratory work and analysis is required to prepare for the AP test. College credit depends upon the AP test score and the college of choice. Students will need to complete additional study outside of class to prepare for the National College Board AP test.

Prerequisites: Successful completion of Calculus (H), Chemistry (H) and Physics (H)

INTEGRATED SCIENCE (I-IV) **Credit: 1.0**

Integrated Science (I-IV) is an inquiry and standards-based course designed to assist a student in meeting their appropriate learning goals as listed on their IEP. This course is taught by a special education learning support teacher in a small group setting. This hands-on course will focus on providing a basic foundation in the fundamental concepts of Physical Science, Biology, Chemistry and Ecology. Emphasis will be placed on skill development in the areas of using equipment, making observations, applying scientific method, and problem-solving using mathematical relationships. Knowledge of scientific concepts and careers and applying science to real world experiences will be incorporated.

Prerequisites: IEP Recommendation

SCIENCE (EMOTIONAL SUPPORT)

9,10,11,12

Credits: 1.0

This course parallels the material and content provided through the academic Science program. It follows the scope and sequence of each grade level course 9, 10, 11 while meeting the individual needs of each student as described in his/her IEP. It will also provide a behavior management component to address the needs of each student as described in a current IEP.

Prerequisites: IEP Recommendation

SCIENCE (FUNCTIONAL LEARNING SUPPORT) **9,10,11,12** **Credit: 1.0**

This inquiry-based course will help teach students the fundamental skills of physical science, chemistry, biology, ecology, and physics. This course will be a hands on approach to learning that involve labs and projects where the students will be actively engaged in the learning process. This course will help to develop the necessary skills and create an understanding of the world around them and help them be an active participant within their community.

Prerequisites: IEP Recommendation

Science Electives

In addition to the standard science course sequence in grades 9-11, students may choose additional or alternative courses from the following electives:

ACADEMIC ECOLOGY **Credit: 1.0**

This course will focus on having students develop an understanding of the importance of being a steward of the earth. There will be an emphasis on the necessity of balancing the needs of a growing human population with maintaining a healthy, viable environment. This course will also stress the complexity of environmental issues and highlight current local environmental issues. There will be extensive field work that utilizes the meadow study area and the stream site at the high school.

Prerequisites:

1. **Successful completion of Physical Science (A or CP), and**
2. **Successful completion and academic biology**

COLLEGE PREPARATORY ECOLOGY

Credit: 1.0

Using an inquiry-based approach, students will develop an understanding of the importance of being a steward of the earth. The College Prep Ecology course emphasizes the necessity of balancing the needs of a growing human population with maintaining a healthy, viable, environment. There will be a focus on the interdependence between abiotic and biotic factors in an environment as well as the flow of matter and energy in an ecosystem. The learner will study the complexity of environmental issues. Local environmental issues will also be addressed through the use of newspapers, field studies and appropriate field trips.

Prerequisites: Successful completion of Biology (CP)

MICROBIOLOGY/GENETICS (Honors)

Credit: 1.0

The Microbiology/Genetics elective was designed to provide a more in-depth study of genetics and the microbial world. Microbiology emphasizes the interrelationships, both beneficial and harmful, between humans and microbes. Lab experiences will include aseptic techniques, staining procedures, evaluation of

the effectiveness of antibiotics and antiseptics in controlling bacteria. Genetics will build upon the students' understanding of heredity as learned in Biology. Lab experiences will include the breeding of Brassica rapa and Drosophila melanogaster through several generations to analyze the inheritance patterns of specific traits. Statistical analysis will indicate if the data supports Mendelian patterns. Non-Mendelian patterns, such as polygenic and multiple alleles, will also be investigated. This course is for students interested in health-related careers and the further study of Biology.

Prerequisites: Successful completion of Biology (H or CP)

HUMAN ANATOMY (College Preparatory)

Credit: 1.0

Using inquiry learning, students will learn about human morphology and physiology by developing an understanding of how form fits function. This course emphasizes building upon Biology concepts including the relationship between structure and function at all levels of organization as well as analyzing the chemical and structural basis of living organisms. This will be accomplished by comparative study of animals; including the sheep, pig, and chicken. Students will journey through the body systems building a knowledge base leading toward a greater understanding of the workings of the human body. Human Anatomy is designed to broaden the background of the student interested in a medical career.

Prerequisites: Successful completion of Biology (H or CP)

Course Offerings in

WORLD LANGUAGES

The World Language Department offers courses of study in Spanish, French, and German. While world language study is not mandatory for high school graduation, many colleges require further study of a world language at the university level in order to receive a degree. A strong, continuous language background in high school gives the student a solid basis for success in those college courses. Communicating in another language is fast becoming part of our daily life, not solely a college prerequisite. The awareness and understanding of other cultures are crucial in today's world. Therefore, it is highly recommended that students study a world language during high school, regardless of future goals.

Colleges expect prospective students to successfully complete a minimum of two to three years of a single world language in high school. However, to be considered an attractive candidate to the most selective colleges and universities, students are encouraged to reach the highest level possible in the same language. Students interested in attending technical school or any post-high school training should complete a minimum of two years of world language study.

Studies of student success in languages have shown that one should score a minimum grade of 75% in the current language level in order to maximize one's chances of continued success at the next level. A student must successfully complete the Upper Moreland School District World Language Proficiency Test to move from the first level of the language to the second level and from the second level to the third level.

FRENCH I **Credit: 1.0**

This course is the first part of a sequential program in the study of French. It stresses the major aspects of language learning: comprehension, speaking, listening reading, writing and cultural analysis. Students will engage in conversations, read brief passages in French, and study the beliefs of the people who speak French in relationship to their culture. In addition, students will write brief paragraphs, connect aspects of the French language and culture to their own language and to other disciplines. They will begin to develop an understanding of cultural influences and explore ways to connect with others who speak the language and attempt to use the language outside of the classroom.

FRENCH II **Credit: 1.0**

This course is the second part of a sequential program in the study of French. French II requires extensive speaking, reading, writing, comprehension and cultural analysis activities conducted in the French language. The course continues basic structures taught in French I. The students will be exposed to the language and the culture through authentic materials. The

students will be building upon and expanding on communicative skills learned in Level I.

Prerequisites: Successful completion of French I and the Upper Moreland School District Proficiency Test

FRENCH III **Credit: 1.0**

In year three of the language, students continue to develop skills in the four language areas: listening, speaking, reading, and writing. Cultural activities and information will continue to be imbedded in ongoing instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities in French. **Prerequisites: Successful completion of French II and the Upper Moreland School District Proficiency Test**

FRENCH IV **Credit: 1.0**

In year four of the language, students will continue to develop skills in the four language areas: listening, speak-ing, reading, and writing. Cultural information will be imbedded in on-

going instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities in French. Authentic literature, arts and current events will drive classroom topics and discussions in which students will relate these topics to themselves.

Prerequisites: Successful completion of French III

ADVANCED PLACEMENT FRENCH

Credit: 1.0

The AP French Language course is designed to be comparable to college/ university French language courses. It encompasses aural/oral skills, reading comprehension, grammar, and composition. Students taking such a course, emphasizing the use of French for active communication, have the following objectives:

1. the ability to comprehend formal and informal spoken French;
2. the acquisition of vocabulary and a grasp of structure to allow the easy, accurate reading of newspaper and magazine articles, as well as of modern literature in French;
3. the ability to compose expository passages; and
4. the ability to express ideas orally with accuracy and fluency.

