

SPRINGFIELD HIGH SCHOOL

2019-2020 SCHOOL YEAR

COURSE CATALOG AND COURSE DESCRIPTIONS

Language Arts

The Language Arts program at Springfield High School integrates all the language arts skills– reading, writing, speaking, listening, thinking, and researching – into the curriculum and helps students apply these skills to meaningful tasks. Our program goal is to have students achieve high academic standards goals in the language arts: reading independently, reading critically, analyzing and responding to literature, writing in various forms for a variety of audiences, producing compositions of high quality, speaking proficiently, and using research skills. Students at all grade levels will be expected to know and meet district and state standards in reading, writing, speaking and listening. Technology is infused into each course in a deliberate and meaningful fashion.

Accelerated Program	<i>This program is ideal for students applying to colleges designated as competitive and most competitive. Students selecting the most rigorous courses typically select college majors and careers which are communications-based (for example, Arts and Sciences, Pre-Law, Political Science, etc.).</i>			
	Grade 9	Grade 10	Grade 11	Grade 12
	Language Arts (I) H	Language Arts (II) H	AP Language & Composition or H Language Arts (III)	AP Literature & Composition or H Language Arts (IV)
Standard Program	<i>This program is ideal for students for the majority of college and career bound students. Students selecting these courses will be well prepared for a wide variety of college majors and career choices, both communications and technology-based.</i>			
	Grade 9	Grade 10	Grade 11	Grade 12
	CP Language Arts (I)	H Language Arts (II) or CP Language Arts (II)	H Language Arts (III) or CP Language Arts (III)	H Language Arts (IV) or CP Language Arts (IV)

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- CHE Courses with this code are Clearing House Equivalency for Springfield High School Only
- H Courses with this code or designation are Honors Level or have Honors weight options

CH₁₁₀ H Language Arts (I): Foundations of Literature /Honors

1.0 credit Language Arts Credit Grade: 9

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in 8th grade language arts plus or
Grade of 94% or higher in 8th grade language arts

In Language Arts (I) Honors, students will be introduced to and study various genres of fiction and non-fiction, and they will learn the necessary skills specific to each type of reading. To enhance their understanding and appreciation of the literature, students will discover the relationship between the works and their respective time periods and cultures. Texts include *The Odyssey*, *Romeo and Juliet*, *Lord of the Flies*, "A Modest Proposal," Romantic poetry, *Things Fall Apart*, and *All Quiet on the Western Front*. In conjunction with and in addition to the reading, students will employ the writing process and write extensively in various modes, ranging from formal literary analysis to persuasion and poetic response. Reading and writing skills will be assessed daily for development with a goal of demonstration of mastery. Grammar and vocabulary development via the Sadlier Vocabulary Workshop program (Level E) are also stressed.

In Honors level classes, students must be self-motivated, possess strong writing skills, and be able to work through challenging texts independently. They will be required to read and write more extensively and in more depth, and they can expect a greater demand for homework responsibilities.

Language Arts (I) Honors requires the following additions to/variations from the College Preparatory level:

- *A summer reading assignment for a required text.*
- *Homer's The Odyssey (in lieu of Greek myths).*
- *Two to three additional texts, including a Shakespearean comedy.*
- *Two to three additional writing pieces or projects.*

CH₁₁₁ CP Language Arts (I): Survey of Literature /College Preparatory

1.0 credit Language Arts Credit Grade: 9

In Language Arts (I) College Preparatory, students will be introduced to and study various genres of fiction and non-fiction, and they will learn the necessary skills specific to each type of reading. To enhance their understanding and appreciation of the literature, students will discover the relationship between the works and their respective time periods and cultures. Texts include Ancient Greek myths, *Romeo and Juliet*, *Lord of the Flies*, "A Modest Proposal," Romantic poetry, and *Raisin the Sun*. In conjunction with and in addition to the reading, students will employ the writing process and write extensively in various modes, ranging from formal literary analysis to persuasion and poetic response. Reading and writing skills will be assessed daily for development with a goal of demonstration of mastery. Grammar and vocabulary development via the Sadlier Vocabulary Workshop program (Level D) are also stressed.

CH₁₂₀ H Language Arts (II): The American Experience /Honors

1.0 credit Language Arts Credit Grade: 10

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in 110 or
Grade of 94% or higher in 111

Language Arts (II) Honors will examine how American writers have represented and interpreted the American experience through their works. The course intends to provide students with an exposure to the social, economic and

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cultural events that have shaped and defined our values and our goals as a nation. The development of the course may be thematic or chronological. Students in the Honors level classes will read from American writers including Arthur Miller, John Steinbeck, and Harper Lee. In addition to the study of literature, students will have opportunities to employ the writing process in a variety of writing modes. Grammar, usage, mechanics, and vocabulary via the Sadlier Vocabulary Workshop program (Level F) will be studied and developed. This course will place an emphasis in preparing students for taking the Keystone Literature Exam. Assessment methods vary and include oral, written, multi-media and group presentations.

In Honors level classes, students will be required to read and write more extensively and in more depth and can expect a greater demand for homework responsibilities and independent preparation.

Language Arts (II) Honors requires more of the following than in the College Preparatory level:

- *Analytical writing,*
- *Reading,*
- *Independent work*
- *Homework*

CH 121 CP Language Arts (II): The American Experience /College Preparatory

1.0 credit Language Arts Credit Grade: 10

Language Arts (II) College Preparatory will examine how American writers have represented and interpreted the American experience through their works. The course intends to provide students with an exposure to the social, economic and cultural events that have shaped and defined our values and our goals as a nation. The development of the course may be thematic or chronological. Students in Academic level classes will read from American writers including Arthur Miller, John Steinbeck, and Harper Lee. In addition to the study of literature, students will have the opportunity to employ the writing process in a variety of writing modes. This course will place a heavy emphasis in preparing students for taking the Keystone Literature Exam. Grammar, usage, mechanics, and vocabulary development via the Sadlier Vocabulary Workshop (Level E) will be studied. Assessment methods vary and include oral, written, multi-media and group presentations.

CH 130 H Language Arts (III): Global Perspectives /Honors

1.0 credit Language Arts Credit Grade: 11

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in 120 or
Grade of 94% or higher in 121

Language Arts (III) Honors builds upon the 10th grade literature experience. This course moves students from an American outlook on the 20th century to a global perspective. Through this global exposure to modern world literature, students explore the human condition in light of the cultural implications found in novels, short stories, poetry, plays, and memoirs from throughout the world, including the Middle East, Asia, Africa and Latin America. In addition to the study of literature, this course focuses on college preparation, including an emphasis on the development of college level writing and literary analysis, MLA format, vocabulary development via the Sadlier Vocabulary Workshop program (Level G), and independent reading and writing. Assessment methods vary and include written, multi-media and group presentations.

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In Honors level classes, students will be required to read and write more extensively and in more depth and can expect a greater demand for homework responsibilities and independent preparation.

Language Arts (III) Honors requires more of the following than in the College Preparatory level:

- *Two summer reading books and assessments*
- *Extensive fiction and non-fiction reading*
- *Emphasis on college level writing, developing mature and sophisticated writing style*
- *More homework responsibilities*

CH 131 CP Language Arts (III): Global Perspectives /College Preparatory

1.0 credit Language Arts Credit Grade: 11

Language Arts (III) College Preparatory builds upon the 10th grade literature experience. This course moves students from an American outlook on the 20th century to a global perspective. Through this global exposure to modern world literature, students explore the human condition in light of the cultural implications found in novels, short stories, poetry, plays, and memoirs from throughout the world, including the Middle East, Asia, Africa and Latin America. In addition to the study of literature, students will employ the writing process in a variety of modes, including narrative, informational, and persuasive. Grammar, usage, mechanics, and vocabulary development via the Sadlier Vocabulary Workshop program (Level F) will be stressed. Assessment methods vary and include oral, written, multi-media and group presentations.

CH 139 Advanced Placement English Language and Composition

1.0 credit Language Arts Credit Grade: 11

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 90% or higher in 120 or
Grade of 94% or higher in 121

The AP English Language and Composition course is designed to help students become skilled readers of prose written in a variety of rhetorical contexts and to become skilled writers who compose for a variety of purposes. Both their writing and their reading should make students aware of the interactions among a writer's purposes, audience expectations, and subjects as well as the way generic conventions and the resources of language contribute to effectiveness in writing. To this end, grammar instruction is a strong component of the course. Students will have opportunities to write about a variety of subjects and to demonstrate an awareness of audience and purpose. The overarching objective is to enable students to write effectively and confidently across the curriculum and in their professional and personal lives. Another purpose of the AP English Language and Composition course is to enable students to read complex texts from many disciplines and historical periods with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature readers. To reflect the increasing importance of graphics and visual images in texts published in print and electronic media, students are asked to analyze how such images both relate to written texts and serve as alternative forms of texts themselves. Vocabulary development will be addressed via the Sadlier Vocabulary Workshop program (Level G). Students must take the Advanced Placement Exam in order to earn the AP grade weight.

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CH 140 H Language Arts (IV): Epics, Classics & Contemporaries /Honors

1.0 credit Language Arts Credit Grade: 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in 130 or
Grade of 94% or higher in 131

In Language Arts (IV) Honors, students will develop an understanding and appreciation of major works of classical and modern literature. Works may include *Oedipus Rex*, *Antigone*, *A Doll's House*, *Macbeth* and/or *Hamlet*. The course will weave in a variety of supplementary texts that enhance student comprehension of core texts. The course will center on various types of writing including argument, analysis, and evaluation. The students will engage in the writing process through critical analysis of the text, drafting an argument, and working through the revision process. Other areas of study include literary criticism, vocabulary acquisition via the Sadlier Vocabulary Workshop program (Level H), mechanical expression, and literary analysis.

In Honors level classes, students will be required to read and write more extensively and in more depth and can expect a greater demand for homework responsibilities and independent preparation.

Language Arts (IV) Honors requires more of the following than in the College Preparatory level:

- *One summer reading book and two assessments; more homework responsibilities*
- *Extensive fiction and non-fiction reading*
- *Emphasis on college level writing, developing mature and sophisticated writing style*

CH 141 CP Language Arts (IV): Epics, Classics & Contemporaries /College Preparatory

1.0 credit Language Arts Credit Grade: 12

In Language Arts (IV) College Preparatory, students will develop an understanding and appreciation of major works of classical and modern literature. Works may include *Oedipus Rex*, *Antigone*, *A Doll's House*, *Macbeth* and/or *Hamlet*. The course will weave in a variety of supplementary texts that enhance student comprehension of core texts. The course will center on various types of writing including argument, analysis, and evaluation. The students will engage in the writing process through critical analysis of the text, drafting an argument, and working through the revision process. Other areas of study include vocabulary acquisition via the Sadlier Vocabulary Workshop program (Level G), mechanical expression, and literary analysis.

CH 149 Advanced Placement English Literature and Composition

1.0 credit Language Arts Credit Grade: 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 85% or higher in 139 or
Grade of 90% or higher in 130 or
Grade of 97% or higher in 131

The purpose of this course is to give qualified students the opportunity to read, write, think, and speak about challenging works of literature in a seminar setting. The overall reading goal is to provide for the experience, interpretation, and evaluation of literature through extensive writing and discussion. We will supplement our core readings with independent readings and supplementary texts. As we read, we will look to identify common themes among the novels, plays, poems, stories, articles, and essays. Our reading and writing will be supported by work from

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the Sadlier Vocabulary Workshop program (Level H). The way we make learning real and lasting is through finding connections between the different texts we immerse ourselves in during class. We will not study texts in isolation; rather, we will put them in conversation with one another and use them as lenses for critically viewing each text. We will learn to use literary criticism to create meaning with texts. We will learn to apply Theory of Mind to challenging texts, grapple with issues of authorial choice as a threshold concept, and practice a variety of writing approaches from analytical to argumentative. The way we use the texts of this course will help to prepare students for the AP Literature and Composition exam in May and a college level English course. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

In this AP course, students will be required to read and write more extensively and in more depth and can expect a greater demand for homework responsibilities and independent preparation.

AP Literature and Composition requires more of the following than in the Language Arts (IV) Honors level:

- *Three summer reading books and four assessments*
- *Extensive fiction and non-fiction reading navigated using note-taking strategies*
- *Emphasis on university-level writing that recognizes writing as a process; developing a mature and sophisticated writing style*
- *Expectation of interdisciplinary learning experiences (challenging course work) to draw upon in seminar setting*
- *More homework responsibilities*
- *Love of reading and writing*
- *Willingness to speak and contribute during seminar setting*

Additional Language Arts Course Offerings

CH 126	Creative Writing			
0.5 credit		Humanities, Technologies, & Arts	Grades: 9, 10, 11	HAC access

In this course, students will explore the art of storytelling. The emphasis will be on creating short fiction and learning the techniques of short story writing. Students will participate in frequent short writing exercises in an attempt to learn about plot structure, conflict creation, dialogue, character development, and voice. Completion of written stories, novels, and writing contests will be required, as well as at least one submission by each student to the Literary Magazine. Computers will be used extensively, both for word processing and Internet exploration.

CH 128	Advanced Writing Fiction			
0.5 Credit		Humanities, Technologies, & Arts	Grades: 10, 11, 12	HAC Access
Prerequisite:	Teacher recommendation along with recommended standards of academic performance as follows: Grade of 94% or higher in 127			

For Advanced Writing Fiction, students will be expected to have the fundamentals of writing at their disposal. This environment will dive deeper into the elements of writing, emulating a college level writing environment. Students will be expected to work independently on writing projects, submit work for contests and publication, share their writing in a writing circle environment and produce a finished product, whether it be a novel, short story collection or poetry collection. Students will also be expected to complete an author study project and be able to identify elements in the works of a published author to implement into their own writing.

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151	Literature and Film		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	HAC Access

In teaching both literary and filmmaking techniques, this course will use a variety of carefully chosen films as a medium for understanding the relationship between film and literature. Students will study the language of film and will focus on artistic techniques, such as the use of lighting, camera angles, music and sound, and editing, in order to better evaluate a film's success. Students will submit film reviews and complete presentations based on the techniques and devices studied and interpreted. All Language Arts academic standards will be met in this course with a heavy emphasis on persuasive writing.

Communications Course Offerings

CH 839	<i>Presenting in a Tech Driven World (formerly Public Speaking)</i>		
0.5 credit	Humanities, Technologies, & Arts	Grades: 11, 12	HAC Access

Advancements and innovations in technology and software applications are being integrated into presentations and public speaking to provide for a more robust and interactive experience for the audience and presenter alike. This course will introduce students to a variety of presentation platforms to complement the public speaking skills students will develop as they learn the language of communication, both verbal and nonverbal, when presenting to an audience. Students in this course will participate in a variety of speaking/presentation situations including informative, persuasive, and narrative while integrating technology to enhance the effectiveness of the presentation. Students will also evaluate presentations, express individual opinions, and work on presentation projects with peers.

Presentation technology such as: Adobe InDesign, Adobe Spark, AniMaker, Cute Cut, Cyberlink Power Director, iMovie, PowToons, and Prezi will be explored.

840	Introduction to Acting		
0.5 credit	Humanities, Technologies, & Arts	Grades: 9, 10	HAC Access

Students will develop self-confidence in this course, both as performers and as individuals. They will receive a general orientation to the Stanislavski "Method" of acting. Course activities include extensive work in improvisation, characterization, stage movement, monologues, and scene work. Class and teacher viewing of performances and class participation are included in the evaluation of students.

842	Advanced Acting		
0.5 credit	Humanities, Technologies, & Arts	Grades: 11, 12	HAC Access
Prerequisite: Successful completion of Introduction to Acting			

Delving further into the acting skills and techniques introduced in "Introduction to Acting", students will explore and perform contrasting monologues from published plays, as well as one scene in a safe and supportive atmosphere. Understanding the dramatic text, communicating with a fellow actor, and discovering personal connections to a character and scene are just some of the benefits of this class. Public performance will again be stressed with students performing scenes and plays on stage at Celebration of the Arts

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Social Studies

The Social Studies program at Springfield High School is designed to allow the student the option of becoming involved in specific aspects of the social sciences that parallel his/her specific interest. The program is designed to consider the development of the intellectual capabilities of each student which will in turn lead the student to become a more rational thinking being. Coupled with this is an emphasis on the application of the many higher order thinking processes including the various skills connected with decision making, problem solving, critical and creative thinking. The students will have the necessary knowledge, intellectual and social awareness, and communicative skills to function and develop in the 21st century.

Accelerated Program	<i>This program is ideal for students applying to competitive colleges, especially if the student is planning to major in business management, economics, psychology, law and other social science disciplines.</i>			
	Grade 9	Grade 10	Grade 11	Grade 12
	H/CP The Global Context	H/CP United States History:1820-Present Or AP United States History	H/CP United States Civics and Government Or AP United States Government and Politics	Additional Coursework: See course descriptions for a variety of additional SS courses.

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CH 210	H The Global Context: Voices of the People
1.0 Credit	Social Studies
	Grade 9

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 94% or higher in 8th grade Social Studies

This course is designed to expose the students to distant cultures of the world as viewed through indigenous narratives. Our units of study include an examination of the Middle East, Africa, South Asia, East Asia, and South America’s own histories and how these were impacted when encountering the colonialism of the Western world. In each unit, emphasis is placed on geography, culture, brief historical context, and current issues of the region. This course exposes students to a variety of cultures, and the patterns of civilizations as they evolve. A major focus will be placed on government, geography, society, customs, religion, global current events and economics. The aim is to give students a broad understanding of the world’s modern civilizations to help them participate in today’s global society. Within the Honors course students will be expected to challenge themselves to think deeply about the connections between the historical texts they encounter and global current events.

Students should expect class discussions, collaborative work, nightly assignments, simulations and direct instruction. Integrative technology is an important component to this course. Student’s geographic skills will be honed with in-depth map work. Special attention will be given to the development of higher-level writing skills. Long term research projects will be assigned.

CH 211	The Global Context: Voices of the People
1.0 Credit	Social Studies
	Grade 9

This course is designed to expose the students to distant cultures of the world as viewed through indigenous narratives. Our units of study include an examination of the Middle East, Africa, South Asia, East Asia, and South America’s own histories and how these were impacted when encountering the colonialism of the Western world. In each unit, emphasis is placed on geography, culture, brief historical context, and current issues of the region. This course exposes students to a variety of cultures, and the patterns of civilizations as they evolve. A major focus will be placed on government, geography, society, customs, religion, global current events and economics. The aim is to give students a broad understanding of the world’s modern civilizations to help them participate in today’s global society.

Students should expect a wide variety of classroom activities, including but not limited to: simulations, direct instruction, group work, computer projects, and independent assignments. Students will learn, review, and then implement basic geographic skills with unit specific map labeling. Current events are an important part of this class, and students will be expected to be aware of important global events.

CH 220	H United States History:1820-Present/Honors
1.0 Credit	Social Studies
	Grade: 10

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in Honors Global Context
Grade of 94% or higher in CP Global Context

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This course surveys American History from the Jacksonian to the present, highlighting some of the important political and cultural contributions by Pennsylvanians along the way. Important events, themes, and people are studied with an emphasis on their relationship to one another and their meaning to the present. The course examines the beneficiaries of the American Experience as well as those who were left out. It traces the extraordinary social, technological, economic and foreign policy transformations that have made us what we are as people. Students are challenged to analyze events while using primary and secondary sources that sometimes lead to various interpretations of the evidence. Above all, students are required to think about the meaning of this nation's history in their lives. Reading, writing, discussing, and active involvement are the essential strategies used in this course. The internet also plays a vital role in accessing primary sources and varied interpretations. A semester long research project will culminate with a formal research thesis paper.

The Honors course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history. Students should learn to assess historical materials – their relevance to a given interpretive problem, their reliability, and their importance, and to weigh the evidence and interpretations presented in historical scholarship. A semester long research project will culminate with a formal 6-8 page research thesis paper.

CH 221 CP United States History:1820-Present/College Prep
 1.0 Credit Social Studies Grade: 10

This course surveys American History from the Jacksonian period to the present, highlighting some of the important political and cultural contributions by Pennsylvanians along the way. Important events, themes, and people are studied with an emphasis on their relationship to one another and their meaning to the present. The course examines the beneficiaries of the American Experience as well as those who were left out. It traces the extraordinary social, technological, economic and foreign policy transformations that have made us what we are as people. Students are challenged to analyze events while using primary and secondary sources that sometimes lead to various interpretations of the evidence. Above all, students are required to think about the meaning of this nation's history in their lives. Reading, writing, discussing, and role-playing are the essential strategies used in this course. The Internet also plays a vital role in accessing primary sources and varied interpretations. A semester long research project will culminate with a formal research thesis paper.

CH 225 Advanced Placement United States History
 1.0 Credit Social Studies Grade: 10

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
 Grade of 90% or higher in Honors Global Context
 Grade of 94% or higher in CP Global Context

The Advanced Placement program in United States History is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States history from early settlement to the present. This course prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Student should learn to assess historical materials – their relevance to a given interpretive problem, their reliability, and their importance, and to weigh the evidence and interpretations presented in historical scholarship. The Internet also plays a vital role in accessing primary sources and varied interpretations for research projects. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

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CH 240 H United States Civics and Government/ Honors

1.0 Credit Social Studies Grade: 11

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in United States History H
Grade of 94% or higher in United States History CP

United States Civics and Government is designed to assist students in developing an understanding of the American political system and an appreciation for the important role that citizens play in our democratic republic. Units of study include the purpose and function of government, historical foundations and significant documents of American government, general processes of government, the interpretation and application of law, and the role of individual citizens and that of groups and organizations in our political system. Students will also compare and contrast the role of the federal government with that of the state of Pennsylvania. Internet research is used for simulations and problem solving projects as well as to provide a consistent awareness of current events in Washington and Harrisburg.

Within the Honors classes students will be expected to challenge themselves to think deeply about the connections between the historical texts they encounter and current events that are unfolding within the United States today. Students will also be expected to take engage in various independent and collaborative research and writing initiatives.

CH 241 CP United States Civics and Government/ College Preparatory

1.0 Credit Social Studies Grade: 11

United States Civics and Government is designed to assist students in developing an understanding of the American political system and an appreciation for the important role that citizens play in our democratic republic. Units of study include the purpose and function of government and the historical foundations and significant documents of American government, the general processes of government, the interpretation and application of law, and the role of individual citizens and that of groups and organizations in our political system. Students will also compare and contrast the role of the federal government with that of the state of Pennsylvania. Internet research is used for simulations and problem solving projects as well as to provide a consistent awareness of current events in Washington and Harrisburg.

CH 245 Advanced Placement United States Government & Politics

1.0 Credit Social Studies Grade: 11

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 90% or higher in Grade 10 Honors United States History
Grade of 94% or higher in Grade 10 CP United States History

The Advanced Placement American Government and Politics course is an intensive program of instruction and personal study focusing on the national level of government and politics. Students will critically examine five common areas and subjects normally covered in an introductory college political science course: the Constitution; underpinnings of Government, political parties and interest groups; institutions and policy processes of the national government; civil rights and civil liberties. The course uses web resources extensively in addition to textbook and primary source materials. Students with consistently high grades in social studies and teacher recommendations will be considered for the course. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

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Social Studies – Additional Course Offerings

^{CH} 254	Civil and Criminal Law			
0.5 Credit	Humanities, Technologies, & Arts	Grade: 10, 11	HAC access	

The Civil and Criminal Law course offers the student an exciting hands-on experience in practical law using the Street Law Text and other Street Law materials. The major emphasis will be on practical application through student simulations, mock trials, moot court hearings, and presentations by legal experts. Students will be using the Internet to research past cases, precedents, and legal updates.

^{CH} 255	Psychology			
0.5 Credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	HAC access	

The primary goal of this semester course is to expose students to some of the major topics and themes of the field of psychology. The course covers the history of psychology and the four major perspectives of psychology; biological, behavioral, psychodynamic, and humanistic, as well as a study of the brain, self-concept and advertising psychology, and social psychology and abnormal psychology. Students will participate in experiments and demonstrations to reinforce course concepts and as a result, gain a better understanding of the forces behind human behavior; their own and others.

^{CH} 258	Constitutional Civil Rights			
^{CH} 258H	Honors Constitutional Civil Rights			
0.5 Credit	Humanities, Technologies, & Arts	Grades: 11, 12	HAC access	

Anyone who has ever watched a cop drama knows that criminal suspects have certain rights, including the right to remain silent and the right to an attorney. People speak their minds freely on television and on the internet knowing that they have a right to free speech. These rights, and many more, are guaranteed and protected under the United States Constitution and the Bill of Rights. In this course, we will explore these rights in real life cases and analyze the Supreme Court's role as protector and defender of the Constitution. Activities will include debates and simulations, as well as participation in an intensive moot Supreme Court hearing.

^{CHE} 261	Sociology			
^{CHE} 261H	Honors Sociology			
0.5 Credit	Humanities, Technologies, & Arts	Grades: 11, 12	HAC access	

Sociology is the study of social life, social change, and the social causes and consequences of human behavior. In this one semester course, students will focus on human behavior in families, religious groups, local communities, and in the broader society. Students will examine such topics as cultural conformity, adolescent socialization, racial and ethnic relations, and gender. Class discussions based on assigned readings will be the primary activity during this course, with several short reaction papers and examinations assigned throughout the semester. Students are also required to complete a culminating research project. Students must realize that a regimen of regular study and above average ability in reading and synthesizing skills are required in order to achieve success at this level.

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Social Studies – Advanced Placement Course Offerings

CH 235 Advanced Placement European History

1.0 Credit Humanities, Technologies, & Arts Grade: 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 90% or higher in
Honors United States Government and Politics, AP Gov , or AP U.S. History
Grade of 94% or higher in CP United States History

This course is designed as a college level course and students are expected to take the AP test in May. The scope of the course is from the Renaissance to present day and utilizes a college level text plus a variety of primary sources. Students will be expected to complete several research projects plus participate in historic simulations and class discussions. Analysis of material to determine patterns in history is a necessity in the course, as is understanding how to write a complete persuasive historic essay. Students must become comfortable in using the internet for research and contacting other AP sites. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

CH 256 Advanced Placement Psychology

1.0 Credit Humanities, Technologies, & Arts Grades: 11, 12 HAC access

Prerequisite: Grade of 90 % or higher in honors level social studies courses
Grade of 84% or higher in AP level social studies courses

This is a rigorous college level course. By design, the course is patterned after a typical undergraduate introductory psychology course. A college-level text is used in the course. The course covers 14 designated topics: 1) History and Approaches; 2) Research Methods; 3) Biological Bases of Behavior; 4) Sensation and Perception; 5) States of Consciousness; 6) Learning; 7) Cognition; 8) Motivation and Emotion; 9) Developmental Psychology; 10) Personality; 11) Testing and Individual Differences; 12) Abnormal Psychology; 13) Treatment of Psychological Disorders; 14) Social Psychology. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

CH 265 AP Human Geography

1.0 Credit Humanities, Technologies, & Arts Grades: 10,11, 12 HAC Access

The AP Human Geography course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth’s surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and application.

CH 981 Advanced Placement Microeconomics

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12 HAC Access

Prerequisite: Completed or currently enrolled in Algebra II

This is a college level course that introduces students to the concept that economic questions exist because of scarcity, wants exceed the resources available to satisfy them, choices must be made and cost-benefit analysis can be used to understand and explore the smaller segments of the economy such as consumers and producers and how they interact

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in output markets and resource markets, and of course the impact of government policies on these economic units. This course follows approved AP curriculum. Students must take and pass the AP exam to be eligible to receive college credit.

CH 984 **Advanced Placement Macroeconomics**

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12 HAC Access

Prerequisite: Successful completion of H/CP Algebra II

This college-level course complies with College Board guidelines and is the equivalent of an introductory-level university course in Macroeconomics. AP Macroeconomics provides students a thorough understanding of the principles of economics that apply to an economic system as a whole. Students learn about scarcity, national income, price determination, economic performance measures, the financial sector, stabilization policies, inflation, unemployment, economic growth, the business cycle, price indices, Classical Economics and Say's Law, the fundamentals of aggregate supply, the fundamentals of aggregate demand, expenditure and tax multipliers, economic growth and productivity, Keynesian Economics, fiscal policy, and international economics.

SHS Course # **290 World Affairs

DCCC Course # POL 200 World Affairs

(Honors Weight awarded with successful completion of Capstone Project)

1.0 Credit Humanities, Technologies, & Arts Grades: 11, 12

3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

This course deals with the theory and practice of international relations. Upon successful completion of the course, students should be able to analyze the role of power in international politics. Students will identify the major constraints a national state must deal with in the formulation and implementation of foreign policy, as well as assess the impact of the United Nations on the relations between national states in the contemporary world. Finally, students will plan developmentally and culturally appropriate strategies to address individual differences among political adversaries.

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Science

The Science program at Springfield High School is designed to allow the student the option of becoming involved in specific aspects of the Sciences that parallel her/his specific interest. From Biology to Advanced Placement (AP) Environmental Science, the Science curriculum is flexible enough to account for individual needs. The program is designed to consider the development of the intellectual capabilities of each student which will in turn, lead the student to become an articulate and rational thinker. Coupled with this, is an emphasis on the application of higher order thinking processes including the skills connected with decision making, problem solving, and critical and creative thinking. The students will gain the necessary knowledge, intellectual and social awareness, and communicative skills to function and succeed in the 21st century.

CH 305 H Biology/Honors

1.0 Credit Science Credit Grade: 9

Prerequisites: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 96% or higher in 8th grade science

Honors Biology is a rigorous and challenging course designed to explore the characteristics of the life. Course content includes the scientific method (summer work required), characteristics of living things, cell structure, function and transport, cellular reproduction, biochemistry, photosynthesis, cellular respiration, genetics, DNA, ecology and evolution. Students will be introduced to some of the techniques, equipment, and information used by biologists. In addition to in class lecture and lab activities, independent supplemental reading and enrichment activities will be assigned and completed outside of the classroom. Students will sit for their Keystone Biology Exam during this course. This course will have a summer assignment.

CH 311 Biology /College Prep

1.0 Credit Science Credit Grade: 9

Biology is a course designed to explore the characteristics of the life. Course content includes the scientific method, characteristics of living things, cell structure and function, cellular reproduction, biochemistry, photosynthesis, cellular respiration, genetics, DNA, ecology and evolution. Students will be introduced to some of the techniques, equipment, and information used by biologists. Students will complete several labs and inquiry based activities to reinforce the concepts and develop their technical writing skills. Current biological issues will also be explored. *Students will be take the Keystone Biology Exam in this course.*

CH 320 H Chemistry /Honors

1.0 Credit Science Credit Grade: 9, 10

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in H Biology
Grade of 94% or higher in CP Biology
Grade of 84% to 93% in CP Biology requires a teacher recommendation

This honors science course is recommended for math and science students as evidenced by the prerequisites above. The major areas of study are atomic structure and mole concept, chemical bonding, kinetic molecular theory, solutions, chemical reactions, reaction rates, acid/base chemistry, oxidation/reduction chemistry, and dynamic equilibrium.

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Students will develop skills in making observations, analyzing data, drawing conclusions, and problem solving. Honors Chemistry students can expect:

- Additional assigned problems
- More in-depth treatment of concepts and problems
- More in-depth analysis of experimental techniques and results
- More frequent use of higher order thinking processes
- More challenging evaluations/assessments

This course is recommended for students planning professional careers in science and medicine. This course will have a summer assignment.

NEW STEM PATHWAY OPTION

Students completing Geometry in Grade 8 have the option to take Honors Chemistry in Grade 9 to begin a science and math course pathway that will make it possible for students in this pathway to earn one or more additional Advanced Placement Courses, Honors Courses or Dual Enrollment course before graduation. A possible science/math pathway would be:

	Grade 9	Grade 10	Grade 11	Grade 12
Science	Honors Chemistry	AP Chemistry Or Honors Biology	AP Biology or Honors Biology and AP Physics 1 or Hn Physics	AP Environmental
				<i>AP Physics C</i>
Mathematics	Honors Algebra II	Honors Pre-Calculus	AP Calculus AB or BC Or Honors Differential Calculus Or Probability and Statistics	AP Statistics Or AP Calc AB or BC
				<i>Dual Enrollment</i>

CH 321 CP Chemistry /College Prep

1.0 Credit

Science Credit

Grades: 10, 11

Prerequisite:

Successful completion of CP Biology (311)

Chemistry is a laboratory course which emphasizes five major areas of study: atomic structure and mole concept, chemical bonding and chemical formulas, principles of chemical reactions, kinetic molecular theory, solutions and acid/base. Students will develop skills in making observations, analyzing data, drawing conclusions, and problem solving. The course involves use of calculators, simulations on the computer, and using the computer to produce lab reports.

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CH 355 **Advanced Placement Physics 1**

1.0 Credit Science Credit Grades: 11 HAC Access

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Math

Grade of 90% or higher in Honors Pre-Calculus

Grade of 94% or higher in College Prep Pre-Calculus

Students who have already completed Honors Physics 330 are not eligible for 354. This course is ideal for students who have a career interest in the sciences, math, or engineering. No prior physics education is required; however this is a rigorous AP course for students who intend to pursue further honors and AP science electives. This course focuses on understanding the basics laws of mechanics and electricity: motion, forces, momentum, energy, torque, rotation. Skills of algebra, geometry, and trigonometry will be integrated freely and extensively in the course, both in the formulation of physical laws and in the solutions of problems. Students are expected to manipulate algebraic expressions involving multiple variables and should have an understanding of basic trigonometric functions. The student will be required to conduct experiments and compile data into lab reports

This course follows the AP curriculum and will prepare students for the AP Physics 1 exam. Students must take the Advanced Placement Exam in order to earn the AP GPA weight.

CH 330 **H Physics /Honors**

1.0 Credit Science Credit Grades: 11, 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Math

Grade of 90% or higher Honors Geometry

Grade of 94% or higher College Prep Geometry

This course focuses on understanding the basics laws of mechanics: motion, forces, momentum, energy, torque, rotation, and electricity. Skills of algebra, geometry, and trigonometry will be integrated freely and extensively in the course, both in the formulation of physical laws and in the solutions of problems. Students are expected to manipulate algebraic expressions involving multiple variables and should have an understanding of basic trigonometric functions. The student will be required to conduct experiments and compile data into lab reports. In addition, students in the honors physics course will be expected to:

- Compile 12-15 formal lab reports throughout the course,
- Conduct independent and group research

This course is ideal for students who have a career interest in the sciences, math, or engineering.