Course content might best reflect intellectual interests shared by the students and teacher (the arts, history, current events, literature, culture, sports, etc.) Materials might well include recordings, films, newspapers, and magazines. The course seeks to develop language skills that are useful in themselves and that can be applied to various activities and disciplines rather than to the mastery of any specific subject matter. Extensive training in the organization and writing of compositions must be an integral part of the AP French Language course.

Prerequisites: Successful completion of French IV.

GERMAN I

Credit: 1.0

This course is the first part of a sequential program in the study of German. It stresses the major aspects of language learning: comprehension, speaking, listening, reading, writing, and cultural analysis. Students will engage in conversations, read brief passages in

German, and study the beliefs of people who speak German in relationship to their culture. In addition, students will write brief passages, and connect aspects of the German language and culture to their own language and to other disciplines. They will begin to develop an understanding of cultural influences and explore ways to connect with others who speak the language and attempt to use the language outside the classroom.

GERMAN II

Credit: 1.0

In year two of the language, students continue to develop skills in the four language areas of listening, speaking, reading and writing while cultural activities and information continue to be imbedded in ongoing instruction. A major goal of this course is more effective communication in the target language. Teachers provide instruction and facilitate classroom activities primarily in German.

Prerequisites: Successful completion of German I and the Upper Moreland School District Proficiency Test

GERMAN III

Credit: 1.0

In year three of the language, teachers will continue to provide instruction primarily in the target language while students further develop the skills in the four language areas of listening, speaking, reading and writing. Cultural activities and information will continue to be imbedded in ongoing instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities primarily in German.

Prerequisites: Successful completion of German II and the Upper Moreland School District Proficiency Test

GERMAN IV

Credit: 1.0

In year four of the language, students will continue to develop the skills in the four language areas of listening, speaking, reading and writing. All cultural information will be imbedded in ongoing instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities in German. Authentic

literature, arts and current events will drive classroom topics and discussions in which students will relate these topics to themselves.

Prerequisites: Successful completion of German III.

ADVANCED PLACEMENT GERMAN

Credit: 1.0

The AP German Language course is designed to be comparable to college/university German language courses. It encompasses aural/oral skills, reading comprehension, grammar, and composition. Students taking such a course, emphasizing the use of German for active communication, have the following objectives:

1. Possessing a strong command of vocabulary and structure;
2. Understanding spoken German in various conversational situations;
3. Reading newspaper and magazine articles, contemporary fiction, and non-technical writings without the use of a dictionary;
4. Organizing and composing expository passages;
5. Expressing ideas orally with accuracy and fluency.

Course content might best reflect intellectual interests shared by the students and teacher (the arts, history, current events, contemporary literature, culture, sports, etc). As such, students will develop language skills that are useful in themselves and that can be applied to various activities and disciplines rather than to the mastery of any specific subject matter.

Prerequisites: Successful completion of German IV.

SPANISH I

Credit: 1.0

This course is the first part of a sequential program in the study of Spanish. It stresses the major aspects of language learning: comprehension, speaking, listening, reading, writing, and cultural analysis. Students will engage in conversations, read brief passages in Spanish, and study the beliefs of people who speak Spanish in relationship to their culture. In addition, students will write brief passages and connect aspects of the Spanish language and culture to their own language and to other disciplines. They will begin to develop an understanding of cultural influences and explore ways to connect with others who speak

the language and attempt to use the language outside the classroom.

SPANISH II

Credit: 1.0

In year two of the language, students continue to develop skills in the four language areas: listening, speaking, reading, and writing. Cultural activities and information will continue to be imbedded in ongoing instruction. A major goal of this course is more effective communication in the target language. Teachers will provide instruction and facilitate classroom activities primarily in Spanish. **Prerequisites:** Successful completion of Spanish I and the Upper Moreland School District Proficiency Test

SPANISH III

Credit: 1.0

In year three of the language, students continue to develop skills in the four language areas: listening, speaking, reading, and writing. Cultural activities and information will continue to be imbedded in ongoing instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities in Spanish. **Prerequisites:** Successful completion of Spanish II and the Upper Moreland School District Proficiency Test

SPANISH IV

Credit: 1.0

In year four of the language, students will continue to develop skills in the four language areas: listening, speaking, reading, and writing. Cultural information will be imbedded in ongoing instruction. Students will be expected to communicate primarily in the target language so that these skills are developed to their maximum potential. Teachers will provide instruction and facilitate classroom activities in Spanish. Authentic literature, arts and current events will drive classroom topics and discussions in which students will relate these topics to themselves.

Prerequisites: Successful completion of Spanish III.

ADVANCED PLACEMENT SPANISH

Credit: 1.0

The AP Spanish Language course is designed to be comparable to college/university Spanish language courses. It encompasses aural/oral skills, reading comprehension, grammar, and composition. Students taking such a course, emphasizing the use of Spanish for active communication, have the following objectives:

1. the ability to comprehend formal and informal spoken Spanish
2. the acquisition of vocabulary and a grasp of structure to allow the easy and accurate reading of newspaper and magazine articles, as well as of modern literature in Spanish
3. the ability to compose expository passages
4. the ability to express ideas orally with accuracy and fluency

Course content might best reflect intellectual interests shared by the students and teacher (the arts, history, current events, literature, culture, sports, etc.) Materials might well include recordings, films, newspapers, and magazines. The course seeks to develop language skills that are useful in themselves and that can be applied to various activities and disciplines rather than to the mastery of any specific subject matter. Emphasis in the organization and writing of compositions will be stressed as an integral part of the AP Spanish Language course.

Prerequisites: Successful completion of Spanish IV

Course Offerings in

BUSINESS

Courses in the business department offer students an opportunity to develop or improve skills that have a practical application in both the academic and professional world. Students enrolling in a business course will find the curriculum varied, relevant to their interests and presented for students at all ability levels. All the course offerings in the Business department are designed to run for one semester.

WORD PROCESSING **Credit: 0.5**

Learn to proficiently prepare sophisticated documents for high school, college and future employment. Students will explore the various techniques of word processing using *Microsoft Word* while developing the necessary typing skills to produce attractive reports, term papers, outlines, business letters, tables and other forms of correspondence. A sophisticated office simulation will provide the students with experience in all aspects of document processing within an office environment.

DESKTOP PUBLISHING **Credit: 0.5**

This course is based in Microsoft's Word and Publisher software, along with the use of scanners, the Internet, and laser printers. Students will learn how to improve their ability to communicate ideas quickly through the integration of text, graphics, and digital photographic images to produce such documents as newsletters, brochures, and business cards.

WEB DESIGN **Credit 0.5**

This course is designed to allow students to create, edit and maintain web pages using Microsoft Frontpage software. Students will learn how to create a web page, add internal and external links, use various formatting techniques, apply themes, insert graphics, create and modify tables, create frames and use styles. Each student will be required to complete a culminating project involving the design and creation of a web page of his/her choice.

COMPUTER APPLICATIONS

Credit: 0.5

A challenging course offered to students preparing for employment or who are planning to enter college. Meaningful software applications will be taught using word processing, spreadsheet, database management, and graphic software. Popular software

programs will be utilized (i.e., Power point, Excel, Access) on our state-of-the-art personal computer network. Qualify yourself for a job in the business or computer field or gain a solid foundation for future use of computers in your personal and academic pursuits.

MARKETING AND RETAILING

Credit: 0.5

This course is designed for students pursuing a future in the business world. This highly interactive course will allow students to engage their creative side while learning how to market a product, a service, and most importantly become a more informed consumer. New trends in marketing will be explored. Emphasis will be placed on all aspects of marketing including: marketing essentials, consumer behavior, product research, selling, advertising, promotion and communication. Students will engage in individual and group activities. Students will be asked to express themselves either verbally or in written form. The internet will be utilized for research. Computers will be used to enhance the delivery of content and provide a means of improving individual communication skills.

ACCOUNTING I (College Preparatory)

Credit: 0.5

This course is reserved for students in grades 11 and 12 only. An introductory course into a successful way of keeping financial records of a single owner service business. It presents the basic principles in their simplest form and shows the student how to use these principles through practical application. Some computer application is utilized. After manual procedures are mastered, software will be used as an enrichment activity to facilitate the processing of accounting data.

ACCOUNTING II (College Preparatory)

Credit: 0.5

Designed for students who are interested in a more in-depth study of accounting. It presents the necessary documentation needed for a successful partnership or for operating a merchandizing business. Establishing a payroll register and tax obligations, depreciation calculations and producing financial statements are examples of documents produced in this course. After manual procedures are mastered,

Computer accounting software will be used as an enrichment activity to facilitate the processing of accounting data. This course is recommended for college bound students interested in a business major.

Pre-requisites: Earn a minimum grade of 75% in Accounting I.

BUSINESS LAW

Credit: 0.5

This course is reserved for students in grades 11 or 12 only. The course is designed to help students understand various aspects of the law profession and how it relates to the business world. Units of study will include lawyers, civil and criminal law, as well as the juvenile justice system. It will also cover the legal implications of the business world such as contracts, insurance, property and employment. This course is recommended for college bound students interested in a business major.

VISUAL AND PERFORMING ARTS

Visual Arts

The courses in the Visual Arts program are designed to prepare students who are interested in pursuing a career in the visual arts and also to provide enrichment and encouragement of creative expression in students who are interested in art for their own personal fulfillment. All of the art courses incorporate art history, aesthetics, art criticism and art production. Students will learn the creative process and apply it to solve a variety of visual arts problems using a wide range of art media. Students will be required to learn a variety of technical skills and to demonstrate the acquisition of these skills through art production. Students will become more visually literate and will be able to communicate their ideas by speaking about, writing about and making visual art. In all of the art courses a sketchbook is required. In some cases a portfolio is required to store artwork. Courses that require specific supplies and/or lab fees are noted in the course descriptions.

INTRODUCTION TO ART MAJOR

Credit: 1.0

This course concentrates on the development of basic drawing techniques and lays the foundation for sculpting, painting and printmaking. Students will gain an understanding of art history, aesthetics and criticism and will develop art projects with knowledge of the elements of art and the principles of design. The information and skills learned in this course serve as an introduction to the Art Major course and the entire art program. Students must supply a sketchbook, drawing pencils/erasers and a portfolio. A weekly homework assignment is given.

ART MAJOR

Credit: 1.0

In this course, students will increase their capability in drawing, painting, printmaking, design, and sculpture. Color theory and figure drawing will be emphasized. In addition to producing art, learning will focus on aesthetic issues, art history, and art criticism. Students must supply a sketchbook, drawing pencils/erasers and a portfolio. A weekly homework assignment is required.

Prerequisites: Introduction to Art Major

ADVANCED ART MAJOR

Credit: 1.0

In this course students will continue to study drawing, painting, design, printmaking, and sculpture. Emphasis will be placed on developing problem solving skills and creativity. It is expected that students selecting this course will have a heightened level of

commitment. Students will continue to develop their own styles and will be encouraged to develop projects which visually communicate their ideas. Art history, aesthetics, and criticism will be a significant part of the curriculum. Students interested in pursuing a career in the visual arts will be given guidance on portfolio preparation, and be informed of career opportunities. Students must supply a sketchbook, drawing pencils/erasers and a portfolio. A weekly homework assignment is required.

Prerequisites: Art Major or Teacher Recommendation

AP STUDIO ART

Credit: 1.0

This class is an Advanced Placement course that enables highly motivated students to do college-level work in studio art while still in high school. It will involve significantly more time and commitment than other high school art courses. The guidelines for Advanced Placement Studio Art portfolios cover a variety of interests and approaches to art. Each student will work to develop a portfolio on a concentration or body of related works. Every student will have a choice of submitting a 2D design, a 3D design, or drawing portfolio with specific requirements for each one.

Prerequisites: Minimum of 90% in Art Major and Advanced Art Major

PAINTING**Credit: 1.0**

This course offers students in-depth study in painting. Media that students will explore are: watercolor, gouache, tempera, pastel, ink, acrylic and oil. Painting from direct observation will be emphasized. Students will be directed in discussions involving aesthetic issues and art criticism. The art history component of this course consists of learning about American art from its origin during colonial times to the 19th century. Students must supply a sketchbook and a portfolio. **Prerequisites: Introduction to Art Major**

2D DESIGN**Credit: 0.5**

This course introduces the elements of art and the principles of design by working with two-dimensional design problems. This is an art course in which problem solving is used to work through a design assignment by using higher order thinking skills to analyze, evaluate, create, critique, revise and translate the final product. Researching, planning, preliminary drawing, and executing a rough draft are thoroughly explored before arriving at a final design product. Color theory, pattern design, design abstraction and typography are just a few of the art problems explored. A sketchbook is required.

POTTERY**Credit: 1.0**

This course involves all processes used in the making of functional clay pieces. Handbuilding techniques along with throwing on the potter's wheel will be introduced using earthenware and stoneware clays. Exploration of surface decoration using glaze techniques will be an important component of this course. A sketchbook is required.

SCULPTURE**Credit: 0.5**

In this course, the students will use art elements and design principles applied to three dimensional design problems found in the sculptural process. Examples of sculptural works include, but are not limited to the following media: clay, wire, plaster, wood, fabric, cardboard, found objects. Sculptural techniques may include construction, assemblage, modeling and carving. A sketchbook is required.

CRAFTS DESIGN**Credit: 0.5**

Students will explore a variety of craft techniques and materials in this course. The focus of the course is on the history of crafts and the ways in which crafts reflect the people and societies who create them. Crafts made in this course will be utilitarian and may include, but are not limited to, jewelry, mosaic and woodwork, loom and non-loom weaving and fabric design. A sketchbook and a lab fee of \$10.00 are required.

PRINTMAKING**Credit: 0.5**

Students in this course will be taught printmaking techniques including relief (linoleum and woodblock), intaglio, monotype, collagraph/embossing, lithograph, and screen processes by which they can pursue individual concepts and imagery. Students will gain a working knowledge of the tools, materials, and processes as they develop and refine their personal vision. These processes also provide the students with opportunities for discovering multiple solutions to problems. Art criticism and aesthetics, along with the study of art history, will be vital components of this course. A sketchbook is required.