CH 331 **CP Physics /College Prep**

1.0 Credit Science Credit Grades: 11, 12

Prerequisite: Teacher recommendation upon successful completion of 320 or 321 (CP or Hn Chemistry)

Students are expected to use mathematics to quantitatively discuss the concepts of physics, as well as be able to solve problems. This course will focus on the laws of mechanics, including motion, forces, momentum, energy,

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thermodynamics, torque, rotation and electricity. Students taking the course will improve their problem-solving skills and learn to compile laboratory data into a lab report. Throughout the course, students will use lab equipment and computer-interface software to collect data and will be required to report their findings through formal lab reports. Students are expected to use mathematics to quantitatively discuss the concepts of physics, as well as be able to solve problems.

Science - Advance Placement Course Offerings

CH 350BI Advanced Placement Biology

1.5 Credits Science Credit Grades: 11, 12 HAC Access
 Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
 Grade of 87% or higher in 305 & 320 (H Biology & H Chemistry)
 Grade of 94% or higher in 311 & 321 (CP Biology & CP Chemistry)
 Grade of 84% to 93% in 311 or 321 requires teacher recommendations

This course is designed to be the equivalent of a first year college course in Biology, and has been developed according to the new guidelines of the College Board. In-depth topics of study include molecular genetics and evolution, cell structure and energy transformation, population ecology, plants, and animals. The required lab component of the course includes investigations and technologies in areas such as recombinant DNA technology, aquatic productivity, botany and biochemistry, and comparative vertebrate dissections, will help students improve written and oral communication skills. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP GPA weight. This course will have a summer assignment.

CH 351CH Advanced Placement Chemistry

1.5 Credits Science Credit Grades: 11, 12 HAC Access
 Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
 Science
 Grade of 94% 320 or 321
 Grade of 84% to 93% 320 or 321 requires teacher recommendations
 Math
 Grade of 90% or higher in 430, 420 or 458

This course is designed to be the equivalent of a first year college course. In AP Chemistry students will master fundamental principles of chemistry and develop competence in problem solving. The areas of study include a highly rigorous treatment of the structure of matter, the status of matter, chemical reactions, and descriptive chemistry. There is also a strong laboratory component for the course. Students must take the Advanced Placement Exam in order to earn the AP grade weight. This course will have a summer assignment.

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CH 356 Advanced Placement Physics 2

1.0 Credit Humanities and Elective Credit Grades: 12 HAC Access
Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Science

Grade of 94% or higher in 330 or 355

Grade of 84-93% in 330 or 355 with teacher recommendation

Math

Grade of 90% or higher in [Honors Pre-Calculus](#)

This is an AP physics course serving as an algebra-based survey of classical mechanics, electricity & magnetism, thermodynamics, fluids, waves, optics, & nuclear physics. Skills of algebra, geometry, and trigonometry will be integrated freely and extensively in the course, both in the formulation of physical laws and in the solutions of problems. Students are expected to manipulate algebraic expressions involving multiple variables and should have an understanding of basic trigonometric functions. The student will be required to conduct experiments and compile data into lab reports. This course follows the AP curriculum and will prepare students for the AP Physics 2 exam. Students must take the Advanced Placement Exam in order to earn the AP GPA weight.

CH 352 Advanced Placement Physics C: Mechanics

1.0 Credit Humanities and Elective Credit Grades: 12 HAC Access
Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Grade of 94% or higher in 330

Grade of 84%-93% in 330 or 331 w/ teacher recommendation

Grade of 84% or higher in 355; 84% or lower requires teacher recommendation

Concurrently taking or successful completion of 460 or 461 (AP Calc AB or BC)

An advanced mechanics course offered to students who already completed a semester of physics (honors preferred). Taking AP Calculus concurrently, or in the past is also recommended. The course will take a calculus-based approach to exploring the topics covered in introductory physics including: kinematics, dynamics, work & energy, momentum, rotation, gravitation, and oscillations. Students must take the Advanced Placement Exam in order to earn the AP GPA weight.

CH 362 Advanced Placement Environmental Science

1.0 Credit Humanities and Elective Credit Grades: 11, 12 HAC Access
Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Grade of 94% or higher in 305/306, 311, 320 or 321

Grade of 84-93% in 305, 306, 311, 320 or 321 requires teacher recommendation

This course will provide scientific principles, concepts, and methodologies required to understand the interrelationship of the natural world, to identify and analyze environmental problems, to evaluate risks associated with these problems and to examine alternative solutions. This class includes a strong lab component. Topics include energy flow, the biosphere, the human population, renewable and nonrenewable resources, environmental quality, and global change. This course follows the AP curriculum. Students must take the Advanced Placement Exam in order to earn the AP GPA weight. This course will have a summer assignment.

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Science – Additional Course Offerings

CH 361	Planet Earth			
0.5 Credit	Humanities and Elective Credit	Grades: 10, 11	HAC Access	

Planet Earth is an introductory survey course broken into four units: Lithosphere, Hydrosphere, Atmosphere and Biosphere. It is designed to cover the following topics about our planet: the atmosphere, the oceans, its ecosystems, human population dynamics, its agriculture, water resources, biodiversity decline, energy challenges, atmospheric pollution, and climate change.

CH 366A	Human Anatomy and Physiology			
0.5 Credit	Science Elective Credit	Grades: 11, 12	HAC Access	
Prerequisites:	Grade of 74% or higher in 305, 311, 320, 321			
Lab Fee:	\$5			

This course is a study of both human anatomy and physiology with an integral laboratory component. This course is designed to prepare students who are considering entering the medical, nursing, or allied health fields and as such is of a rigorous content level. The course will offer a survey of important anatomical terms as well as an overview of the body's major organ systems. Students will have the opportunity to gain insight into various career options and the studies required for them

CH 373A	Meteorology			
1.0 Credit	Humanities and Elective Credit	Grades: 10, 11, 12	HAC Access	

This course is a study of the earth's atmosphere and weather-related phenomena. Major principles of meteorology will be addressed by long-term study of real time data sources from the Internet. The students will study the structure of the atmosphere, basic meteorological principles, weather maps and severe weather systems. **Students will be expected to deliver "on-air" weather forecasts for the high school daily announcements.** This is a highly challenging, science course on par with introductory Meteorology courses taught at the college level. The curriculum presupposes students have an understanding of the gas laws, fundamental physics principles and excellent math skills.

CH 374	Exploring the Cosmos (formerly Astronomy)			
0.5 Credit	Humanities and Elective Credit	Grades: 10, 11, 12	HAC Access	
Prerequisites:	Algebra I			

This course provides an introduction to the field of astronomy designed to provide an overview of the subject, including basic physical concepts involving planets, stars, galaxies, and cosmological distances. The course is designed to emphasize conceptual understanding and an appreciation for the discovery process. Besides project-based classroom work, students will complete an observational experience as well as a current event presentation to the class.

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CH 379	Forensic Science		
0.5 Credit	Humanities and Elective Credit	Grades: 10, 11, 12	HAC Access
Prerequisites: Grade of 80% or higher in 305 or 311			

This course will cover updated techniques, practices and procedures used in forensic science. Students will participate in forensic analysis and the proper procedures for collection and preservation of evidence at crime scenes. Students will investigate new technologies used by forensic scientists. Discussions of probabilities role in interpreting the significance of scientifically evaluated evidence will be incorporated in this course. Students will study actual cases to see the role of forensic science in criminal investigations.

CH 369	Zoology		
CH 369	Honors Zoology		

0.5 Credit	Humanities and Elective Credit	Grades: 11, 12	HAC Access
Prerequisites: A Grade of 80 or Higher in Biology and a Score of Proficient or Advanced on the Biology Keystone.			

This course provides an introductory study of all members of the animal kingdom. This course is designed to cover evolution as it applies to the animal kingdom and the taxonomy of the animal kingdom. The course will survey the animal kingdom from the simple invertebrates through mammals. The course will include lab work and cooperative projects.

CH 368	Genetics		
CH 368H	Honors Genetics		

0.5 Credit	Humanities and Elective Credit	Grades: 11, 12	HAC Access
Prerequisites: A Grade of 80 or Higher in Biology and a Score of Proficient or Advanced on the Biology Keystone. A Grade of 80 or Higher in Chemistry			

This course provides a study of genetics, most specifically human genetics. This course will specifically cover the biochemistry of DNA and chromosomes, human genetics, genetic diseases and disorders and genetic technologies. The course will include laboratory exercises, statistical analysis, and long-term projects.

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SHS Course # 375 Introduction to Astronomy

DCCC Course # ESS 102 Introduction to Astronomy
ESS 103 Introduction to Astronomy Laboratory (Optional)

1.0 Credit SHS Humanities, Technologies, & Arts Grades: 11, 12 HAC Access
4.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.
Prerequisites: Satisfactory score on the Accuplacer exam or SAT, 75% average in Chemistry, and Algebra 2.

This college-level course is designed to introduce students to the science of astronomy, its history, and its importance as an influence on our view of humankind. Students will conduct astronomical observations using software, telescopes, and star charts to study objects in the night sky. Practical observational activities are designed to foster a conceptual understanding of how objects from great distances are studied from the earth. This is a rigorous textbook driven course intended for non-science majors to satisfy one of their college science credit requirement. This is a College Academic Learning Goal (CALG) designated course for Scientific Inquiry through DCCC.

This course is designed to introduce students to the science of astronomy, its history, and its importance as an influence on our view of humankind. The course is intended for non-science majors. Upon successful completion of this course, students should be able to: describe the night sky, trace the history of astronomy, describe the important properties of stars, describe the general characteristics of the solar system, discuss the discovery and nature of the Milky Way Galaxy and different types of galaxies, and discuss the possibility of life existing elsewhere in the universe.

SHS Course # 390 Humans and the Environment

DCCC Course # BIO 102 Humans and the Environment

(Honors Weight awarded with successful completion of Capstone Project)

1.0 Credit Humanities, Technologies, & Arts Grades: 11, 12 HAC Access
3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

This course provides an introduction to the study of the design of the natural world and interactions between humans and their environment. It includes an investigation of the impact of human activities on biodiversity, natural resources, availability of energy, and contamination of the environment. The scientific, economic, and social issues that contribute to environmental problems are also examined. Sustainability principles, policies, and programs are explored on the local, national and global level. This course is designed for non-science majors.

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Mathematics

The Springfield High School Mathematics department offers programs that will provide students with mathematics courses appropriate to their future goals. From Algebra I to Advanced Placement (AP) Calculus, the mathematics curriculum has offerings to meet each student's specific needs. All courses are designed to prepare students to use mathematics effectively in today's world. The critical skills of problem-solving, logical reasoning and decision-making are incorporated and developed in all courses. Recognizing the importance of technology in today's world, the department emphasizes the use of technology in all courses in order to enable students to develop superior skills in this area. A Texas Instrument TI 84 or TI 84+ graphing calculator is a necessity for Algebra II courses and above. Students should consult the academic planning and programming guide for proper course sequence and prerequisites.

This program is ideal for students applying to competitive colleges, especially if the student is planning to major in mathematics, science, engineering and other mathematics-intensive disciplines.

	Grade 9	Grade 10	Grade 11	Grade 12
Accelerated Program	Option 1 (student has completed Geometry) H/CP Algebra II	Option 1 Probability and Stat or H/CP Pre-Calculus	Option 1 AP Statistics H/CP Pre-Calculus AP Calculus AB or BC	Probability and Statistics H/CP Pre-Calculus
	Option 2 H/CP Algebra II	Option 2 H/CP Geometry	Option 2 Probability and Statistics or H/CP Pre-Calculus	AP Calculus AB or AP Calculus BC AP Statistics

This program is ideal for the majority of college and career bound students.

	Grade 9	Grade 10	Grade 11	Grade 12
Standard Program	Algebra I	H/CP Algebra II	H/CP Geometry	Algebra III/Trig Probability and Statistics H/CP Pre-Calculus AP Statistics Math for Business and Finance

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CH 411 CP Algebra I /College PreParatory

1.0 Credit Mathematics Credit

Prerequisite: Successful completion of Math at ETR
Students not completing Math at ETR to a satisfactory level may be required to take a math support class in conjunction with Algebra II.

The goal of this course is to develop algebraic skills and concepts and to enhance problem solving ability that every student needs to succeed in college, technical school, or the working world. A secure foundation in basic mathematical skills, fractions, and decimals is essential for success. Topics covered in this course include: number theory, polynomial expressions and equations, products and factors of polynomials, coordinate graphing, graphing linear equations, determining and analyzing the slope of lines, probability, and radical and rational expressions. Algebra skills and concepts needed to solve equations, inequalities and systems of equations will be developed. Algebraic problem solving techniques will be employed to solve relevant applications. Graphing calculator technology will be introduced. All topics in this course will prepare students for successful completion of the Algebra I Keystone exam. A TI Graphing Calculator is recommended.

CH 430 H Algebra II /Honors

1.0 Credit Mathematics Credit

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:

Students at ETR:

84% or higher in Geometry

96% or higher in Algebra I

Students at SHS: 96% or higher in Algebra I

The fast-paced nature of the honors level course relies on students possessing strong, independent work habits. In order to sharpen employability skills, students will have opportunities to collaborate with peers and present solutions to the class. Students will experience a fast paced, challenging investigation of many topics including transformations of linear, quadratic, and polynomial functions, modeling with linear, quadratic, polynomial, exponential, and logarithmic functions, solving linear and non-linear systems, operations with polynomial functions, exploring radical functions, working with sequences and series, and investigating probability including permutations and combinations. The Honors course will also include study of trigonometric ratios and functions. Graphing calculator technology will accompany students throughout the course. Topics will be covered in more depth than in the CP level course, 431. All topics covered in this course will prepare students for successful completion of the Algebra I Keystone exam.

CH 431 CP Algebra II /College Preparatory

1.0 Credit Mathematics Credit

Prerequisite: Successful completion of High School level Algebra I.

Students at ETR:

<83% in Geometry

84% to 95% in Algebra I

<84% in Algebra I may be recommended to repeat Alg I in 9th Grade

Algebra II is a demanding course designed to challenge the student through a more thorough investigation of many topics, including transformations of linear, quadratic, and polynomial functions, modeling with linear, quadratic,

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polynomial, exponential, and logarithmic functions, solving linear and non-linear systems, operations with polynomial functions, exploring radical functions, working with sequences, and investigating probability. Graphing calculator technology will accompany students throughout the course. Graphing calculator technology is a course requirement. All topics covered in this course will prepare students for successful completion of the Algebra I Keystone exam.

CH 420 H Geometry/Honors

1.0 Credit Mathematics credit Grades: 10, 11, 12
 Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
 Grade of 84% or higher in 430
 Grade of 94% or higher in 431(84% to 93% with teacher recommendation)

This course is recommended for those students who have completed Honors Algebra II or who have completed Algebra II in high school and are looking for a rigorous course. Students are expected to have a solid understanding of algebraic processes. This course will help students develop the foundations of inductive and deductive reasoning which will enable them to draw upon their ability to reason in a logical framework. Through the use of applications and investigations, students will learn the properties of polygons, triangles, quadrilaterals, circles, perpendicular and parallel lines, bisectors, congruence transformations, similarity transformations, basic trigonometry, perimeters, areas, and volumes. Triangle congruence theorems and proofs using these theorems are critical to the course.

CH 421 CP Geometry/ College Preparatory

1.0 Credit Mathematics credit Grades: 10, 11, 12
 Prerequisite: Successful completion of 430 or 431

Students will be provided with a solid basis in the deduction thought process and will be helped to understand and draw upon their ability to reason in a logical framework. Through the use of applications and investigations, students will learn the properties of polygons, triangles, quadrilaterals, circles, perpendicular and parallel lines, bisectors, congruence transformations, similarity transformations, basic trigonometry, perimeters, areas, and volumes. Triangle congruence theorems and proofs using these theorems are critical to the course.

CH 439 Fundamental Concepts of Algebra and Geometry

0.5 Credit Mathematics Credit Grade 12
 Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
 Successful completion of 430 or 431 or,
 Successful completion of 420 or 421

This course is ideal for the college preparatory senior who, upon earning credit in CP Algebra II or CP Geometry demonstrating basic proficiency, may need reinforcement of Algebra and Geometry eligible content with the primary goal of preparing students for 100-level college mathematics classes and preparation for the DCCC Accuplacer for Mathematics or equivalent college mathematics placement assessment.

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CH 458 H Pre-Calculus/ Honors

1.0 Credit Mathematics Credit Grades: 10, 11, 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in Honors Algebra II
Grade of 94% or higher in CP Algebra II, AND
Grade of 84% or higher in Honors Geometry
Grade of 94% or higher in CP Geometry

NOTE: Students entering Honors Pre-Calculus from CP Geometry and/or CP Algebra II will be required to meet with the Honors Pre-Calculus teacher and complete summer work before enrolling in the class.