Music

The courses in the Performing Arts program are designed to prepare students who are interested in pursuing a career in either vocal or instrumental music and also to provide enrichment and encouragement of creative expression in students who are interested in music for their own personal fulfillment.

INTRODUCTION TO MUSIC

Credit: 0.5

This class will provide a solid framework in listening to, playing, and composing music. A wide variety of musical styles will be studied; from Gregorian Chant to Punk Rock. This course is for the student who has little or no music training but wants to know more about music.

ADVANCED PLACEMENT MUSIC THEORY

Credit: 1.0

This course is for the student who has been singing or playing an instrument for several years, reads music, knows key signatures, major and minor scales, and other basics of performing and composing music. The full music technology lab, with music notation software, enables students to compose and expand their knowledge of theory, aural skills and music history in preparation for the Advanced Placement Music Theory exam. **Prerequisites: Placement Test**

PIANO

Credit: 0.5

Beginners will develop their skill at the piano, learning to play songs and read music through sequential practice. The music technology lab, complete with synthesizers and music notation software, provides students with the equipment to support the exploration and realization of their creative talents in the composition and performance of original music.

GUITAR

Credit: 0.5

Beginners will learn the basics of guitar. Note reading and chord progressions are stressed. Tab is not used.

CONCERT CHOIR

Credit: 1.0

For beginning or advanced student who enjoy singing whether their experience is singing with choirs or just singing with the radio! Vocal technique and music reading will be taught through a repertoire that reflects a wide variety of genres. Membership is a pre-requisite for PMEA District, Regional, and All-State Chorus. This is a performance class, as well as an academic course. Participation in concerts is required.

CONCERT BAND

Credit: 1.0

This course is the core of the instrumental music program. It is available to students who play brass, woodwind and percussion instruments for the performance of concert band music. Performances include concerts and various community functions. Students must have had previous instruction on a band instrument or have prior approval from the director. Membership is a prerequisite for MONTCO Band and PMEA District, Regional and All-State Band. Participation in Concert Band also provides students the opportunity to participate in any performance tours with the music department. Participation in concerts is required.

STRING ORCHESTRA

Credit: 1.0

This course is available to all string players in grades 9 through 12 for the performance of string music. Students must have had previous instruction on a string instrument or have prior approval from the director. Membership is a pre-requisite for PMEA District, Regional, and All-State Orchestra. Participation in concerts is required.

Course Offerings in the

FAMILY/COMSUMER SCIENCES & INDUSTRIAL TECHNOLOGY

The Practical Arts program is designed to help students assume responsibility for living and for understanding technology. These courses vary in difficulty and may be selected for enrichment or career purposes. Each area offers laboratory courses which allows students to take the same course for credit more than one time.

Family and Consumer Sciences

DECORATIVE DESIGN

Credit: 0.5

Students will have the opportunity to explore the world of interior design through the decorative arts. This course will expose students to a variety of hands-on sewing techniques, while examining how different textile arts can be used effectively in the home environment. Students will complete a variety of projects on topics including, but not limited to, embroidery, quilting, counted-cross stitch, and sewing. This lab course may be taken more than once for credit. A nominal lab fee is required for this course.

MANAGING INDEPENDENCE

Credit: 0.5

This course is highly recommended for students who will be responsible for their own day-to-day life management skills once they leave home. The classes are designed to explore personal management of food, clothing, living spaces, money, and consumerism. This course is for juniors and seniors who are preparing for the responsibilities of independence.

CHILD CARE

Credit: 0.5

Students will study the care, growth, and development of the infant and toddler. This course is designed for students considering a career in education, early childhood education, or psychology. The course includes simulations using "Baby Think It Over", an electronic baby programmed to cry, the "Flour Baby" project, a variety of speakers, and field trips.

CHILD BEHAVIOR AND DEVELOPMENT

Credit: 0.5

This course is available to students in grades 9, 10, 11, and 12. Students will continue their study of the development of the child from toddler through school-age years. This course is designed for students interested in careers in education, early childhood education, or psychology. The curriculum will include field trips to local day care centers, various guest speakers, and a nursery school program. This lab course may be taken more than once for credit.

Prerequisites: Successful Completion of Child Care

CONTEMPORARY COOKING

Credit: 0.5

If you enjoy working with food and learning how it affects your health, then this is the course for you. Students will learn meal planning and the basic preparation skills for fruits, vegetables, breads, meats and more. The course activities include guest speakers, a field trip, and many labs that provide hands-on experiences for the students.

ADVANCED FOODS LAB

Credit: 0.5

Students will expand their culinary interests and skills as they explore cuisines from around the world. Particular emphasis will be placed on how diets from around the world have influenced American buying and eating habits. Classroom activities will include guest speakers, special demonstrations and field trips. This lab course may be taken more than once for credit.

Prerequisites: Successful completion of Contemporary Cooking.

Industrial Technology

INTRODUCTION TO WOODWORKING

Credit: 0.5

This course will introduce the student to a variety of hand and machine tools that will be used to build projects of their choice. All areas of woodworking will be stressed including designing, planning, constructing and proper finishing techniques.

ADVANCED WOODWORKING TECHNOLOGY

Credit: 0.5

This course is designed for the student who shows a strong interest in woodworking with an emphasis on power machinery. Each student will be able to design, plan and construct a project which involves advanced woodworking techniques. The student will be able to choose his/her own project with no limit on size or complexity. This lab course can be taken more than once for credit. **Prerequisites: Intro to Woodworking Tech**

ADVANCED TECHNICAL DRAWING/COMPUTER AIDED DRAFTING (C.A.D.)

Credit: 0.5

This course is designed for students who wish to pursue a second, third or fourth year of drafting. Each student will be given the opportunity to concentrate on an indivi dualized course of study. The student can also use the computer to revise previously done drawings or develop new plans. Students will be able to build models of the houses that they designed and draw in Architectural Drawing. This lab course may be taken more than once for credit. **Prerequisites: Intro to Tech Drawing**

PROBLEM SOLVING TECHNOLOGY

Credit: 0.5

This course is designed to explore the technology of energy, transportation, construction and manufacturing problems. The course allows you the option of developing an individual course of study to place emphasis on areas of specific interest. This lab course may be taken more than once for credit.

INTRODUCTION TO TECHNICAL DRAWING/COMPUTER AIDED DRAFTING (C.A.D.)

Credit: 0.5

This course presents the basics of instrument drawing and introduces the student to the language of technical drafting. After learning basic hand mechanical drawing, the student will be able to explore the exciting world of computer aided drafting. The student will learn the skills necessary to complete technically oriented drawings using the computer.