This course is recommended for mathematics students who have completed Honors Algebra II and Honors Geometry. In this course students will have daily experience with graphing calculator technology in the investigation of such topics as functions and models, trigonometric functions and their inverses, trigonometric identities, explicit and recursive formulas of sequences, Pascal's Triangle and the Binomial Theorem, ellipses and hyperbolas, and the logic of solving inequalities.

Due to the nature of this Honors course, in-depth discussions, proofs, and extension of certain topics and additional projects and/or assignments will be evident throughout the course. Upon successful completion of this course, students will be prepared to take AP Calculus.

CH 459 CP Pre-Calculus/College Prep

1.0 Credit Mathematics Credit Grades: 10, 11, 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 74% or higher in CP Geometry

This course is recommended for those math students who have completed CP Algebra II and CP Geometry. In this course students will have daily experience with graphing calculator technology in the investigation of such topics as functions and models, trigonometric functions and their inverses, trigonometric identities, explicit and recursive formulas for sequences, Pascal's Triangle and the Binomial Theorem, and the logic of solving inequalities.

CH 442 Honors Differential Calculus

1.0 Credit Mathematics Credit Grades: 11, 12

Prerequisite: Teacher recommendation and completion of Pre-Calculus or Honors Pre-Calculus.

This course is recommended for those students who have completed Pre-Calc or Honors Pre-Calc who seek exposure to calculus in a non-AP environment. In this course students will continue their daily experience with graphing calculator technology. Class time will be split between an initial deep review of Pre-Calculus topics and an introduction to Differential Calculus concepts. Pre-Calculus review topics will include: polynomials, the Fundamental Theorem of Algebra, imaginary numbers, polar coordinates, unit circle trigonometry and trigonometric identities, and proofs with trigonometric identities. Calculus topics will include limits and continuity, derivatives, applications of derivatives, chain rule, and mean value theorem.

Due to the honors level, in-depth discussion and extension of certain topics will be evident throughout the course

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CH 445 Probability and Statistics/College Prep

1.0 credit Mathematics Credit Grades: 11, 12 HAC Access

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 80% or higher in 421 and/or 459
Grade of 75% or higher in 420, 442, and/or 458

This course is designed to meet the mathematical and research needs of students who plan to enter such fields as economics, business, education, psychology, sociology, biology and medicine, as well as science and mathematics. It is considered excellent preparation for usual college courses offered in these fields. The topics covered in the course include measurement scales, sampling techniques, study design, measures of center and dispersion, probability, estimation of confidence intervals, normal, binomial, geometric, and poisson distributions, sampling distributions, hypothesis testing, linear regression, chi-square tests of independence and goodness of fit, one-way analysis of variance, and tests of homogeneity of variance.

Mathematics – Advanced Placement Course Offerings

CH 460 Advanced Placement Calculus AB

1.0 Credit Mathematics Credit Grades: 11, 12

Prerequisite: Teacher recommendation along with recommended standards of academic performance as follows:
Grade of 84% or higher in 442 of 458

This rigorous advanced placement course follows the College Board Advanced Placement (AP) Curriculum Framework.

Big Idea 1 Enduring understanding

Limits The concept of a limit can be used to understand the behavior of functions.

Big Idea 2 Enduring understanding

Derivatives The derivative of a function is defined as the limit of a difference quotient and can be determined using a variety of strategies. A function’s derivative, which itself is a function, can be used to understand the behavior of the function. The derivative has multiple interpretations and applications including those that involve instantaneous rates of change. The Mean Value Theorem connects the behavior of a differentiable function over an interval to the behavior of the derivative of that function at a particular point on the interval.

Big Idea 3 Enduring understanding

Integrals and the Fundamental Theorem of Calculus

Anti-differentiation is the inverse process of differentiation. The definite integral of a function over an interval is the limit of a Riemann sum over that interval and can be calculated using a variety of strategies. The Fundamental Theorem of Calculus, which has two distinct formulations, connects differentiation and integration. The definite integral of a function over an interval is a mathematical tool with many interpretations and applications involving accumulation. Anti-differentiation is an underlying concept involved in solving separable differential equations. Solving separable differential involves determining a function or relation given its rate of change.

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World Language

The need for all learners to become competent in their ability to communicate with people of other countries is increasingly apparent due to instantaneous worldwide communication networks and an economy that is globally interconnected. Proficiency in languages other than one's own is a definite asset to the workplace, and for personal enrichment, especially when traveling. The World Language Department offers courses in French, Spanish, and German. Students may elect to take Spanish through the Advanced Placement level; German is offered through level 4 and French is offered through level three. With each additional year of study, students improve their linguistic fluency and grammatical accuracy, and continue to gain insight into the culture and literature of the language they are studying. *Because learning a language involves continually building upon previous knowledge, the World Language faculty strongly recommends that students earn a minimum grade of 70% in a prerequisite course in order to progress to the next level.*

CH 501 French I /College Prep

1.0 Credit

World Language

Grades: 9, 10, 11

The purpose of this course is to introduce and develop the skills necessary to listen, speak, read, and write French at an elementary level, with the emphasis on developing conversational skills. Students will learn vocabulary and basic structures, which will become the means to understand and be understood in the language. Students will gain knowledge of and sensitivity towards the culture and customs of the French-speaking world. A video series, audio recordings, and on-line resources are integral parts of the course.

CH 502 French II /College Prep

1.0 Credit

World Language

Grades: 10, 11, 12

Prerequisite: Successful completion of 501

In this course students will continue to develop their basic listening, reading, speaking, and writing skills. There will be an emphasis on developing students' understanding and appreciation of French-speaking cultures, and on developing their conversational skills. A video series, audio recordings, and on-line resources are integral parts of the course.

CH 503 French III

1.0 Credit

World Language

Grades: 11, 12

Prerequisite: Successful completion of 502

This course will continue to strengthen the skills of listening, speaking, reading, and writing at an intermediate level. Cultural readings, situational vocabulary, and more advanced structures will be the primary focus of the course. Much of the learning and practice of this material will be done in co-operative groups, through small group discussion, presentations, and compositions. A variety of teaching techniques and materials will be used, including a video series, and audio recordings.

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CH 521	Spanish I /College Prep
1.0 Credit	World Language
	Grades: 9, 10, 11, 12

The purpose of this course is to begin to develop fundamental speaking, listening comprehension, reading, and writing skills. Students will gain a knowledge of and sensitivity towards the culture of the Spanish-speaking peoples of the world. Activities in this course will help the student master basic vocabulary, use questions and answers, develop listening comprehension skills, read elementary selections, and study the customs of Spanish-speaking countries. Audio selections, videos, and on-line resources will aid in furthering competency. Spanish I is intended for students who have never taken Spanish or for those who have had a minimal exposure. Students successfully completing the ETR Spanish I program should enroll in Spanish II.

CH 522	Spanish II /College Prep
1.0 Credit	World Language
	Grades: 9, 10, 11, 12
Prerequisite:	Successful completion of 521

This course is intended for students who have successfully completed Spanish I. In order to continue the development of basic speaking, listening, reading, and writing skills, students will learn to use the vocabulary appropriate to their level in meaningful spoken and written sentences and brief conversations. Through the reading of a short novel and cultural readings from the textbook, discussions, and projects, students will be better able to understand some of the cultural aspects of the various Spanish-speaking peoples. On-line resources, videos, and an audio program are integral parts of this course.

CH 523	Spanish III /College Prep
1.0 Credit	World Language
	Grades: 10, 11,12
Prerequisite:	Successful completion of 522

The purpose of this course is to enable Spanish students to increase proficiency in conversation and writing. A continued development of fundamental vocabulary, listening comprehension, reading, and writing skills will be stressed. Students will read short stories and cultural selections in Spanish. Special projects will be assigned to promote speaking and writing proficiency. On-line resources and an audio program are integral parts of the course.

CH 525	Honors Spanish IV
1.0 Credit	World Language
	Grades: 11, 12
Prerequisite:	Completion of 523 and a grade of 84% or better are recommended

In this course students will work on continuing to develop advanced listening, reading, speaking, and writing skills, with an emphasis on both oral and written communication skills. Gaining fluency in the language through the use of cultural readings, situational vocabulary, and more advanced structures will continue to be the primary focus of the course. Students will create multi-media projects and write extensively. A variety of teaching techniques and materials will be used, on-line resources, audio recordings, and video resources will aid in furthering competency in listening comprehension, speaking and cultural awareness.

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CH 526 **Advanced Placement Spanish Language**

1.0 Credit World Language Grades: 11, 12
Prerequisite: Grade of 84% or higher in 525

The Advanced Placement Spanish course is an intensive course of instruction that follows the AP Spanish Language curriculum and continues to develop all four communication skills. Through the use of vocabulary enrichment, varied reading materials, and discussion on a variety of topics, students will be able to communicate more effectively in written and spoken Spanish. Audio and video tapes, as well as on-line resources will aid in furthering competency in listening comprehension, speaking, and cultural awareness. Students must take the Advanced Placement Exam in order to earn the AP grade weight.

CH 531 **German I /College Prep**

1.0 Credit World Language Grades: 9, 10, 11

Students will develop basic communicative proficiency through a variety of oral and written activities: stories, dialogues, teacher-student interaction, small group activities, readings, songs and games, as well as through use of a strongly integrated audio, video and software program. Students will be introduced to the customs and culture of the German speaking people, learning about a typical student's family and school life, sports and other past-time activities, shopping, and eating out.

CH 532 **German II /College Prep**

1.0 Credit World Language Grades: 10, 11, 12
Prerequisite: Successful completion of 531

Students will continue to develop their communicative proficiency through storytelling, role-playing, readings, and interacting with the teacher and their classmates, as well as through use of a strongly integrated audio, video, and software program. Grammar and vocabulary will be expanded as students cover topics such as giving directions, shopping for gifts, talking about past vacations, and food and physical activities as they relate to health. Students will exchange letters with e-pals in German speaking countries in order to more personally expand their understanding of the culture.

CH 533 **German III**

1.0 Credit World Language Grades: 11, 12
Prerequisite: Successful completion of 532

It is strongly recommended that German II was completed with a minimum grade of 84% to be successful in this course.

Students will continue to develop their communicative proficiency through storytelling, role-playing, and interacting with the teacher and their classmates, as well as through use of a strongly integrated audio, video, and software program. Particular emphasis will be placed on practicing real-life situations one might encounter on a trip to a German speaking nation. Students will read traditional folk and fairy tales, as well as more contemporary stories. An additional video series will help students hone their listening and speaking skills, and gain an ever-growing awareness of the culture and customs of the people.

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CH 561 Latin I

1.0 Credit

World Language

Grades: 09, 10, 11, 12

This course is intended to introduce the students to the structure and syntax of the Latin language, and to examine the parallels between Latin and English syntax, structure, and vocabulary. This course will enable students to translate and compose introductory Latin. Students will be guided through the reading of elementary passages, as well as in the preparation of projects. Latin is the foundational language of the sciences, medicine and law; students pursuing these fields after high school should consider Latin a prerequisite. This course will also benefit students taking the SAT and ACT.

CH 562 Latin II

1.0 Credit

World Language

Grade: 10, 11, 12

Prerequisite: Successful completion of 561

This course is intended for students who have successfully completed Latin I. In order to continue the development of basic reading, and writing skills, students will learn to use the vocabulary appropriate to their level in meaningful translation exercises and reading passages. Through the reading of modified texts, supplementary materials, and cultural readings from the textbook, discussions, and projects, students will be better able to understand some of the historical and cultural significance of Classical Latin.

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Business and Administrative Technology Education

The Business and Technology Department at Springfield High School is designed to provide students the option of becoming involved in specific aspects of the business and technology world that parallels their personal and career interests. Students have the opportunity to develop the knowledge and skills needed to succeed in business and to function more efficiently in the technologically driven 21st Century. The program develops lifelong learning skills that foster flexible career paths and confidence in adapting to a workplace that demands constant retooling.

630 Introduction to Web Design

0.5 credit Humanities, Technologies, & Arts Grade: 9, 10, 11

This course assumes no previous experience in web design. Students learn to identify the components and characteristics of high quality sites and how to create them. The class covers file structure and organization, basic graphic editing as well as color and design strategies. We also explore some creative and fun features including Flash animation, sound and interaction. The class culminates with the creation of an all-inclusive web site displaying all their work in this class.

CHE 631 Web Design II

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12

Prerequisite: Successful completion of 630

Web Design 2 takes students to the next level in web design. Students have the opportunity to explore their different areas of interest and develop skills in those areas. While the first few classes are review and refresher exercises, we then move onto lessons on problem solving, team building and design. Later lessons are specific to the group's interests. Some topics you might want to explore include: editing HTML5 code, Dreamweaver, CSS, Flash websites, Flash animation, Flash Games and debugging JavaScripts.

646 Photoshop I

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11

This course is designed to introduce students to the fundamentals of Adobe Photoshop. Students will explore the questions that face today's Photoshop artist and provide some educated answers through the use of Adobe Photoshop's digital tools and features. Students will learn basic graphic design principles while creating, editing, and manipulating images. Students will use basic and advanced editing tools of Photoshop to create logos, movie posters, magazine covers, and digital collages.

647 Photoshop II

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12

Prerequisite: Successful completion of 645

This course merges and expands on prior knowledge and skills learned in Photoshop I. The course requires students to research and analyze all components of the design process and sets the stage for independent design projects. This course teaches students more advanced digital techniques using Photoshop CS5 including but not limited to: image

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manipulation through masking and layers, multiple selection methods, saving and exporting, scanning, retouching, pen tool, and cutting edge techniques used in industry today.

904A Computer Applications
 0.5 credit Humanities, Technologies, & Arts Grades: 9, 10

Computer Applications is designed to develop microcomputer skills using Microsoft Office applications. Software programs covered in the course include word processing, database development, spreadsheets, and presentation development. Specifically, students are able to apply their skills to school assignments for their academic courses in Microsoft Office Word, Excel, PowerPoint, and Access.

945 Introduction to Programming
 0.5 credit Humanities, Technologies, & Arts Grades: 10, 11

This course allows students to explore the field of computer programming. Students learn basic programming functions as they develop problem solving strategies and critical thinking skills. Students will create design, write, and develop console and Graphical User Interface (GUI) applications. Topics focus on the object-oriented paradigm, control and decision structures, loops, parameters, modular programming, the software development process, documentation, debugging, validation and testing.

951 Emerging Technologies/Tech Support
 0.5 credit Humanities, Technologies, & Arts Grades: 11, 12
 Prerequisite: Students will indicate interest through HAC and teacher will grant final approval.

This class is for those individuals who have a serious interest in computers and technology and are considering a career in IT. This class will focus on troubleshooting hardware/software issues throughout the building while working in conjunction with the High School and District Tech Departments. When students are not troubleshooting or assisting others in the building, they will have an opportunity to complete self-guided certification programs (Google, Cisco, Microsoft, etc.).

955A Introduction to Business
 0.5 credit Humanities, Technologies, & Arts Grades: 09, 10, 11

This course introduces students to the world of business: how they are planned, organized, created, and make or lose money in our economic system. Students learn about the different fields of study within business and the career opportunities that exist in each field. In addition to the textbook, students discuss real business issues and current events directly related to business the economy and consumers.

CHE 965H Honors Business II
 0.5 credit Humanities, Technologies, & Arts Grades: 11, 12

This course continues our exploration of business; different fields of study within business and careers possible for young people with an understanding of business. In addition to the textbook, students discuss real business issues and current events directly related to business the economy and consumers. To add a little more fun to the class, students buy and sell stocks in the online Simulated Stock Market game where the winners walk away with small prizes and big bragging rights.

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CHE 956	Marketing		
0.5 credit		Humanities, Technologies, & Arts	Grades: 11, 12

This course presents marketing as a set of skills and knowledge combined with economics, finance, and career planning to create strategic plans. Students learn the foundations and functions needed to successfully market goods, services, and ideas to consumers. Professional development, customer service, and technology are presented as keys to students' success. While students study business, economics, selling, human relations, communications, distribution, promotion, product planning, and pricing, they also see marketing as a career choice. Marketing is recommended for students considering a university major in Business Administration, Marketing and Communications.

CHE 958A	Money Management		
0.5 credit		Humanities, Technologies, & Arts	Grades: 11, 12

Students will discover how career choices affect future income. They will explore income sources as well as purchasing power. They will manage money by using a checking account and keeping good financial records. Students will create a financial plan and review the steps of an effective buying plan. They will look at sources, benefits, and costs of credit. At the completion of the course, students should be able to make wise financial choices.

This course fulfills the Personal Finance & Money Management credit requirement.

CHE 963	Accounting I		
CHE 963H	Honors Accounting I		
1.0 credit		Humanities, Technologies, & Arts	Grades: 10, 11, 12

Students will learn to maintain financial records using basic accounting procedures. Included is instruction in the full accounting cycle of a sole proprietorship, as well as a corporation, with the significance of accounting on management decisions. Students will explore accounting as a career and adapt accounting procedures to personal finances. Accounting is recommended for those who are considering a university major in business or accounting.

This course fulfills the Personal Finance & Money Management credit requirement.

CHE 964AH	Honors Accounting II		
0.5 credit		Humanities, Technologies, & Arts	Grades: 11, 12
Prerequisite:	Successful completion of 963		

This course offers proficiency in basic and complex accounting procedures for corporations. Principles of a merchandising business and corporation structures will be approached realistically. This course is designed for students who hope to own a business or follow a career in accounting.

731A	Graphic Arts & Design I		
0.5 credit		Humanities, Technologies, & Arts	Grades: 9, 10, 11

SHS Graphic Design I is a semester long class that gives students the opportunity to learn and apply design principles and industry standards of graphic arts and design. Using art, color, design, layout and typography, the SHS Graphic Design I students will be able to create professional looking illustrations and designs. They will choose, alter, and manipulate art

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both mechanically and digitally to produce various visual images and forms. Students will learn how to use Adobe Illustrator and Photoshop, as well as traditional design tools and techniques.

This is a project based course that teaches the necessary skills through hands-on application. Students will demonstrate the skills learned through a variety of challenging design projects. Projects include: Cover design- magazine cover (Semester 1) or cover design for the Springfield Press St. Patrick's Day edition (Semester 2). Holiday Greeting Card design, Company Branding project including logo design, and business cards. Final project: Inspirational Typography poster. Students will use acquired typography and design skills to create a wide format poster with an inspirational message for incoming freshmen to SHS. There is no limit to creativity. A good imagination, combined with acquired technical skills over the course of the semester, will provide for a great learning experience that can be transferred to other areas of academic, as well as occupational life.

732	Graphic Arts & Design II		
1.0 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Prerequisite:	Successful completion of 731		

This is a yearlong, project-based course that develops career and communication skills in print production and graphic design, using Adobe tools and various output media. These key skills are developed in a spiral-each project adds more challenging skills to foundation proficiencies. Students experience subject areas and skills across careers in graphic design, photography, print and layout design, and production.

CHE 733	Graphic Arts & Design III		
CHE 733H	Honors Graphic Arts and Design III		
1.0 credit	Humanities, Technologies, & Arts	Grades: 11, 12	
Prerequisite:	Successful completion of 732 and teacher recommendation		

This is a yearlong, project-based course that develops career aptitude for graphic design through application. Graphic Arts and Design III students will provide the SHS District and community a service in print production and graphic design based on district and community requests/needs.

- SHS School District print production using graphic design tools
- Individual Digital Portfolio creation using Adobe tools

Through district and community projects, Independent Study students will experience real world challenges in graphic design and print production.

734	Digital Painting and Illustration		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	

Digital Painting and Illustration is a semester long course that focuses on digital computer painting and illustration techniques. Students will learn to use the tools and techniques of digital painting using Adobe Photoshop, Illustrator and a Wacom tablet to produce digital art. Students will also learn basic drawing skills, the traditional drawing concepts of basic composition and design, the use of shadows and highlights to create the illusion of volume, and how to use atmospheric and linear perspective to create the illusion of space. Students will explore how these skills can be used with applications to the fields of game design and animation, such as animation backgrounds, textures for 3D animation, concept art, and illustration.

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SHS Course #	990	Fundamentals of Game Design
DCCC Course #	DPR 117	Fundamental of Game Design Theory and Practice

(Honors Weight awarded with successful completion of Capstone Project)

0.5 Credit	Humanities, Technologies, & Arts	Grades: 11, 12
3.0 Credit	DCCC credit awarded for completion with a grade of 70% or higher.	

This course introduces students to the theory and practical aspects of the computer game development process. Students brainstorm a game idea, establish focus, determine the storytelling mode, and document the design. Upon successful completion of this course, students should be able to: demonstrate understanding of the vocabulary of game design theory and practice, identify the techniques of top game designers, analyze and identify the elements that make successful games, and apply the computer game development process to create a design document.

Advanced Placement Courses

CHE 980 Advanced Placement Computer Science (A)

1.0 credit	Humanities, Technologies, & Arts	Grades: 11, 12
Prerequisite:	Successful completion of 945 is strongly recommended Successful completion of H/CP Algebra II	

This advanced placement course is offered to those students with excellent problem solving ability and a keen interest in computer science as a career. The focus of this course is to provide students with a conceptual background in computer science. The major emphasis is on programming methodology, algorithm design, and object oriented programming in the Java language. This course prepares a student for advanced placement in a college computer science program by means of the Advanced Placement Exam. All students enrolled in AP courses are required to take the College Board’s Advanced Placement Exam.

CHE 983 Advanced Placement Computer Science Principles (CSP)

1.0 credit	Humanities, Technologies & Arts	Grades: 11, 12
Prerequisite:	Successful completion of 945 is strongly suggested and either has completed or be currently enrolled in Algebra II	

Computer Science Principles is a course that exposes students to the core concepts of computer science. Students will gain a broad base of knowledge and skill from a framework encompassing the big ideas of computing; creativity, abstraction, data and information, algorithms, programming, the internet, and global impact. Students also learn computer programming with an emphasis on problem-solving and logic development using computational tools in data analysis. Most projects are open-ended and students will be working individually and collaboratively in pairs. Students create projects requiring written reflection reports and narration of design specification.

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Family and Consumer Sciences

601 Fundamentals of Foods and Nutrition

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11

Lab Fee: \$25

This course introduces students to the art and science of cooking. Students will learn how to prepare foods focusing on the areas of dairy, vegetable, meats and grains as well as foods from many different cultures. Students will also be participating in the original recipe competition at Celebration of the Arts. The final exam will help focus on how current food choices will affect their health today as well as in the future. Students have the opportunity to explore careers in the foods and nutrition industry.

602 Focus on Foods and Nutrition

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12

Lab Fee: \$25

In this course, students use up-to-date technologies such as the food processor, microwave and convection oven to prepare both familiar and new dishes. Culinary principles will be applied to foods including eggs, chicken and Fruit. Students will prepare traditional and interesting foods such as chicken parmesan, Hungarian goulash and baked Alaska. Using sophisticated diet analysis software, students will evaluate numerous foods as well as their overall nutritional health. Students have the opportunity to explore careers in the foods and nutrition industry.

603 Advanced Food Preparation

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12

Prerequisite: Successful completion of 601 or 602

Lab Fee: \$35

Advanced Food Preparation is for any student who wants to learn the tricks involved in making even a simple meal look exciting and complicated. This course includes the study of advanced cooking techniques used in the preparation of such foods as soups, sauces, gingerbread houses and much more. Home cooking projects utilize complex diet analysis software to aid in meal planning. Regional cuisines including French, Italian, Chinese, and American will be examined in detail. Test your skills by designing and creating a piece of edible art for the cake decorating competition at Celebration of the Arts.

605A The Science of Food through the Lifespan

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12

Prerequisite: Successful completion of 601 or 602

Lab Fee: \$35

Travel your life span on culinary terms. How should you eat to maintain a healthy body? What foods should be consumed or avoided during pregnancy? What foods help an infant thrive? How do you feed yourself well when you are on very tight budget? How do nutritional needs change as we age? Learn the answers to these questions as well as many others such as the science behind candy making and how our environment affects our food needs and choices.

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611	Interior Design and Housing	
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12

In this course students will study the elements of interior design and learn how to use them in various living environments. Students will design floor plans and analyze room usage and traffic patterns in order to determine the best ways to utilize the space and furnishings. Color schemes as well as furniture styles, selection and placement will be examined by both personal experimentation and computer. Major projects include a personal home improvement project and a dream room design and presentation board.

620	Child Development	
0.5 credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11

This course deals with the development of a child and the issues s/he may face as they grow up. The influence of the family and the impact of the way basic needs are met early in life are examined. Differences between boys and girls will be observed and analyzed as well as each facet of how a child develops. Developmental milestones (skills/abilities that should be achieved by a certain age) will be identified and discussed. Special relevant issues such as pregnancy, labor and childbirth, the impact of technology and the building of good self-esteem will be examined. This is a valuable course for those interested in career areas such as early childhood/elementary or secondary education, special education, day care supervision, social work, child psychology, pediatric medicine and parenting.

621A	Child Development Preschool	
1.0 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12
Prerequisite: Strongly recommended to take Child Development as a prerequisite to CDPS		

This course allows students to study the development of children in a more up close and personal way by working with real children, ages 3-4 years old, in a preschool setting. Students will have the opportunity to gain skills writing lesson plans, teaching lessons, and supervising activities in Rainbow Junction, our in-house preschool program, all while learning to work with a team of fellow classmates. Students will discover how to motivate, discipline, and supervise children as well as learn how to plan age-appropriate lessons and activities. This course provides a more practical, in-depth hands-on experience for students who are interested in working with children in any capacity.

621B	Child Development Preschool II	
0.5 credit	Humanities, Technologies, & Arts	Grades: 11, 12
Prerequisite: Successful completion of 621A AND teacher approval		

This course allows students to continue to study the development of children in the preschool setting of Rainbow Junction. They will have the opportunity to guide first level students in the skills of writing lesson plans, teaching lessons, and supervising activities all while learning to direct a team of fellow classmates. Students will also be working on a few independent projects throughout the semester. This course provides a more extensive practical hands-on experience for students who are interested in working with children especially in the capacity of teaching.

622	Advanced Child Development	
1.0 credit	Humanities, Technologies, & Arts	Grades: 11, 12
Prerequisite: Successful completion of 621, teacher approval AND you must be willing to walk or provide your own transportation every day, rain or shine, to the Springfield Literacy Center		

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This course offers the opportunity to work at the Springfield Literacy Center (K-1) under the supervision of the Child Development Instructor. Students will teach lessons, create visual displays, work with children in small groups, use the Smartboard for lessons and generally assist the cooperating teacher during the period they are in the elementary school classroom. This course provides an excellent opportunity for valuable, hands-on classroom experience all while exploring a variety of aspects of teaching. Students will report to the SLC each day as well as complete various practical assignments for the Child Development Instructor. **Students must be self-motivated and able to work well independently.**

623 Advanced Child Development II

.5 OR 1.0 credit Humanities, Technologies, & Arts Grades: 11, 12

Prerequisite: Successful completion of 622, **teacher approval** AND you must be willing to walk or provide your own transportation every day, rain or shine, to the Springfield Literacy Center **or other assigned Elementary School campuses.**

This course offers the opportunity to further work with children under the supervision of the Child Development Instructor. Cooperative situations within the district will be set up on an individual basis. This course provides an excellent opportunity for valuable, hands-on classroom experience all while exploring different age groups and aspects of teaching. Students will report to their assigned location each day as well as complete a log and several assignments for the Child Development Instructor. **Students must show an interest in teaching, be self-motivated and able to work well independently.**

CHE 640 Personal Finance

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12

This course fulfills the Personal Finance and Money Management requirement.

Life on your own will be the focus of this course. Managing your own checkbook, establishing good credit, determining costs for major life events (wedding, buying a house, having a baby) will all be examined as well as learning to handle paying monthly bills while balancing personal and family life. The psychology of relationships and higher level communication skills are the focus while integrating all parts of financial matters during the life cycle. Practical, hands-on methods are applied for successful learning. Research strategies are developed and curriculum directed projects are worked on in cooperative groups.

641 Core Communication and Future Planning Skills

0.5 credit Humanities, Technologies, & Arts Grade: 9

This course is strongly recommended for all freshmen. The design of this course is to introduce students to the fundamentals of communication and the psychology of relationships. The emphasis is on verbal and nonverbal communication and relationship intelligence. Several practical exercises in public speaking will provide the students with oratorical experience needed in post-secondary education and the world of work. The essential elements of this course revolve around *The 7 Habits of Highly Effective Teens*. The students will investigate a career path, write a resume, practice interviewing techniques, and learn fundamental relationship skills to better communicate with family, teachers, peers, bosses, and coworkers. These components are designed to meet the individual needs of all students as they pursue their high school education.

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SHS Course # 690 Student Success

DCCC Course # INT 100 Student Success

0.5 Credit Humanities, Technologies, & Arts Grades: 11, 12

3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

Student Success provides an opportunity for students to learn and adopt methods to promote their success in college. The course assists students in establishing educational objectives and increases success in achieving them. Included are the skills, behaviors and attitudes associated with success.

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Industrial Technology

701A Industrial Materials I

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11
 Lab Fee: \$35

The Industrial Materials program is described as “Creativity through Problem Solving.” Students have every opportunity to design and create amazing pieces of decorative and functional art from beautiful woods. Students will develop an appreciation for fine quality and attention to detail through their creations. Industrial Materials I is just the first of four levels that students can experience in the program – many families have a house full of beautiful furniture built entirely by hand from these courses. Take this first-level course to gain the expertise and hopefully have your creations published nationally as many students have already achieved. Design examples include detailed jewelry boxes, clocks, small pieces of furniture, or anything that your mind can create! Even if you have absolutely no experience, you should expect success and be prepared to take home pieces you will be extremely proud to display. Evaluation is based on safe lab procedures and work habits. Emphasis is placed on meeting individual needs, working safely, and preparing for **“Celebration of the Arts”** to showcase student work. Please view over 100 student creations at www.ssdcougars.org/webpage/gtrout and be amazed!

702 Industrial Materials II

1.0 credit Humanities, Technologies, & Arts Grades: 10, 11, 12
 Prerequisite: Successful completion of 701A

In Industrial Materials II, students will refine their problem-solving and creative skills practiced in Industrial Materials I and work on advanced techniques such as creating intricate moldings, carvings, or any design their minds can create as part of their artistic masterpiece. Students have virtually no limitations in their designs and have the opportunity to receive advanced instruction through open lab work sessions after school and in the evenings. Our students have designed nearly every piece of furniture imaginable over the past 28 years and have been featured in 33 national and international publications, as well as displayed at the Philadelphia Furniture Show. Projects include complete bedroom and dining room sets, pool tables, sideboards, armoires, pianos, harpsichords, Victorian desks, and even a Model –T truck. Course activities will require students to design and create a major piece of furniture...or more! Evaluation is based on lab procedures, safe work habits, and preparation for the **“Celebration of the Arts”** to showcase student work to the public. Please view over 100 student creations at www.ssdcougars.org/webpages/gtrout and be amazed! These advanced students are responsible for their chosen materials.

CHE 703 Honors Industrial Materials III

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12
 Prerequisite: Successful completion of 702 and teacher approval

Industrial Materials III is designed to provide the opportunity for students who truly wish to make the most incredible artistic creations possible! View www.ssdcougars.org/webpages/gtrout highly motivated students may exceed 1.0 credits per year if their schedule permits. These advanced students are responsible for their chosen materials.

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CHE 710	Architectural Design I		
1.0 credit	Humanities, Technologies, & Arts	Grades: 09, 10, 11, 12	

This very popular course has been designed to meet student’s desires to learn more about architectural design and engineering concepts. Emphasis will be placed on floor plan configurations, traffic flow patterns, adding twenty first century amenities, interior design, elevation drawings, understanding typical wall elevations/exploded views, landscape design and the use of a 3D virtual reality software. Model Building will bring the theory to reality as students will build their “Dream House” from balsa wood in ¼ inch scale. Creativity, accuracy of plans to models and craftsmanship exhibited in building the model will be measured for final grade. Technical sketches will provide students with rendering skills (to shade their elevations) and be required in the areas of pencil, ink and colored prisma-color. Models and Technical Sketches will be put on display and judged at the annual Celebration of the Arts.

715	Engineering: Structural Design		
0.5 Credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11, 12	
Lab Fee:	\$35		

This course offers students opportunities to explore pre-engineering and design concepts. Instruction will feature elements of the STEM curriculum (Science, Technology, Engineering and Math). A fully functional lab with computers, engineering conceptual modules and industry leading equipment will assist students in grasping content and assembling prototypes. The project based curriculum emphasizes creativity in design, materials and construction techniques used today and in the future. Areas of study will include: architectural design and layout, structural engineering, manufacturing/building techniques and green energy alternatives. Solid Works and Google Sketch-Up software will enhance design creativity in a supportive learning environment. The course has been developed to provide twenty-first century technology, combined with a team approach to create solutions generated by design challenges. Design briefs are used to describe the real life situation to provide an authentic learning experience. Students interested in exploring engineering as a career and learning while having fun should strongly consider this course!

CHE 716	Fabrication Technology: Robotics		
0.5 Credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Lab Fee:	\$35		

This course offers students opportunities to explore pre-engineering concepts in robotics, design and fabrication. Instruction will feature elements of STEM curricula (Science, Technology, Engineering and Math). A fully functional lab with computers, engineering conceptual modules and industry leading equipment will assist students in grasping the content. Projects will include fabrication and programming of a robot, and designing and manufacturing using a CNC/Laser. Course emphasis will be placed on a hands-on curriculum that features creativity in design, and materials and fabrication techniques used today and in the future. Areas of study will include: CNC G-Code programming, robotics engineering, laser technology and manufacturing and assembly techniques related to core design prototypes. Solid Works and Google Sketch-Up software will enhance design creativity in a tech driven learning environment. This course has been developed to provide twenty-first century technology, combined with a team approach to create solutions generated by design challenges. Design briefs are used to describe real life situations to provide an authentic learning experience. Students interested in understanding how products are fabricated should join us in exploring engineering in an entirely new way.