ARCHITECTURAL DRAWING

Credit: 0.5

This course requires the student to design a house, including the living, service and sleeping areas according to their uses. It stresses specific planning of each area to perform its unique function. Students will be required to make a complete set of house drawings which will include the location, décor, size, and shape of each room. This lab course can be taken more than once for credit. **Prerequisites: Intro to Tech Drawing**

Course Offerings in

PHYSICAL EDUCATION AND HEALTH

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 sport skills. The program is organized so each student has the opportunity to select and participate in a variety of indoor and outdoor sports, lifetime activities and personal physical fitness programs. Course offerings are reviewed each year and modified as needed to meet the needs of the students. The Presidential Physical Fitness Test is administered at the beginning and end of each year to assess current fitness levels and to assist students in setting and achieving individual goals. Physical education is required each year and each student must meet a minimum requirement of 2 credits 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.

PHYSICAL EDUCATION 9, 10, 11, 12

In grades nine through twelve, the physical education program has been designed to enhance the physical, intellectual, emotional and social development of all students. Through participation in physical education, students will develop components of fitness and a variety of lifetime sport skills. The program is organized so each student has the opportunity to select and participate in a variety of indoor and outdoor team sports, lifetime and leisure activities, outdoor pursuits and personal physical fitness programs. The following sports

Credits: 0.5 each year

and activities will be included but not limited to: climbing wall, badminton, golf, tennis, table tennis, yoga/Pilates, basketball, weight training and conditioning, soccer/speedball, football, and aerobics. Students will follow a planned course for each activity/sport which includes skill development, game strategies, historical background and related terminology. In ninth grade the class meets on an every other day schedule while in grades 10-12, it meets every day for a semester .

The Health program is designed to enhance the physical, intellectual, emotional and social development of all students. Learning opportunities are provided to develop the knowledge and skills necessary to promote and maintain lifelong health, safety and wellness.

HEALTH – GRADE 9

Credit: 0.5

The ninth grade course builds on content and skills obtained through the middle school program. This course will focus on the skills necessary for developing and maintaining a healthy lifestyle. Areas of study will include: personal fitness, human sexuality, diseases and disorders related to the body systems and the six pillars of character education.

HEALTH - GRADE 10

Credit: 0.5

The tenth grade course focuses on social and emotional health. The primary goal of this course is to promote positive mental wellness. Topics will include: mental and emotional health, family and social health, and current drug trends in society. Also, students will be introduced to a variety of health-related careers.

GRADUATION PROJECT

Credit: 0.5

Seniors will be scheduled during the first or second semester and the project must be completed during that time period. One half credit will be awarded for the successful completion of the project and the project presentation.

EASTERN CENTER FOR ARTS AND TECHNOLOGY

E.C.A.T. is accredited by the Middle States Association of Colleges and Schools. The campus is located in Willow Grove and the school is owned by nine school districts in Eastern Montgomery County. They 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. 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.

The options include:

College Credit Penn State courses are 5 days a week, 7:30 - 9:00 a.m. for college bound seniors interested in engineering, computer science or accounting/finance. College credit Penn State courses are open only to college bound seniors interested in the challenge of college level introductory courses in accounting, computer science or engineering. Students must pass the first semester class to be eligible to continue second semester. Students successfully completing these courses will receive 8 Penn State credits in accounting/finance, 7 Penn State credits for computer science, or 6 Penn State credits in engineering. Students meet either on the Penn State Abington College campus or at EASTERN during the school year.

Career programs are 5 days a week for 2 hours 45 minutes in the morning or afternoon. Career programs in fourteen career areas are primarily offered to 11th and 12th grade students and are recommended as a two-year sequence for students, except Allied Health, which is a seniors only option. A co-op work experience program is available to second-year students incorporating on-site job experiences with classroom learning. Many programs offer advanced placement/college credit options at colleges like Johnson & Wales University, Penn College of Technology, Lincoln Technical Institute, CHI and Bucks and Montgomery Community Colleges.

To attend the Eastern Center for Arts and Technology a first year student must:

- Have earned a minimum of 11 credits
- Complete an Eastern Center registration card and a UMHS course selection card

Please Note:

- 1) All 11th grade students new to the Eastern Center will receive priority for spaces available after the placement of returning students.
- 2) All returning Eastern Center students will be guaranteed admission and the opportunity to complete their career objectives. However, students who do not pass the first year of a program, or students wishing to return to the school in a different occupational program, shall be considered new students.
- 3) Grade 12 students attending the Eastern Center for the first time shall receive consideration for all remaining slots based on their capability of completing the program.

Students attending the Eastern Center must have the following courses included in their schedule:

<u>Grade 11</u>		<u>Grade 12</u>	
Eastern Center	3.0 credits	Eastern Center	3.0 credits
English	1.0 credit	English	1.0 credit
Science	1.0 credit	US History	1.0 credit
Math	1.0 credit	Elective	1.0 credit
Phys Ed 11	0.5 credit	Phys Ed 12	0.5 credit
		Graduation Project	0.5 credit

2009-2010 High School Program Offerings

Half Day Programs

7:45 - 10:30 a.m. OR 12:00 - 2:45 p.m.

Air Conditioning and Heating Technology	Cosmetology
Allied Health	Culinary Arts
Automotive Technology	Electrical Technology
Collision Repair Technology	Electronics Engineering Technology
Commercial Art	Environment Landscape Management
Computer Network Administration	Protective Services
Construction Technology	Welding Technology

College Credit Courses

7:30 - 9:00 a.m.

Accounting/Finance
Computer and Information Science
Engineering

CAREER PROGRAMS

AIR CONDITIONING AND HEATING TECHNOLOGY

Credits: 3.0

The student enrolling in this program would be taking the first step toward a financially rewarding career providing a service that is always in demand. The program provides a comprehensive foundation of the basic theories and principles of residential heating, air conditioning and heat pump systems. Students will study major system components, gas laws, pressure/temperature relationships, and will learn to properly use tools of the trade. Students will also learn basic electricity and electrical schematic reading for the service technician and will receive an introduction to hot water systems. Students will apply this knowledge by installing, starting up and servicing operating residential heating and air conditioning systems. The student will also learn how to handle refrigerant properly and install the various parts of the refrigeration system. In the second year,

students will prepare for the Environmental Protection Agency Refrigerant Certification exam for small appliances and high pressure appliances to be qualified to purchase and safely handle refrigerants used in this field. Students need to be dependable, respect others and have ambition to achieve success in this highly technical field. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: HVAC service and installation, mechanical construction, mechanical engineering and insurance consultant.

ALLIED HEALTH

Credits: 3.0

This is a one-year program for high school seniors who want to pursue a career in the health field. It is designed to expose students to a variety of health careers. This program provides core knowledge and skills needed to

work in the field. It blends study with experiences in a clinical setting partnering with healthcare professionals and interacting with patients. Students will be more prepared and gain confidence and understanding of what it takes to be a success in the health care field. Taking this course can help students save time and money to select the best health career for them. Before enrolling in Allied Health senior year, students should have or be concurrently taking Algebra I and II and college prep Biology and Chemistry with labs. All collegiate health majors require these courses with a minimum C average and the students' overall GPA of 2.5. Prior to beginning the program, all students must undergo a physical exam and a State Police criminal background check as mandated by State Law and required by Abington Memorial Hospital. Students may qualify for advanced placement college credit at Penn College of Technology upon successful completion of Allied Health with at least a B average. With higher education, this program prepares the student for success to become a technician in laboratory or nuclear medicine, radiation therapy or radiology, cardiovascular and respiratory technology, nurse, physical, occupational or speech therapy, nurse practitioner or physician's assistant.