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Communications through Video Production - Media

760	Introduction to Mass Media	
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11

From the oldest cave paintings made thousands of years ago to the technologically advanced Information Age in which we currently reside, we see evidence of humans working to develop new, more sophisticated, and broader means of communication. This course will provide students with an overview of the wide range of mass communications methods used in modern society. They will examine the history and evolution of mass communication as a whole. In addition, the students will explore the current and future career paths in the field of mass communication. Students in this course will research the various forms and functions of mass communication, sample and critique content from each of those formats, discuss and evaluate the role and impact media has on our society, and will map various career paths in the field of mass communication. Students will learn how to become more discerning consumers of media, practice safe and responsible digital citizenship, and have a better understanding of how to produce and distribute their own content. This class would be beneficial for students who have a general interest in media and communications, but want to gain a deeper understanding of the various opportunities in the field so they can make more informed decisions regarding their future academic and career plans.

770	Television Production: Basic Video Production	
0.5 credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11

This course is the recommended entry-level video production course. It will cover the fundamentals of video production and will work in both the studio/multi-camera format, as well as the film-style/single-camera format. Students will develop the skills needed to function in all aspects of the Production Cycle, and will learn how to produce live multi-camera segments, as well as how to use Adobe Premiere Pro for non-linear video editing. Over the course of the semester, students will work in large and small groups to produce a series of videos. As their skills develop, some projects may be produced for broadcast on our morning announcement programs or SETV.

771	Television Production: Film-Style Production	
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12

Much of today's video production equipment is portable; therefore, many productions are shot on location. The course teaches students to create videos that are shot on location and edited in the studio. Emphasis is placed on the writing of treatments, scripts, and storyboards, single camera shooting, and non-linear editing techniques. Students will work in small teams and produce a series of videos including (but not limited to) a stop-motion animation, a Public Service Announcement, a music video, and a short film. Students who have taken this class will have the opportunity to participate in the recording and broadcast of special televised events such as COTA and the Dance Marathon.

***** Students will need to provide their own 16GB or 32GB card. More details will be provided through the course syllabus.**

773	Broadcast Journalism	
773H	Broadcast Journalism II/Honors	
1.0 credit	Humanities, Technologies, & Arts	Grades: 11, 12
Prerequisite:	Successful completion of 770, 771, or 744	

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In Broadcast Journalism, students will be taught the skills of story selection, news writing and delivery, along with basic and advanced TV Production skills. The class will produce both daily announcements (The Cougar Pause), and a monthly thematic news magazine program (The Growl) for the high school delivered via the web. In addition, students will produce a series of news reports on various subjects that will be shown in the high school, and on SETv. Students in this class will be assigned a specific job or leadership role based on their abilities and experience, and will treat their time in the class like a work day in a television news studio. Students who have taken this class will have the opportunity to participate in the recording and broadcast of special televised events such as COTA and the Dance Marathon.

***** Students will need to provide their own 16GB or 32GB card. More details will be provided through the course syllabus.**

776	Documentary Video Production		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Prerequisite:	Successful completion of 770 or 771 or 773		

Documentary Video Production is an advanced-level video production course that allows students to work individually on three documentary videos of increasing length. The choice of subject matter is completely the prerogative of the student. Students will work through the entire process of developing an idea, doing research, collecting interviews, storyboarding, writing, shooting, and editing. All completed videos will be considered for broadcast on SETv, and may be entered into contests, when available. This is a perfect class for a creative, tech-savvy student who wants the opportunity to work individually, and produce projects that could be used as a portfolio piece or demo reel in the future.

***** Students will need to provide their own 16GB or 32GB card. More details will be provided through the course syllabus.**

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Art

801 Studio Art

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11, 12
Lab Fee: \$10

Studio Art provides the opportunity for beginning art students as well as more advanced students to experiment with concepts, methods, and materials in the following areas: design, drawing, print-making, painting and 3-D design. By studying the contributions of artists past and present and participating in studio work and critiques, students will gain a more critical appreciation of the value of art. Students will use the Internet as a research tool for art historical information. Students will be required to enter at least one piece of their artwork in the Celebration of the Arts exhibit. Students are required to supply an artist's sketchbook.

803 Drawing and Design

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11, 12
Lab Fee: \$10

Focusing on building drawing and observation skills, exploring personal expression and creative problem-solving; this course allows you to grow your skills as an artist. Because we work with students who have varying skill levels/experience, the goal of this course is to take you where you are and grow your individual skills over the semester - even if you have no experience, you can expect success. You will be challenged to stretch your preconceived ideas of what you can do as an artist and to explore the fine art world of drawing & design. Using historical and contemporary artists as inspiration, you will create a series of drawings and paintings that hone your competence with a variety of drawing & design tools and techniques. By participating in self, peer and group critiques and learning to give actionable feedback, you will develop your ability to look at your own artwork in a deeper manner and allow you to write and speak clearly and thoughtfully about others' art. Art school representatives visit throughout the year to discuss career options and college planning. Open Studio sessions are available after school twice a week for advanced instruction opportunities. All students participate in the Celebration of the Arts exhibit. Students are required to supply an artist's sketchbook for the class.

805 Painting and Drawing

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11
Lab Fee: \$10

Pen & Ink, Pencil, Tempera Paint, Charcoal, Watercolor...if those words make your heart sing, this is the course for you. Focusing on building painting, drawing and observation skills, exploring personal expression and creative problem-solving; this course allows you to grow your skills as an artist. Not sure if you're good enough? Our goal in this course is to take you where you are and grow your individual skills over the semester - even if you have no experience, you can expect success. We challenge you to stretch your preconceived ideas of what you can do as an artist and to explore the world of fine art. Using historical and contemporary artists as inspiration, you will create a series of drawings and paintings that expand upon your skills with a brush and pencil. By participating in self, peer and group critiques and learning to give actionable feedback, you will develop your ability to look at your own artwork in a deeper manner and to communicate thoughtfully about others' art. Art school representatives visit throughout the year to discuss career

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options and college planning. Open Studio sessions are available for advanced instruction opportunities. All students participate in the Celebration of the Arts exhibit. Students are required to supply an artist’s sketchbook for the class.

811 Functional Ceramics

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11
 Lab Fee: \$18

Ever look around your home and notice all the functional objects made of clay? Plates, cups, mugs, pitchers, platters, vases, salt and pepper shakers, bowls... Ever wish you could learn to make pottery on the potter’s wheel? Here’s your chance to create some amazingly beautiful and functional pottery for your own use. Is it easy? Not always. Will you get dirty? Yes. Will it be worth all the effort and the dirt? Absolutely! You’ll have the opportunity to create original designs for your own functional pottery, while learning about contemporary ceramic artists and cultural artistic heritage. In this professional ceramic studio you will learn a variety of handbuilding techniques and the potter’s wheel in a supportive community atmosphere. Digital portfolios are used to document your progress, processes and problem-solving strategies. All students are required to enter at least one piece in the Celebration of the Arts exhibit. **There is an \$18 lab fee for this course.

813 Sculptural Ceramics

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11
 Lab Fee: \$18

At the core of this course are the basic questions of any artist: How does your sculpture reflect who you are, what you think and what you feel? As a sculptor, how do I communicate meaning? You will have the unique opportunity to explore the world of sculptural ceramics – by studying contemporary ceramic sculptors such as Victor Spinski, Beth Cavener Stichter, John Brickels and Adrian Arleo. This project-based course links studio work and critiques to the exciting world of contemporary ceramic artists and their historic predecessors. Students will focus on meaning and symbolism in art as it relates to their artwork and to the artwork of professional artists; continually asking themselves how their in-class learning connects with their lives and to the larger world of art. Students will work in a professional ceramic studio and actively participate in this unique artistic community. The Internet is used as a research tool. Using a digital portfolio, students will document their progress and problem-solving strategies. Students are required to enter at least one piece in the Celebration of the Arts exhibit. **There is an \$18 lab fee for this course.

815 Tile Making: Impression and Expression

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11
 Lab Fee: \$18

A unique combination of drawing and ceramics, the tile artwork at Celebration of the Arts never fails to delight and inspire viewers. Students learn several techniques for creating tiles, including stamping, mold making, picture mosaics and traditional mosaics. All the phases of tile making, including creating an original design, working with clay, glazing, gluing and grouting, will be experienced firsthand. This exciting course focuses on personal expression as it is linked to contemporary art and artistic and cultural heritage – specifically Pennsylvania tile artists - and on participation in studio work and critiques. Students will work in a professional ceramic studio and actively participate in this unique artistic community. The Internet is used as a research tool. Using a digital portfolio, students will document their progress and

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problem-solving strategies. Students are required to enter at least one piece in the Celebration of the Arts exhibit.
 **There is an \$18 lab fee for this course.

817	Primitive Ceramics: Earth, Air, Fire and Water		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Lab Fee:	\$18		

We go seriously old school in Primitive Ceramics. By experimenting with primitive techniques including: creating your own clay bodies (meaning we will walk to the creek and dig up and process our own clay), burnishing, smoke-firing, traditional and horsehair raku, and alternative finishes (we often use fire as a tool in this course). The results are often unpredictable and always beautiful. Focusing on independent research and design; students meet indigenous people's both historic and contemporary and their hand-constructed ceramic techniques. Students will work in a professional ceramic studio and actively participate in this unique artistic community. The Internet is used as a research tool. Using a digital portfolio, students will document their progress and problem-solving strategies. Students are required to enter at least one piece in the Celebration of the Arts exhibit. **There is an \$18 lab fee for this course.

819	Sculpture		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Lab Fee:	\$18		

How often in your lifetime are you going to get the opportunity to carve stone?! Here's your chance to take on an unusual challenge. This rigorous and exciting course provides the opportunity for students to explore the fine art of sculpture. Areas of study include sculptural aesthetics, history, contemporary art, criticism and production. Students will explore major principles, concepts, techniques, materials, and tools of the sculptor. While the main project in this course is a stone carving using alabaster or soapstone, we also use a variety of other materials such as plaster, Pariscraft, found objects, clay, paper and wood on smaller projects. In this project-based course, students do independent online research and create original designs for their sculptures. Students will work in a professional sculpture studio and actively participate in this unique artistic community. Using a digital portfolio, students will document their progress and problem-solving strategies. Students are required to enter at least one piece in the Celebration of the Arts exhibit.
 **There is an \$18 lab fee for this course.

820	Digital Sketchbook		
0.5 credit	Humanities, Technologies, & Arts	Grades: 11, 12	
Lab Fee:	\$15		

Drawing technology and digital art have changed drastically to fit the speed of the 21st century artist and this course will give students the opportunity and training needed to push their creative potential without limitations. Digital Sketchbook's curriculum allows students the opportunity to create dynamic, thought provoking images using current professional tools such as the Wacom's Mobile Studio Pro pen and touch interface, Autodesk's Sketchbook Pro "user friendly" drawing and painting software, and Sketchup's 3D modeling capabilities. Tools that will allow art to be created directly on a computer screen with speed and precision. Wacom and Sketchbook pro are considered the creative industry's standard digital art software and hardware combination that is used by creative professionals around the world in 2D/3D animation studios, visual effects departments, comics, and photography. Companies such as Pixar, Disney, Ford, Blue Sky, Dreamworks, BMW, and countless other industries utilize these tools in some capacity. Students will draw, compose images correctly, explore animation techniques, manipulate perspective tools, create in a 3D space,

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develop narrative drawings such as comics and children’s book illustrations, and modify their own drawings instantly just as the leading professionals.

- Time management of deadlines, utilizing on screen note taking with Microsoft OneNote, creative problem solving, managing a digital workflow are also a dedicated part of the curriculum.

Resources:

<http://www.wacom.com/en-us/products/pen-computers/wacom-mobilestudio-pro>

<https://www.sketchbook.com/?locale=en>

<https://www.sketchup.com/>

824	Special Effects Photography		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Lab Fee:	\$25		

Special Effects allows students to experiment with specialized photography techniques not taught in the Digital or Portrait Photography courses. Techniques such as; Bokeh, Double Exposure, Long Exposure, Composite, and High Dynamic Range photography. Students will have the opportunity to use Canon DSLR cameras with a variety of detachable lens at their disposal. Along with photographing with professional grade equipment students will work directly on screen with Wacom Mobile Studio Pro 13 tablet computers while editing in the industry standard digital imagery editing suites Adobe Photoshop and Lightroom.

- Time management of deadlines, utilizing on screen note taking with Microsoft OneNote, creative problem solving, managing a digital workflow are also a dedicated part of the curriculum.
- Students may sign out equipment from the photography department while enrolled in the course.
- Please visit Mr. Mann’s class page for information and examples of photography projects.
- Similar to all art courses student work will be proudly displayed at Celebration of the Arts.
- This course utilizes Google Classroom and other Google applications

Resources:

<http://www.wacom.com/en-us/products/pen-computers/wacom-mobilestudio-pro>

<https://lightroom.adobe.com/>

826	Portrait Photography		
0.5 credit	Humanities, Technologies, & Arts	Grades: 10, 11, 12	
Lab Fee:	\$25		

Portrait photography is a course designed to teach students how to take photographs of people. Students will photograph their classmates, friends, family, and themselves to practice basic techniques involving depth of field, flash photography, managing a group, candid portraits, posing, working with telephoto lens to capture athletes in live athletic events, and learn how to photograph pets for extra credit. Utilize the most basic concepts of photography even the more advanced students will take on a series of challenges that utilize their creativity and prior experiences. Students will have the opportunity to use Canon DSLR cameras with a variety of detachable lens and pivot external flashes at their

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disposal. Along with photographing with professional grade equipment students will work directly on screen with Wacom Mobile Studio Pro 13 tablet computers while editing in the industry standard digital imagery editing suites Adobe Photoshop and Lightroom.

- Time management of deadlines, utilizing on screen note taking with Microsoft OneNote, creative problem solving, managing a digital workflow are also a dedicated part of the curriculum.
- Students may sign out equipment from the photography department while enrolled in the course.
- Please visit Mr. Mann’s class page for information and examples of photography projects.
- Similar to all art courses student work will be proudly displayed at Celebration of the Arts.
- This course utilizes Google Classroom and other Google applications

Resources:

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<https://lightroom.adobe.com/>

827	Digital Photography		
0.5 credit		Humanities, Technologies, & Arts	Grades: 9, 10, 11
Lab Fee:	\$25		

Digital Photography is a course dedicated to the ever changing technological advances in the world of photography and design. Students will have the opportunity to learn the benefits of digital imagery, how to manipulate their cell phone’s camera, and why photography has become so popular. Macro, Still Life, Panoramic, Architectural, and Lowlight photographic techniques are the foundation of digital photography. They provide anyone with an excellent intro experience to camera and tripod techniques while providing knowledge for future course in the SHS photography program. Students will have the opportunity to use Canon DSLR cameras with a variety of detachable lens at their disposal. Along with photographing with professional grade equipment students will work directly on screen with Wacom Mobile Studio Pro 13 tablet computers while editing in the industry standard digital imagery editing suites Adobe Photoshop and Lightroom.

- Time management of deadlines, utilizing on screen note taking with Microsoft OneNote, creative problem solving, managing a digital workflow are also a dedicated part of the curriculum.
- Students may sign out equipment from the photography department while enrolled in the course.
- Please visit Mr. Mann’s class page for information and examples of photography projects.
- Similar to all art courses student work will be proudly displayed at Celebration of the Arts.
- This course utilizes Google Classroom and other Google applications

Resources:

<http://www.wacom.com/en-us/products/pen-computers/wacom-mobilestudio-pro>
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Honors Level Courses

CHE 807 Honors Art

1.0 credit Humanities, Technologies, & Art Grades: 11, 12

Prerequisite: Successful completion of two of the following courses: 801, 803, or 805

*****Students express interest through HAC Course Request with teacher review and final approval.**

Considering a career in the arts? This class is for you. You will experience a variety of formal, technical, and expressive means available to the professional artist. Exploring career opportunities in art, you will have the opportunity to talk with art school representatives. You will highly refine your observation skills, learn to work independently as you research art historical movements and artists - and become familiar with contemporary artists. Hanging your work at Celebration of the Arts is the culmination of a year of intense work. Open Studio sessions are available for advanced instruction opportunities. Students planning to take Advanced Placement Art Senior year will use this class to begin developing the Breadth sections of their Advanced Placement Portfolio. **There is no Lab Fee for this course; students are expected to purchase the following items for the course: A large portfolio (at least 18" X 24"), an 18" X 24" sketchbook and a small sketchbook used for the purpose of required independent homework projects.

CHE 829H Honors Photography

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12

Prerequisite: Successful completion of two of the following courses (824, 826, and 827)

Lab Fee: \$65

*****Students express interest through HAC Course Request with teacher review and final approval.**

This course is for the highly motivated photographer who wants to perform at a college level while still in high school. The honors photography course is the perfect stepping stone to AP Photography and will be used as a benchmark entering the AP course (829). This will require independent work, goal setting, planning skills, and ongoing communication with the teacher. The 15 images created will be a combination of teacher assigned and student driven projects. Students will strengthen many photographic skills, including comprehensive technical knowledge of their camera, professional use of software and printing output options, as well as brainstorming critical creative problems. Critiques are student driven with an emphasis on constructive feedback. This course is designed deliberately to prepare students for the AP experience.

- Students may borrow a equipment from the photography department.
- Please visit Mr. Mann's class page for information and examples of photography projects.
- Students that complete the work in this course receive a "wall" at Celebration of the Arts.