Prerequisites: Algebra I, Algebra II, Biology and Chemistry

AUTOMOTIVE TECHNOLOGY

Credits: 3.0

The automotive industry is one of the most technologically demanding fields. The program is designed for the student who is serious about working in that industry. It includes the understanding of engines, fuel systems, electrical systems, transmissions, clutches, brakes, front and rear suspensions, air conditioning, routine service procedures and computerized diagnostic techniques. Instruction also includes hands-on work with a variety of recent model automobiles. The curriculum, facility and instructor are National Institute for Automotive Service Excellence (ASE) certified and have partnered with the Automotive Educational Systems Program (AYES). This provides qualified juniors with experiences at participating dealerships and paid summer internships. The student who completes the required course competencies has

the opportunity to take ASE qualifying exams after completing a reduced period of work experience in the industry. The student also qualifies for advanced standing through an articulation agreement with Montgomery County Community College, Lincoln Technical Institute and advanced placement at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: automotive service, engineering and design, manufacturer representative, insurance industry damage appraisal and testing, race car development, technical writer, manager, and teaching.

COLLISION REPAIR TECHNOLOGY

Credits: 3.0

A student enrolled in this program benefits from a combination of classroom instruction and the hands-on experience needed to carry out repairs on motor vehicles. The program uses the I-Car (Inter-Industry Conference on Auto Collision Repair) enhanced curriculum so students will learn the newest automotive refinishing techniques, color mixing and gain practical experience in surface preparation and finishes. Proper application of state-of-the-art undercoats and topcoats, including epoxy, enamel and urethane single-stage and two-stage base/coat, clear-coat systems are also taught. This self-paced program is one of only sixteen in Pennsylvania certified by the National Institute for Automotive Service Excellence (ASE) for meeting industry standards. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: automotive, marine and aeronautic service, new car design, manufacturing representative, insurance industry damage appraisal and testing, race car fabrication and vehicle engineering, metal fabrication, safety design engineering, technical writer, electronic diagnosis and technology, consumer information technologies, collision test engineering and teaching.

COMMERCIAL ART

Credits: 3.0

Are you interested in graphic design, commercial illustration or digital imaging? Not really sure what it takes to make it in these fields? We can help you decide which path is best for you, then help you build the skills and

the portfolio you need to succeed in your chosen area! This is a comprehensive program that covers everything from conceptual drawing and design to a professional portfolio. Students learn the commercial value and application of their unique styles in both design and illustration. Students will expand their knowledge in color theory, typography, digital imaging and computer-generated artwork. As a student in this program you will get to use industry standard software in our newly expanded Mac labs. Programs such as QuarkXpress, Adobe Photoshop and Adobe Illustrator are some of our basic software all students learn. As part of the program, you will continually update your portfolio with artwork that you create in class as well as from many real jobs from the community. We combine fundamental skills with technology - enabling students to build high-quality professional portfolios. A committee of art college representatives established our portfolio requirements. Upon completion of the program, all students have their portfolio reviewed by Commercial Art Occupational Advisory Committee representatives. What better way to prepare for the official application process to a college art program! Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: graphic design, illustration, animation, computer-generated graphic art, digital imaging, teaching and multi-media specialist.

COMPUTER NETWORK ADMINISTRATION

Credits: 3.0

Turn your computer skills into a challenging and lucrative career! This program prepares the student for two of the most prestigious certification exams in the computer industry: Certified Novell Administrator (CNA) and Microsoft Certified Professional (MCP). It also introduces students to the prominent technology of Cisco. Topics covered include the Windows operating system; upgrading and maintaining PC hardware; Internet and technology literacy; TCP/IP and routing protocols; Cisco router configurations; and preparing for networking certifications in Novell and Microsoft. All students are expected to pass the Novell certification examination as a prerequisite to

continuing their studies in Microsoft and Cisco. Entry into this program requires a solid math background, with Algebra II completed or scheduled during the first year of the program. When the student successfully completes this program with a 'B' average or better and meet PSU criteria, they are eligible for up to 13 credits in the Montgomery County Community College Associate Degree program and guaranteed admission into Penn State Abington's School of Information Sciences and Technology. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: computer information systems, teaching, computer network engineering, technology support and services, and help desk support.

CONSTRUCTION TECHNOLOGY

Credits:3.0

This program is the first step for the student interested in pursuing a successful career in civil engineering, architectural engineering, construction technology, or construction management. It will include an understanding of blue print reading, planning and estimating. The student will gain experience in the installation of formwork, rough framing, exterior and interior finishing, and stair, rafter and roof construction. The student's carpentry skills will be put to the test on both residential and commercial construction in the school's shop and at nearby building sites. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: architecture, general contracting, teaching, surveying, construction management, construction technology, civil engineering, architectural engineering, code enforcement and insurance adjusting.

COSMETOLOGY

Credits: 3. 0

If the student has a desire to own their own cosmetology business, this program will provide the skills to begin a career in this popular field. Some of the skills necessary to become a successful cosmetologist include styling, shampooing, nail and skin care, permanent and thermal waving, chemical relaxing, hair coloring and lightening. **Purchase of a cosmetology kit**

and uniform are required. First year students are expected to pass the State Board of Cosmetology written and performance tests required for licensure as a Manicurist. This is a prerequisite to continuing their studies the second year leading to licensure as a Cosmetologist. First year students practice skills on mannequins and fellow students. More advanced students assist clients in EASTERN's cosmetology clinic which is open to the public two days a week. Upon completion of the program, the student will be in the position to take the Pennsylvania State Board of Cosmetology examination to become a licensed cosmetologist. With higher education, this program prepares the student for success in such career fields as: cosmetology, management, teaching, product representation, and development and design.

CULINARY ARTS Credits: 3.0

Culinary Arts is one of today's most rewarding, challenging, and creative professions. The Culinary Arts program enables the student 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. All students pursuing the Cook Apprentice Career Objective must pass the ServSafe Certification administered by the National Restaurant Association before the completion of the program. Culinary students benefit from college credit articulation agreements with Johnson and Wales University (for up to 15 quarter credits) and Bucks County Community College (14 quarter hours) when continuing their education in this program of study at these schools. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: food and beverage management, purchasing, teaching, food manufacturing, pastry, food stylist and retail food management.

ELECTRICAL TECHNOLOGY Credits: 3.0

This multi-faceted program enables the student to learn the basics of electricity as well as advanced electrical technology. Training will be provided in both residential and commercial electrical applications, as well as

communications and computer cabling technology. The program of instruction includes installation of electrical services, circuit breakers, outlets, lights, switches, phone lines and alarm systems. Instruction also includes the understanding of Local Area Networks (LANs), such as the 100-megabit cabling and fiber optic cabling capable of one gigabit of transmission speed using the latest equipment and installation procedures. Good color vision is a requirement and the student should have the ability to climb moderate heights on a ladder. The student is encouraged to consider apprenticeship opportunities after graduation or continue their education in a two or four year college program. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the student for success in such career fields as: residential or commercial electrician, electrical engineering, teaching, computer systems engineering, communications engineering and research and development.

ELECTRONICS ENGINEERING TECHNOLOGY Credits: 3.0

This program is designed for the student to achieve success in electronics, photonics or engineering-related courses and pave the way for their college education. Photonics is the control and distribution of light through optical circuits, lasers and fiber optic cables. It distributes information for the Internet, cable TV and telecommunication systems. To understand how it works students will work on simulated industry projects to become familiar with basic theory and the various types of components and circuits used in photonic equipment. Students will be able to earn a certificate in soldering based on IPC standards (Institute for Interconnecting and Packaging of Electronic Circuits) and advanced students will get training in microprocessor systems and troubleshooting techniques. Students who qualify have the option to take the qualifying test to receive the Associate Certification for Electronic Technicians. As part of this program, the student should have taken, or be concurrently enrolled in Algebra I. Academic courses required by colleges should be taken during high school to qualify for college acceptance. Students may also qualify for advanced placement college credit at Penn

College of Technology and can earn up to 13 credits - nine directly based on Electronics and four more credits based on the results of the math placement exam at Montgomery County Community College. With higher education, this program prepares the student for success in such career fields as: telecommunications, data communications, security system design, facility and product management, teaching and electrical engineering.

ENVIRONMENTAL LANDSCAPE MANAGEMENT

Credits: 3.0

Consider a career in landscaping, preserving trees or environmental management! Completing this program allows students to advance rapidly into management and supervisory positions, manage their own business or get a head start in college. Landscaping students will receive training that prepares them for certification through the Associated Landscape Contractors of America as a Maintenance Technician and/or Installation Technician. Students plan, prioritize and design real projects, operate equipment identify plants, diagnose plant problems, lay pavers and build small ponds. Students interested in environmental studies will assess, design and implement plans to improve our local communities. Projects like conducting pollution studies, or restoring a stream bank and riparian buffer will bring ecologically-based principles and Best Management Practices to life! If you are interested in helping to preserve trees you will learn how to climb, prune, diagnose and repair trees according to standards set by the International Society of Arboriculture. In fact, students will be able to take the ISA certifying exam after they have additional field experience. Additionally, students will get lots of exposure to real world opportunities. Students may also qualify for advanced placement college credit at Penn College of Technology - which is affiliated with Penn State University. Combined with higher education, this program prepares the student for success in green career fields as: arboriculture, horticulture, landscape architecture and design, environmental science, natural resource management and urban forestry.

PROTECTIVE SERVICES

Credits: 3.0

This two-year program prepares the student to enter a career related to law enforcement, fire

science and/or industrial safety and security. It was developed in consultation with a countywide advisory committee of law enforcement and fire officials, private security firms and post-secondary institutions. The program covers criminal justice and investigation, safety, arson investigation, defensive tactics, fire fighting, hazardous materials awareness, accident investigation, community relations, leadership training and physical and mental fitness. In the first year students are expected to pass the Exterior Evolutions written and performance exam administered by the Montgomery County Fire Academy. Before the program is completed, all students are expected to pass the Hazardous Materials Awareness written test administered by the Mont. Co. Fire Academy and the Adult CPR and Standard First Aid written and performance tests administered by the Red Cross. This program requires the student to have good communication skills, be nonjudgmental, have the ability to make quick decisions, think logically and work under pressure. The student must undergo a State Police check to enroll in the program and work in this field. When the student successfully completes this program with a 'B' average or better, they are eligible for 3 advanced placement credits in the Montgomery County Community College Associate Degree in Criminal Justice or Fire Science and 8 credits at CHI in their Criminal Justice program. With higher education, this program prepares students for success in such career fields as: criminal justice, teaching, fire control, security and corrections.

WELDING TECHNOLOGY

Credits: 3.0

This program is designed for the student to become proficient in the welding skills taught and become successful in this field. Welding applications include work in aerospace, railroads, shipbuilding, automobiles, buildings, repair and maintenance of equipment, and extensive use in manufacturing processes. Students will learn about the properties of different types of metals and how to join them using state-of-the-art welding equipment. Students also learn how to read blueprints, fabricate, weld test, develop professional inspection techniques and understand the need for quality control. Students with good welding

skills have earned the highest cooperative education wages of all our programs. Students may also qualify for advanced placement college credit at Penn College of Technology. With higher education, this program prepares the

student for success in such career fields as: mechanical, aerospace or industrial engineering, physical metallurgist, business owner, teaching, equipment sales and welding engineer.

COLLEGE CREDIT COURSES

ACCOUNTING/FINANCE (Honors)

Credits: 2.0

This one-year program is for high school seniors interested in majoring in business at college. The courses are taught by Penn State instructors and cover the same material as Accounting 211, Finance 100 and one semester of MIS 106 at Penn State. The Accounting course couples financial and managerial accounting principles, and microcomputer applications provide a unique PC applications approach to accounting instruction. The Finance course focuses on the role and objectives of the financial manager, financial analysis, capital budgeting, working capital management, capital structure and planning, securities valuation, risk management, mergers and acquisitions and international finance. To be successful in this college level program, the student is required to have a strong math background. A background in accounting or bookkeeping would be useful. Students can earn up to **eight Penn State credits** by successfully completing this program. With higher education, this program prepares the student for success in such career field as: accounting, business, marketing, management, economics and finance. Students attend classes at the Eastern Center for Arts and Technology for part of the year and also at the Penn State Abington campus to give them exposure to a college environment.

COMPUTER INFORMATION

SCIENCE (Honors)

Credits: 2.0

This program is for the college bound senior student interested in an advanced paced one-year curriculum. It prepares students for entry into computer science, information science technology and business. Students are taught by Penn State instructors and earn **seven Penn State college credits**: CMPSC 101 (3 cr.) and IST 110 (4 cr.). Students receive their initial orientation at the Eastern Center for Arts and

Technology and transition to the Penn State Abington campus. While at Penn State students are granted access to both University and campus facilities and resources. Topics covered include computer programming, word processing, spread sheet analysis, database management, presentation graphics, personal homepages, computer aided drafting (CAD), email systems, course management systems and individual and group projects. Programming currently is C++ based and includes algorithmic development, arithmetic operations, loops, functions and procedure types of subprograms, parameters and arrays. Students are also exposed to elementary sorting techniques. It is recommended that students have completed Algebra I, Algebra II, Geometry and two years of lab science before entering the program.

ENGINEERING (Honors)

Credits: 2.0

The college bound senior considering enrolling in an engineering program after high school will greatly benefit from taking this one-year introductory program. It is recommended that students have completed Algebra I, Algebra II, Geometry, Physics and Chemistry. Taught by Penn State instructors, material covered in the fall semester is the same as Penn State course ED&G 100 - Introduction to Engineering Design, and is required of first-year engineering students at most universities. The course is an inter-disciplinary introduction to engineering methods through manual and computer-assisted technical drawing, laboratory experiments and design problems with report writing and oral presentation of the results. Material covered in the spring semester is Penn State course EG 297 - Special Topics in Engineering, which uses mobile robotics as solutions to engineering problems, the economic analysis of engineering alternatives, a study of engineering and the problems and potential pitfalls in the

engineering process. **Six Penn State credits** will be awarded by successfully completing both semesters. With higher education, this program prepares the student for success in all the major fields of engineering. Students will receive their initial orientation at the Eastern Center for Arts

and Technology and transition to Penn State Abington. While at Penn State students will be granted access to both University and campus facilities and resources.