Resources:

<http://www.wacom.com/en-us/products/pen-computers/wacom-mobilestudio-pro>

<https://lightroom.adobe.com/>

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Advance Placement Courses

CHE 828 Advanced Placement Studio: Art 3-D

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12
Prerequisite: Successful completion of two of the following courses: 811, 813, 815, 817, and/or 819

Teacher Recommendation Only

Lab Fee: \$18

The Advanced Placement 3-D course focuses on individual exploration and study using a broad interpretation of sculptural issues. A variety of approaches to representation, abstraction, and expression may be part of the student's portfolio. These may include traditional sculpture, architectural models, apparel, ceramics, three-dimensional fiber arts or metal work. Students develop a body of 3-D artwork which will be submitted in digital slide form to the College Board for evaluation and potential college credit. Portfolios are made up of three sections: Quality (10 slides) • Concentration (12 slides) • Breadth (16 slides). Each student is required to create an artist's statement for the AP portfolio. Students must submit and complete an AP portfolio in order to receive AP grade weight. **There is an \$18 lab fee for this course.

CHE 829 Advanced Placement 2D Design Portfolio: Photography & Design

1.0 credit Humanities, Technologies, & Arts Grades: 11, 12
Prerequisite: Successful completion of the following courses: 829, 824, 826, and 827

Teacher Recommendation Only

Lab Fee: \$65

This course is for the highly motivated 2D design (photography, animation, character design, & graphic artist) student who wants to perform at a college level while still in high school. This will require independent work, goal setting, planning skills, and ongoing communication with the teacher. The 29 images created will fill the required "Quality," "Concentration," and "Breadth" sections of the College Board Advanced Placement 2D Design Portfolio. Students will strengthen their design and photographic skills, including comprehensive technical knowledge of their chosen 2D media, professional use of software such as Adobe Photoshop and Lightroom, Autodesk Sketchbook Pro, Illustrator, and/or Sketch-up. They will also explore printing output options, as well as solving creative problems via design principles. Much of the thematic design of their portfolio will be self-assigned, based on their proposed "Visual Idea". The course culminates with presentation of the student's portfolio on a visual installation called a "Wall" at Celebration of the Arts.

This course provides the opportunity for students to earn honors weight by fulfilling additional requirements outside of the school day. See director for more information.

- Students must have their own photography equipment, Unless focus is non-photography driven.
- Please visit Mr. Mann's class page for information and examples of photography projects.
- Students that complete the work in this course receive a "wall" at Celebration of the Arts.
- \$90 dollar Advance Placement testing fee

Resources:

<http://www.wacom.com/en-us/products/pen-computers/wacom-mobilestudio-pro>

<https://lightroom.adobe.com/>

<https://apcentral.collegeboard.org/courses/ap-studio-art-2-d-design?course=ap-studio-art-2-d-design>

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CHE 831 Advanced Placement Studio Art: Drawing

1.0 credit

Humanities, Technologies, & Arts

Grades: 11, 12

Prerequisite: Successful completion of two of the following courses (801 803, 805) and 807

Teacher Recommendation Only

Are you a highly motivated student? Are you headed to art school and a career in the arts? This course allows you to perform at the college level while still in high school. AP students work all year and in-depth exploring a personal artistic theme. These works will represent the required Quality and Concentration sections in the Advanced Placement Portfolio submitted in early May. Through the intense study of the human figure, you will strengthen your drawing skills. Various media will be explored in black & white and color based upon your thematic series. Work ranges from photo-realism to imaginative compositions; small oilstick paintings to larger-than-life drawings. You will practice and develop the ability to document and explain your thinking, creative processes, research arc, and your developing understandings of how all of these areas work together towards your own personal and artistic growth. This practice will further develop your artistic voice and your ability to explain what has influenced and changed it. In addition to learning how to appreciate and evaluate your own work and that of others, all AP students will be encouraged to stretch and explore their own work and share it with an audience through mandatory weekly Peer Critical Review sessions. All course participants will need to submit an AP portfolio in May and exhibit their work in Celebration of the Arts. Open Studio sessions are available for advanced instruction opportunities.

**There is no Lab Fee for this course. Students will need to purchase the following items for the course: a large portfolio (at least 18" x 24"), an 18" X 24" sketchbook, a small sketchbook used for the purpose of required independent homework projects and any materials needed outside of what is available in the studio to complete their portfolio pieces.

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Music

845 Music: Film and Media

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11

This course explores how music works and the ways in which it can be combined with other forms of media. Through this course, students will have the opportunity to learn, discuss, and create music as it is found in: Film, Television, Broadcasting, Video Games, Podcasts, Commercials, Advertising, and much more. No prior musical experience necessary, just an interest in music.

847 Digital Music Production

0.5 Credit Humanities, Technologies, & Arts Grades: 9, 10, 11, 12

With today's technology, anyone can create and produce music! This course will teach you the skills needed to use what is readily available to get your song "out there." You need no prior musical experience, just the love of learning in a new way and being creative. We will explore the features of GarageBand and learn about sound production, mixing tracks and beats, creating your own songs, basic recording, using FX, and creating music for video. This project-based class is designed to get students engaged in the technology used for music and to inspire them to continue to develop their skills beyond the classroom door on their way to the Grammys!

848 History of Modern Music: Classic Doo-Wop to Modern Hip-Hop

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11

849 Guitar and Ukulele

0.5 credit Humanities, Technologies, & Arts Grades: 9, 10, 11, 12

This beginner course is designed to allow students the opportunity to pick up an instrument and learn to play. Basic technique, note reading, and musical interpretation are at the center of this course. Students will learn songs and techniques for both guitar and ukulele. No prior instrumental background needed.

851 Introduction to Music Theory

0.5 credit Humanities, Technologies, & Arts Grades: 10, 11,12

This introductory course is designed to help understand the fundamental concepts of music. All music is created from the same elements: pitch, rhythm, time, and expression. With these elements in mind, the course takes you from basic music reading through to analyzing the chords of famous pieces of music to allow us to understand the music better.

CHE 880 AP Music Theory

1.0 Credit Humanities, Technologies, & Arts Grades: 11, 12

The ultimate goal of an AP Music Theory course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of these goals may best be approached by initially addressing fundamental aural, analytical, and compositional skills using both listening

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and written exercises. Building on this foundation, the course should progress to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation.

Performance Ensembles

855	Symphonic Band		
1.0 Credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11, 12	

Symphonic Band is a performance, academic, and co-curricular ensemble open to Woodwind, Brass, and Percussion students in Grades 9 through 12. Students study and rehearse Band literature of various styles and difficulty in this class. Students refine performance technique and ensemble playing. Performances, concerts, and rehearsals outside of the school day are required. Students are encouraged to study privately on their individual instruments. As a co-curricular class, students enrolled in Symphonic Band participate in marching band at football games and parades. Participation fees are required to cover uniform and activity expenses.

857	Orchestra		
1.0 Credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11, 12	

Orchestra is an ensemble of performers who play stringed instruments. String players are eligible for inclusion by participation in the middle school program or by audition with the instructor. Standard orchestral literature and lighter selections are rehearsed and performed to gain an understanding of various periods and styles of music. Required concerts and performances are presented in the evenings throughout the school year. There is a uniform cleaning fee.

860	Concert Choir		
1.0 Credit	Humanities or Music Credit	Grades: 9, 10, 11, 12	

Every student will be given the opportunity, encouragement, and assistance to develop the fundamental skills essential for achieving a high standard of vocal performance: good tone quality, accurate intonation, correct breathing, clear diction, and an awareness and sensitivity for artistic interpretation. Required concerts and performances are the Winter Concert, Spring Concert and one other concert each year. In addition to regular class time, every student will be required to attend evening rehearsals prior to each concert as listed on the yearly Choral Department Calendar and in the Choral Department Handbook.

861	Springfield Singers		
1.0 Credit	Humanities, Technologies, & Arts	Grades: 9, 10, 11, 12	
Prerequisite:	<u>Audition Only</u>		

The Springfield Singers is a select group whose membership is by audition only. The fundamental skills essential in achieving a high standard of vocal performance will be stressed. Emphasis will be on ear training, sight singing and application of basic music theory. A higher level of difficulty of choral literature will be learned. Required concerts and performances are listed on the yearly Choral Department Calendar and in the Choral Department Handbook (including: Winter Concert, Spring Concert, Graduation). In addition to regular class time, every student will be required to attend evening rehearsals prior to each concert. There is a nominal uniform cleaning fee.

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Health and Physical Education

035	Grade 9	9th Grade Health & Wellness
036	Grade 11	11th Grade Health & Wellness
0.5 credit		Health/Physical Education Credit

Health and Physical Education is a 2 year requirement. The P.E. component is intended to improve the individual's level of physical fitness, increase enjoyment of physical activity, and encourage more extensive strategies in a variety of sports. Students will develop skills in lifetime, team, and cooperative sports which may include tennis, golf, volleyball, badminton, pickleball, physical conditioning, table tennis, ultimate games, handball, indoor soccer, base games, speedball, and floor hockey. All students are required to wear a regulation gym uniform and sneakers. To receive full credit, students must be prepared with a gym uniform, attend class regularly, and participate in class activities. The Health component is designed to help students make healthy choices throughout their lifetime. Age appropriate topics related to phases of human development will be covered concerning social, emotional and physical well-being of the individual.

Physical Education Additional Course Offerings

041	Enriched Health and Wellness		
0.5 Credit		Humanities, Technologies, & Arts	Grades: 12

Students will participate in a co-ed, intensified Physical Education experience. Points of emphasis will be placed on tournaments, rules and strategies, and participating in unique physical education opportunities. The health component will address age appropriate issues to encourage individuals to make healthy life choices.

042	Live Fit		
0.5 Credit		Humanities, Technologies, & Arts	Grades: 10, 11, 12

Students will be able to identify the major muscles of the body, design and implement a self-created individualized fitness program. All students will receive instruction on proper exercise technique, identification of lifting stations and names of exercises, spotting and safety protocols utilized when working out, fitness terminology, fitness concepts (overload, specificity, cross training, variation), warm up/cool down activities, phases of strength training (endurance, strength, power, sport specific), plyometric exercises, agilities, flexibility, rest and sports nutrition.

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ONLINE COURSE OFFERINGS

In addition to the diverse and student-centered classroom based learning opportunities and experiences, Springfield High School also offers students the opportunity to experience learning in an asynchronous online learning environment. Interested and approved students can choose from a variety of online learning courses not currently offered at SHS. These courses will appear on a student's schedule as being offered during the school day and students will be assigned a location where they can work. Course will be taken for credit and can fulfill credit requirements outside the 24 compulsory credits needed to earn a SHS diploma. Grades are assigned and will be part of GPA calculations. All courses carry a CP course weight. A SHS teacher will monitor student progress and maintain communication with students on weekly basis. Please see the courses listed below and inform your counselor if you are interested in pursuing this option for the upcoming school year.

Career and Technical Education Electives		
Applied Medical Terminology A/B	Career Explorations	Principles of Government & Public Administration A/B
Computing for College & Careers A/B	Culinary Arts A/B	Principles of Health Science A/B
Digital & Interactive Media A/B	Electronic Communication Skills	Principles of Hospitality & Tourism A/B
Health Science 1 A/B	Entrepreneurship A/B	Principles of Human Services A/B
Health Science 2 A/B	Essential Career Skills	Principles of Information Technology A/B
Introduction to Cybersecurity	International Business	Principles of Law, Public Safety, Corrections, & Security A/B
Introduction to Finance	Introduction to Android Mobile App Development	Principles of Manufacturing A/B
Introduction to iOS Mobile App Development	Introduction to Criminology	Principles of Transportation, Distribution, & Logistics A/B
Business Information Management A/B	Principles of Education & Training A/B	Professional Communications
		Sports & Entertainment Marketing
Core Electives		
Art History & Appreciation	Gothic Literature	Introduction to Social Media
Introduction to Anthropology	Holocaust Studies	Mythology & Folklore
Introduction to Archaeology	Marketing, Advertising, & Sales	Native American Studies: Contemporary Perspectives
Introduction to Marine Biology	Principles of Agriculture, Food, & Natural Resources A/B	Native American Studies: Historical Perspectives
Introduction to Veterinary Science	Principles of Arts, Audio/Video Technology, & Communications A/B	Revolutionary Ideas in Science
Introduction to Visual Arts	Introduction to Fashion Design	Social Issues
Sociology	Introduction to Military Careers	Structure of Writing
Theater, Cinema & Film Production	Introduction to Philosophy	Women's Studies

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COLLEGE CREDIT OFFERINGS

College in the High School and Dual Enrollment Courses

Kendra Campbell

Springfield High School has partnered with Delaware County Community College to provide students in Grades 10, 11, and 12 the opportunity to earn college credit while still in high school through two methods – Early College in the High School (Grades 10, 11, and 12) and Dual Enrollment (Grades 11 and 12). Early College in the High School courses are offered on the High School campus during the school day and are taught by high school teachers who have been certified by DCCC to teach the courses. Dual Enrollment courses are offered and taken on DCCC’s campus or online. The positioning of these courses in the school day can present challenges. Every effort will be made to accommodate the time of these classes while still providing students with a full and robust schedule at SHS. We hope that you will consider some of these courses while planning your academic programming. Additionally, some of the DCCC courses are part of a Vocational Certification Program very similar to programs offered at Delaware County Technical Schools. These DCCC programs, listed below, are two year programs where students take courses at SHS for part of the school day and attend classes at DCCC for part of the day.

College in the High School Courses

As stated above, College in the High School courses are Delaware County Community College courses that will be taught by Springfield High School teachers at the HS during the school day. Upon successful completion of the course, students will be awarded credit by SHS and DCCC, i.e. students will earn college credit while taking courses at SHS.

** These courses will be weighted as College Prep course weight. However, students will be awarded **Honors Weight** upon completion of a Capstone Project unique to each course.

Note: Unless otherwise stated, all Dual and College in the High School courses require the student to sit for DCCC Accuplacer. Required scores may vary per course. See the DCCC counselor for details.

SHS Course #	290	World Affairs
DCCC Course #	POL 200	World Affairs
(Honors Weight awarded with successful completion of Capstone Project)		
1.0 Credit	Humanities, Technologies, & Arts	Grades: 11, 12
3.0 Credit	DCCC credit awarded for completion with a grade of 70% or higher.	

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This course deals with the theory and practice of international relations. Upon successful completion of the course, students should be able to analyze the role of power in international politics. Students will identify the major constraints a national state must deal with in the formulation and implementation of foreign policy, as well as assess the impact of the United Nations on the relations between national states in the contemporary world. Finally, students will plan developmentally and culturally appropriate strategies to address individual differences among political adversaries.

SHS Course # 690 Student Success

DCCC Course # INT 100 Student Success

0.5 Credit Humanities, Technologies, & Arts Grades: 11, 12

3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

Student Success provides an opportunity for students to learn and adopt methods to promote their success in college. The course assists students in establishing educational objectives and increases success in achieving them. Included are the skills, behaviors and attitudes associated with success.

SHS Course # 390 Humans and the Environment

DCCC Course # BIO 102 Humans and the Environment

(Honors Weight awarded with successful completion of Capstone Project)

1.0 Credit Humanities, Technologies, & Arts Grades: 11, 12

3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

This course provides an introduction to the study of the design of the natural world and interactions between humans and their environment. It includes an investigation of the impact of human activities on biodiversity, natural resources, availability of energy, and contamination of the environment. The scientific, economic, and social issues that contribute to environmental problems are also examined. Sustainability principles, policies, and programs are explored on the local, national and global level. This course is designed for non-science majors.

SHS Course # 990 Fundamentals of Game Design

DCCC Course # DPR 117 Fundamental of Game Design Theory and Practice

(Honors Weight awarded with successful completion of Capstone Project)

0.5 Credit Humanities, Technologies, & Arts Grades: 11, 12

3.0 Credit DCCC credit awarded for completion with a grade of 70% or higher.

This course introduces students to the theory and practical aspects of the computer game development process. Students brainstorm a game idea, establish focus, determine the storytelling mode, and document the design. Upon successful

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completion of this course, students should be able to: demonstrate understanding of the vocabulary of game design theory and practice, identify the techniques of top game designers, analyze and identify the elements that make successful games, and apply the computer game development process to create a design document.

SHS Course # **375** **Introduction to Astronomy**

DCCC Course # **ESS 102** **Introduction to Astronomy**
 ESS 103 **Introduction to Astronomy Laboratory (Optional)**

1.0 SHS credit Grades: 11, 12 HAC Access

4.0 Credit	DCCC credit awarded for completion with a grade of 70% or higher.
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Prerequisites: Satisfactory score on the Accuplacer exam or SAT,
 75% average in Chemistry, and Algebra 2.

This college-level course is designed to introduce students to the science of astronomy, its history, and its importance as an influence on our view of humankind. Students will conduct astronomical observations using software, telescopes, and star charts to study objects in the night sky. Practical observational activities are designed to foster a conceptual understanding of how objects from great distances are studied from the earth. This is a rigorous textbook driven course intended for non-science majors to satisfy one of their college science credit requirement. This is a College Academic Learning Goal (CALG) designated course for Scientific Inquiry through DCCC.

This course is designed to introduce students to the science of astronomy, its history, and its importance as an influence on our view of humankind. The course is intended for non-science majors. Upon successful completion of this course, students should be able to: describe the night sky, trace the history of astronomy, describe the important properties of stars, describe the general characteristics of the solar system, discuss the discovery and nature of the Milky Way Galaxy and different types of galaxies, and discuss the possibility of life existing elsewhere in the universe.