UMHS COURSE OFFERINGS FOR 2009-2010

<u>LANGUAGE ARTS</u>	232 Algebra II (CP)	* 522 Accounting I (CP)
001 Language Arts 9 (A)	233 Algebra II (H)	* 523 Accounting II (CP)
002 Language Arts 9 (CP)	242 Geometry (CP)	* 532 Business Law
003 Language Arts 9 (H)	243 Geometry (H)	<u>ART</u>
011 Language Arts 10 (A)	252 Analysis/Trig. (CP)	602 Intro to Art Major
012 Language Arts 10 (CP)	253 Analysis/Trig. (H)	603 Art Major
013 Language Arts 10 (H)	262 Pre-Calculus (CP)	604 Advanced Art Major
021 Language Arts 11 (A)	263 Calculus (H)	605 AP Studio Art
022 Language Arts 11 (CP)	265 AP Calculus AB	612 Painting
023 Language Arts 11 (H)	272 Statistics (CP)	* 613 2D Design
031 Language Arts 12 (A)	275 AP Statistics	622 Pottery
032 Language Arts 12 (CP)	296 Mathematics (LS)	* 623 Sculpture
033 Language Arts 12 (H)	297 Mathematics (ES)	* 632 Crafts Design
035 AP English	299 Mathematics (FLS)	* 633 Printmaking
* 042 Effective Oral Comm.	<u>SCIENCE</u>	<u>MUSIC</u>
* 052 Effective Written Com.	301 Physical Science (A)	* 642 Introduction to Music
* 062 Comp Strategies/ Rdg	302 Physical Science (CP)	645 AP Music Theory
* 071 Reading/Writing	311 Biology (A)	* 652 Piano
* 082 SAT Prep-Verbal/Math	312 Biology (CP)	* 662 Guitar
* 083 PSSA Support Rdg/Math	313 Biology (H)	672 Concert Choir
092 English as a Second Lang	315 AP Biology	682 Concert Band
095 English (LS)	321 Consumer Chemistry (A)	692 String Orchestra
096 English (ES)	322 Chemistry (CP)	<u>FAMILY & CONSUMER</u>
097 English (FLS)	323 Chemistry (H)	<u>SCIENCES</u>
098 Reading (LS)	325 AP Chemistry	* 702 Decorative Design
099 Reading (FLS)	331 Conceptual Physics (A)	* 712 Managing Independence
<u>SOCIAL SCIENCES</u>	332 Physics (CP)	* 722 Child Care
102 World History (CP)	333 Physics (H)	* 723 Child Behavior/ Develop
103 World History (H)	335 AP Physics	* 732 Contemporary Cooking
112 US History I (CP)	341 Ecology (A)	* 733 Adv. Foods Lab
113 US History I (H)	342 Ecology (CP)	<u>INDUSTRIAL TECHNOLOGY</u>
115 AP US History (Part I)	352 Genetics/Microbio (H)	* 742 Introduction to Wood
121 US History II (A)	362 Human Anatomy (CP)	* 743 Advanced Wood
122 US History II (CP)	396 Science (LS)	* 752 Prob. Solv. in Tech.
123 US History II (H)	397 Science (ES)	* 762 Intro to Tech Draw/CAD
125 AP US History (Part II)	399 Science (FLS)	* 763 Advan Tech Draft/CAD
135 AP US Gov/Pol	<u>WORLD LANGUAGES</u>	* 764 Architectural Drafting
145 AP European History	401 French I	<u>P.E./FITNESS/HEALTH</u>
*151 Crim./US Just Sys. (CP)	402 French II	850 P.E. & Health
*152 General Psych (CP)	403 French III	* 823 Graduation Project
153 Research in Psych (H)	404 French IV	<u>EASTERN CENTER</u>
155 AP Psychology	405 AP French	901 Air Conditioning /Heating
* 161 Contemp Soc Iss(CP)	411 German I	902 Allied Health
* 162 Amer. Poli System (CP)	412 German II	903 Automotive Tech
163 Macro-Econ/Finan (CP)	413 German III	904 Collision Repair Tech
* 171 History in Media (CP)	414 German IV	905 Commercial Art
* 172 Conflict in Society (CP)	415 AP German	906 Comput Network Admin
196 Social Studies (LS)	421 Spanish I	907 Construction Technology
197 Social Studies (ES)	422 Spanish II	908 Cosmetology
199 Social Studies (FLS)	423 Spanish III	909 Culinary Arts
<u>MATHEMATICS</u>	424 Spanish IV	910 Electrical Technology
201 Problem Solving I	425 AP Spanish	911 Electronics Engineering Tech
202 Problem Solving II	<u>BUSINESS</u>	912 Environment Landscape
211 Integrated Algebra I	* 501 Word Processing	913 Protective Services
212 Integrated Algebra II	* 502 Desktop Publish	914 Welding Technology
214 Integrated Geometry	* 503 Web Design	921 Accounting/Finance (H)
222 Algebra I	* 504 Computer Applications	922 Computer Science (H)
	* 512 Marketing & Retailing	923 Engineering (H)

Table #1 - COURSE OFFERINGS AVAILABLE TO INCOMING 9TH GRADE STUDENTS

<u>REQUIRED COURSES</u>	<u>ELECTIVE OPTIONS</u>
001 Language Arts 9 (A)	* 042 Effective Oral Communications
002 Language Arts 9 (CP)	* 052 Effective Written Communications
003 Language Arts 9 (H)	* 062 Comp Reading Strategies
092 ESL	* 071 Reading/Writing
095 English (LS)	* 151 Criminology /American Justice System (CP)
096 English (ES)	* 162 The American Political System (CP)
097 English (FLS)	* 171 History Through the Media (CP)
098 Reading (LS)	* 172 Conflict and Society (CP)
099 Reading (FLS)	401 French I
	402 French II
102 World History (CP)	411 Spanish I
103 World History (H)	412 Spanish II
196 Social Studies (LS)	421 German I
197 Social Studies (ES)	422 German II
198 Social Studies (FLS)	* 501 Word Processing
	* 502 Desktop Publishing
201 Problem Solving I	* 503 Web Design
211 Integrated Algebra I	* 504 Computer Applications
222 Algebra I	601 Intro to Art Major
232 Algebra II (CP)	* 613 2D Design
233 Algebra II (H)	622 Pottery
242 Geometry (CP)	* 623 Sculpture
243 Geometry (H)	* 632 Crafts Design
	* 642 Introduction to Music
301 Physical Science (A)	* 652 Piano
302 Physical Science (CP)	* 662 Guitar
313 Biology (H)	672 Concert Choir
	682 Concert Band
*850 Physical Education/Health 9	692 String Orchestra
	* 702 Decorative Design
	* 722 Child Care
	* 723 Child Behavior and Development
	* 732 Contemporary Cooking
	* 733 Advanced Foods Lab
	* 742 Introduction to Woodworking
	* 743 Advanced Woodworking
	* 752 Problem Solving in Technology
	* 762 Intro to Technical Drawing & C.A.D.
	* 763 Advancec Technical Drawing & C.A.D.
* Semester Courses	* 764 Architectural Drafting