Dual Enrollment Courses

Tuition and deadlines are as follows:

<u>Standard Rate</u>	<u>Dual Enrollment Rate</u>	<u>Savings</u>
\$350 per course	\$160 per course	\$190 per course
<u>Application Deadlines</u>		
Fall Semester – August 1	Spring Semester – December 1	Summer 1 – May 1 Summer 2 – June 1

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Popular DE courses at Springfield HS:

- Intro to Sociology
- Medical Terminology
- Construction First Aid & Safety
- Engineering Topics Seminar
- Introduction to Teaching
-

The Delaware County Community College course catalog can be accessed at the DCCC Web Site.

Sample DE courses that align with Springfield's emerging academy model:

**Please note that course offerings may be subject to enrollment trends and professor eligibility. The following list is merely an example, not a guarantee of course offerings.*

Engineering , Mathematics, Science, and Technology

BIO 115: Field Ecology

Field Ecology is designed primarily for majors in biology, natural science, and related fields, yet is open to students of all majors. This course introduces students to the general principles of field ecology pertaining to terrestrial, aquatic, and marine habitats. Emphasis will be placed upon regional conservation issues, biodiversity concepts, plant and animal interactions and adaptations, effects of human disturbance on native flora and fauna, and field research techniques.

Students are expected to develop and apply skills in field research and utilizing the scientific method.

DPR 234: Introduction to Computer Game Programming

This course teaches students the concepts of programming using the C++ language and DirectX. This course will introduce students to C++ Object oriented Programming, as well as, DirectX and its components. Students will create 2D and 3D objects, program animation sequences, add sound effects to games, create a virtual game world and program a full-featured role-playing game.

TCC 112: CADD Graphics

This course provides students with the concepts and skills necessary to form the basis of object visualization and documentation inherent to the creation and conveying of technical designs and drawings. Appropriate drafting concepts and skills are developed through use of both free-hand sketching and computer-assisted drafting. Instruction in the use of CADD systems is integrated with graphic theory throughout the course. The course covers theoretical and applied drafting concepts appropriate for conveying graphical representation of objects and designs in a variety of technical environments including manufacturing and construction, as well as architectural, mechanical and civil engineering design.

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TDD 216: Three-Dimensional CADD

This course provides instruction in advanced computer-aided design and drafting (CADD) techniques in addition to creation of three-dimensional drawings. Students progress from two-dimensional projection to wireframe, surface modeling, solids modeling and rendering techniques. Emphasis will be placed on maximizing a personal computer-based CADD system to develop a series of increasingly difficult drafting assignments and ending with a presentation quality final project and portfolio of completed drawings.

AHM 233 Medical Terminology

This course is designed to introduce the skills and knowledge needed to develop an understanding of the language of medicine. The mechanism of building a medical vocabulary, utilizing roots, prefixes, suffixes, and the combining forms, and the pronunciation are emphasized. A workbook/text, audiotapes, and computer software are used to give the student hands-on experience in the use of the language of medicine. *This course is required for the EMT certificate

Business

BUS 215: Human Resource Management

This course presents an in-depth study of the principles of human resource management. The course presents both the theoretical and practical aspects of the broad human resource functions which managers must understand in order to develop an effective and productive workforce. Computer simulations and exercises are used to introduce students to the practical aspects of human resource management.

BUS 105: Introduction to Entrepreneurship

This class is an introduction entrepreneurial class for students interested in starting their own business. The ultimate goal of the class is to improve management, leadership, accounting and overall business skills and knowledge base for our entrepreneur students.

HRM 100: Introduction to Hospitality

This course introduces students to the vast lodging and food service industry. The origins and history of the modern American hotel/motel business and the enormous growth of the food industries are presented in the context of global tourism. Supervisory duties including organizational theory, resource management of the prime cost associated with these businesses, and asset control processes are introduced. Career opportunities are examined as an essential part of the course.

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PLG 100 Introduction to Paralegal

This course focuses on four specific areas of the paralegal profession: (1) the role of the paralegal in the legal profession, (2) the legal and ethical rules that determine unauthorized practice, (3) an understanding of the judicial system at the federal, state and local level, and (4) the various areas of law-civil and criminal with emphasis on the legal terminology associated with each area. *Prepares students to enter into the paralegal AAS degree program

Arts

HUM 100: Introduction to Visual Arts

This course is designed to introduce students, through a broad overview, to the nature of art, the people who make art, the various forms art takes and to the importance of art in our everyday lives. Students consider the role of the artist in society and how that role changes historically. Issues such as aesthetics, creativity and perception, and what it means to be a visually literate patron of the arts will be explored. A thorough introduction to the visual elements and principles of design will help students to form some guidelines for analysis and criticism in such areas as drawing, painting, photography, film, video, sculpture, architecture, crafts, environmental design, theater, dance and music.

Humanities

HUM 141: Film Language

This course is intended to engage students in analysis of the film medium, to help them relate the art of film to their lives and their language and to stimulate their appreciation of the visible world. The course includes a brief survey of film history, a study of the subject matter and bias of the documentary film and visible forms of poetry in the art film.

HUM 180: Aspiration and Dissonance--A Global Interdisciplinary Study of History, Literature and Religion

This course considers the persistent separation between humanity's greatest ideals (defined as our "aspirations") and the reality of history (defined as "dissonance") through selected historical, literary, and mystical works from all over the world. This inter-disciplinary, co-taught course is designed to make the student think about the purpose and value of these aspirations, the skepticism that results from their enduring failure, and the changes that a global education may bring to this situation.

HUM 205: Latin American Studies

This course provides an overview of the Latino-American cultural heritage. Based on elements from anthropology, culture (both folk and popular), film, folklore, language and linguistics, theater and drama, and literature, the course examines various cultural traditions within Latino-American society

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Liberal Arts

ARB 101 Elementary Arabic I

This course introduces students to Arabic alphabets, articulation of sounds, basic grammar, reading and writing. Vocabulary words for cultural and social settings are introduced. Listening and speaking are emphasized in class and laboratory settings.

CHI 101: Elementary Chinese

This course introduces students to the fundamentals of Chinese Language by focusing on the development of functional competence in the four skills (listening, speaking, reading and writing), as well as Chinese cultural knowledge. Students completing this course will master Chinese pronunciation system (Hanyu Pinyin), basic Chinese Characters writing skill, basic Chinese grammar. The emphasis is placed on actual verbal communication.

HIS 251: History of Modern China

This course is an introductory study of the history of China from the seventeenth century to the present. Specifically, the course seeks to analyze how China has been able to build a dynamic and growing civilization amidst rebellion, reform, and revolution. Political, economic, and social issues will be discussed to gain a greater understanding and appreciation of Chinese civilization. Three major themes in the course will deal with imperialism, nationalism, and modernization. An effort will be made to understand the political, economic, and social “self-strengthening” experiments in China within a global perspective. The final portion of the course will examine contemporary Chinese society.

MAT 120: Modern College Mathematics

This course is designed to give students in the non-science fields an appreciation of and experience in using the concepts, logical reasoning and problem-solving techniques involved in various fields of mathematics. It fulfills the mathematics elective for liberal arts, administration of justice, early childhood education, fire-science technology and general education majors at the College.

RUS 101: Elementary Russian

This course introduces students to the Russian language by focusing on the development of functional competence in the four skills (listening, speaking, reading, and writing), as well as the expansion of cultural knowledge. Students completing this course will learn about the basic structure of Russian grammar and writing as well as become familiar with elementary conversational skills.

SOC 110: Introduction to Sociology

The factors that determine social organization, behavior and change are considered in relation to the individual student’s own life. Study is concentrated on social intervention, culture, social class, demography, collective behavior, institutions and socialization

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Additional opportunities through Delaware County Community College:

SWO 101: Introduction to Social Work and Human Services

This is a one semester introduction to human services and the major policies and practices that are used to understand human strengths and challenges. The course explores the skills, values and knowledge based needed to effectively work as a culturally competent, human service professional in a multidisciplinary setting.

Skilled Trades:

TCS 141 Construction First Aid/Safety

Emergency first-aid and accident-prevention instruction for construction employees and managers. OSHA requirements are stressed in this course. Administrative aspects of recordkeeping requirements, rights and responsibilities, standards, safety program development and implementation are covered. Safety training includes identification and elimination of accident and health hazards, inspection techniques and administration of first-aid and CPR. *Required for most associate's degrees and certificates in the skilled trades (construction, plumbing, electrical, etc)

WLD 100 Introduction to Welding

Classroom instruction includes the proper selection of A.C and D.C. power sources and their applications. Oxy-fuel welding and cutting equipment and safety procedures are covered. Also discussed is proper set-up, use of GMAW and GTAW power sources and how to correctly set up and use them. All requirements and safety procedures are covered.

WLD 101 Introduction to Oxy-Fuel Welding and Cutting

Course emphasis is on fuel gases, welding, and cutting equipment. Upon successful completion of this course, students should be able to: List the major advantages and disadvantages of different fuel gases, maintain an oxy-fuel welding set, demonstrate lighting, adjusting, and extinguishing an oxy-fuel flare, and use an oxy-fuel cutting

Emergency & Protective Services EMER 105: Incident Management

This course is designed to provide the student with an overview of the Incident Command-Unified Command Structure. Additionally, a look at incident management from various perspectives such as local fire departments, industrial settings, the Oklahoma City bombing, and others will be discussed. The student will work in an interactive program to prepare for future roles and responsibilities as those charged with a management role in incident command, control or mitigation.

Moreover, the student will learn from the experiences of others, sharpening their understanding skills relative to the dimensions of emergency incident management

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Delaware County Technical School Courses

960AH 3.0 Credits	Health Occupations 2 Semesters	This course includes anatomy and physiology, medical terminology, nutrition, medical procedures, emergency and clinical care, and health care issues. Clinical education is an integral part of the program.
960AT 3.0 Credits	Automotive Technology 2 Semesters	DCTS has the distinction of being among a small number of schools and colleges to be selected to participate in the AYES program, a partnership with General Motors, Daimler Chrysler, BMW, Honda, Hyundai, Subaru, Toyota, Mitsubishi Motors, Nissan, Volkswagen, Audi and Mercedes Benz corporations. This program gives DCTS students a competitive edge by allowing them to work directly on new cars with technicians experienced in the field and at dealerships.
960 BM 2 or 3 Credits	Biomedical Technology & Laboratory Sciences	Delaware County Technical High School is offering NEW PROGRAM for high school students interested in pursuing careers in pathology, biomedical engineering, genetics, medical technology, molecular and cellular biology. This program provides students with the knowledge and hands on experience necessary to be successful in medical technology and laboratory science careers. Students will use state of the art equipment to learn the principles of scientific investigation and how it is applied to agriculture, environmental health, forensics, genetic engineering and medicine. An emphasis will be placed on DNA fingerprinting, polymerase chain reaction, microbiology and immunology. Student leaving this program will have the strong foundation necessary to pursue post-secondary and career opportunities.
960BT 3.0 Credits	Building Trades 2 Semesters	Practical experience and classroom training prepares students enrolled in the Building Trades program to find employment in the construction field or enter a post-secondary institution. Students are taught carpentry, masonry, plumbing, roofing, drywall application, painting and framing/finishing.
960 CFSMA 3.0 Credits	Composite Fabrication And Sheet Metal Assembly 2 Semesters	Description to come.
960CM 3.0 Credits	Cosmetology 2 Semesters	The Cosmetology Program is a three-year standards-based education program. The 1250 hours required for this course are earned when a score of 80% or above is achieved for each individual unit, which includes both theoretical and hands-on training. Students learn haircutting, coloring, manicuring, facials, hairstyling, and shampoo techniques and treatments.
960CA 3.0 Credits	Culinary Arts and Hospitality 2 Semesters	Culinary Arts and Hospitality prepares students for success in our nation's number one employer, the food service and hospitality industry. Students are taught food preparation, dining service, inventory control, safety, sanitation and management skills. Our students also learn food nutrition, healthy cooking, equipment identification, use of hand tools and culinary vocabulary. <i>We are the only high school Culinary Arts program in this part of Pennsylvania to be certified by the American Culinary Federation.</i>
960CN 3.0 Credits	Computer Network and Digital Forensics 2 Semesters	This course is designed to provide a broad background in the nature of electricity, the operation and application of electric circuits, and the physics of electric current flow.
960CP 3.0 Credits	Carpentry 2 Semesters	The Carpentry program prepares students for employment in residential home remodeling and light commercial construction industries. The curriculum covers the use of hand and power tools, blueprint reading, estimating and scheduling of construction operations. Students are introduced to concrete form building, placing, reinforcing and finishing.

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960CR 3.0 Credits	Collision Repair 2 Semesters	DCTS's Collision Repair Technology course is based on an occupational analysis of the auto body field and reflects the job requirements of ICAR (Inter-Industry Conference on Auto Collision Repair) and the Automotive Collision Technology standards. Using state-of-the-art equipment, students are taught MIG welding/cutting, metal repair, corrosion protection, masking, refinishing, undercoating, unibody inspection and detailing.
960 3.0 Credits	Dental Technology 2 Semesters	Description to come.
960EC 3.0 Credits	Early Childhood Education 2 Semesters	The Early Childhood Education (ECE) program prepares students to work with young children in a variety of settings that require an understanding of how children grow, learn and develop. The curriculum is aligned with the National Child Care Association's core of 15 "Professional Abilities."
960EP 3.0 Credits	Emergency and Protective Services 2 Semesters	The Emergency and Protective Services (EPS) program offers a comprehensive public safety education to students interested in pursuing a career or volunteering in the emergency medical, law enforcement, fire, security, industrial safety or emergency management services.
960HV 3.0 Credits	Heating and Air Conditioning 2 Semesters	This course prepares students to apply the technical knowledge and skills necessary to install, repair and maintain commercial, industrial and residential heating, air conditioning and refrigeration systems. The course is taught in compliance with the standards established by the National Association for Testing Excellence (NATE) and the Air Conditioning Contractors of America (ACCA).
960IM 3.0 Credits	Interactive Multimedia and Design 2 Semesters	Interactive Multimedia is a computer graphics program that introduces students to technology-based desktop publishing, multimedia design and production skills. Students learn the concepts of color and design and their use in computer-based graphic design. They also learn animation, sound, video and graphics editing in the multimedia class
960IR 3.0 Credits	Electrical Construction Technology 2 Semesters	The Industrial and Residential Electricity program introduces students to the basic concepts of residential and commercial wiring. Students install circuits, switches, conductors, circuit breakers and other electrical devices. Skills are taught in compliance with the National Electrical Code (NEC) industry standards.
960LS 3.0 Credits	Environmental Landscape and Equipment Operations 2 Semesters	As a member of the Landscape & Greenhouse Operations class, students learn the principles and skills that lead to successful careers in the fields of landscape design/maintenance, nursery and greenhouse production/operations, and floral arts.
960MH 3.0 Credits	Logistic and Inventory Management 2 Semesters	Materials and Inventory Control introduces students to the distribution service industry. The course curriculum prepares students to work in distribution centers, warehouses, and supply rooms.
960WT	Welding Technology Welder	NEW PROGRAM This program prepares students to apply technical knowledge and skills in gas,

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3.0 Credits	2 Semesters	arc, shielded and nonshielded metal arc, brazing, flame cutting and plastic welding. Hand, semiautomatic and automatic welding processes are also included in the instruction. Students learn safety practices and types and uses of electrodes and welding rods; properties of metals; blueprint reading; electrical principles; welding symbols and mechanical drawing; use of equipment for testing welds by ultrasonic methods and destruction and hardness testing; use of manuals and specification charts; use of portable grinders and chemical baths for surface cleaning; positioning and clamping; and welding standards established by the American Welding Society.
966 3.0 Credits	Honors Medical Technology 2 Semesters	This course is a perfect match for the student interested in the healthcare field, and would like to learn more about available options. In this program the hospital becomes the classroom. Crozer Keystone Health Systems will offer a clinical rotation through different departments. Students will work alongside medical professionals to learn the importance of communication with patients. Classroom instruction will be given on the study of body systems, anatomy, infection control, and process of illnesses and injury. Medical terminology and core patient care skills such as taking vital signs, assisting with activities of daily living, and sterile techniques will be taught. This course carries an honors weighted grade.

Delaware County Community College Technology Programs

961ATAutomotive Technology	The Early College Automotive program is designed to allow interested students to earn a certificate in Automotive Technology upon graduation from high school. Students who choose to continue in the program will earn the Associate in Applied Science in the Skilled Trades with one additional year of full time study. Please see the attached flier for more information about the course sequence for the Automotive Technology program. Students who earn the certificate in Automotive can access an entry level position in automotive maintenance and repair. Students who earn the associate's degree can access higher level management jobs or a career as a mechanic with brands such as BMW, Lexus, and/or Mercedes-Benz.
961ETElectro-Mechanical Technology	The Early College Electromechanical program is designed to allow interested students to earn a certificate in Electromechanical Technology upon graduation from high school. Students who choose to continue in the program will earn the Associate in Applied Science with one additional year of full time study. Please see the attached flier for more information about careers in the Electro-Mechanical field.

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