ORANGE SECONDARY PROGRAMS OF STUDY 2018-2019

CAREER AND INNOVATION ACADEMY OF ORANGE (CIAO) – ORANGE HIGH SCHOOL

ORANGE PREPARATORY ACADEMY (OPA) – S.T.E.M. ACADEMY OF THE ORANGES

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ORANGE HIGH SCHOOL
"KEEPING CHILDREN FIRST"

Dear Scholars and Parent(s)/Guardian(s):

The program of study booklet was designed to provide our scholars with vast array of academic opportunities to become college and career ready in the 21st Century. With that in mind, this booklet has exciting information regarding course offerings from each of our instructional departments, career and technical department and our strong partnerships with pre-college programs, college and initiatives, and intern/externship experiences. You will find detailed information about each course, credits, prerequisites, honors courses, Advanced Placement (AP) courses and district graduation requirements.

It is highly recommended that scholars, parents and school personnel examine this program of study before course selections are made. If there are any questions, please do not hesitate to contacting your school counselor, teacher, or administrator. Parent conferences concerning your child's program of study are welcomed and encouraged by contacting your child's school counselor for an appointment.

We are in an environment of change and with that said, our academic departments have developed a comprehensive program of study which will prepare our scholars to compete on a global level and be college and career ready in the 21st Century. We achieve this goal by offering our scholars course content that is college bound focused while also providing curricula that equips our learners for immediate career entry upon graduation.

Our scholars are expected to work with their school counselor to develop the best program of study that fosters academic excellence, industry exposure, goal setting, and to continue to lay the foundation for our scholars to be college and career ready as leaders in the 21st Century.

On behalf of the Guidance Department, wishing you great success in 2017 and beyond!

Sincerely,

Orange High School Guidance Department

GRADUATION REQUIREMENTS

To receive a New Jersey State endorsed diploma from Orange High School, each student must earn a *minimum* of 125 credits. Minimum passing scores are set by the New Jersey State Department of Education. Each year, students in grades nine, ten, and eleven must be enrolled in a program of at least 40 credits.

COURSES*	YEARS	CREDITS
English	**4**	**20**
Mathematics	**3**	**25**
Science	**3**	**15**
Social Studies	**3**	**15**
Physical Education	**4**	**16**
Health and Safety Education	**4**	**4**
Visual and Performing Arts	**1**	**5**
World Languages	**2**	**10**
Financial Literacy, Economics, or Intro. to Business	**.5**	**2.5**
21st Century Life and Careers or Career Technical Education	**1**	**5**
Electives	**3**	**15**

School Counselors must perform a Memorandum of Understanding (MOU) annually to ensure students are on target towards high school graduation. All scholars are scheduled for Algebra I and II which are 10 credits each and Geometry which is 5 credits. This denotes a semester course only.

GRADE PROGRESSION& ADDITIONAL GRADUATION REQUIREMENTS

- **In order for a freshman to be promoted as a sophomore they must earn 30 credits**
- **In order for a sophomore to be promoted as a junior they must earn 60 credits**
- **In order for a junior to be promoted to a senior they must earn 95 credits**
- **In order to graduate, a student must earn a minimum of 125 credits in the required courses for graduation**
- **125 credits minimum required to meet graduation requirements**
- **Proficiency on the PARCC end-of-course assessments.**
- **60 hours of community Service (15 hours each year of school)**

COMMUNITY SERVICE

Our Structured Learning Consultant in the school district is charged with developing our community partnerships which fosters relationships for our students to earn community services hours, intern/externships opportunities and possible job placement with corporate, non-profit and municipal agencies in Orange and the greater Orange area.

Students are required to complete and log a minimum of 15 hours per year of community service as a part of their graduation requirement of 60 total hours. Students at all grade levels are encouraged and motivated to engage in an extensive volunteer program providing assistance, lending their talents, skills, time, energy, and positive attitudes to a diverse community population. Through the office of the Mayor of Orange and the Municipal Alliance, students may acquire information about a variety of civic organizations that welcome the expertise and assistance of high school students. Students may arrange with middle, elementary, and high school principals to volunteer as mentors, tutors, and other practical and meaningful capacities. Religious and non-secular organizations are additional organizations through which students may devote their services to others.

COURSE SELECTION

The Orange Public School District is dedicated to providing all students with equal access to the curriculum and to all course offerings. Students are encouraged to enroll in rigorous courses that provide opportunities to raise their achievement levels and ensure college and career readiness.

Classes are offered at various levels of difficulty, including foundation, college preparatory (CP), honors, and Advanced Placement (AP). Students receiving final grades of "A" or "B" in the previous year's courses are encouraged to consider a more rigorous course level for the subsequent year. Honors and AP courses have a higher level of rigor than CP courses, often requiring higher levels of workload, including extensive independent study.

Students and their parents/guardians are advised to consider individual abilities, interests, and needs; to review prior academic history with regard to specific subjects; and to hold frequent and detailed discussions at home regarding the course selections each year. It is also important to consider teacher and counselor recommendations and to have an ongoing dialogue between and among the guidance counselors, student, and parents. School Counselors are available to assist and support students and parents throughout the scheduling process and can be contacted through the guidance departments—Orange Preparatory Academy at 973-677-4000 x5611 or 5601, Orange High School at 973-677-4000 x5020, or Career and Innovation Academy of Orange (CIAO) 973-677-4000 x1704.

COURSE AVAILABILITY

In order to provide the broadest program possible to meet the needs of students, full year and semester electives are available in all subject areas. Class sizes are established in order to provide optimum educational opportunities for students, and Orange Public Schools makes every attempt to adhere to these limits. Career and Technical Education (CTE) students are given preferential placement in pathway requirements. Course prerequisites are strictly adhered to. A course might not be offered during a given school year due to low enrollment. It is advisable to consider alternate course options during the scheduling process.

GRADING SYSTEM

Numeric	CP	Honors	AP
97-100	4.3	4.8	5.3
90-96	4.0	4.5	5.0
87-89	3.5	4.0	4.5
80-86	3.0	3.5	4.0
77-79	2.5	3.0	3.5
70-76	2.0	2.5	3.0
67-69	1.5	2.0	2.5
65-66	1.0	1.5	2.0
<65	0.0	0.00	0.00

NC No Credit due to Poor attendance
I Incomplete grade to be made up within 10 school days or grade will become an F
ME Medical excuse where student must make up work within 10 school days

Students may lose credit in a course, regardless of current grade, by exceeding 18 unexcused absences in a full year course 9 unexcused absences in a semester course or 5 unexcused absences in a quarter course (*subject to administrative review*). Parent/guardian will be notified according to the following schedule:

Full year course: Parents will be notified after 3, 6, and 9 absences
Semester course: Parents will be notified after 2, 4, and 6 absences
Quarter course: Parents will be notified after 2 and 4 absences

Student, Parent and School Counselor Responsibilities

Student Responsibilities include, but are not limited to:

- Adhering to appointments made or assigned with his/her counselor, or see their counselor during lunch, before school, or after school.
- Promptly returning all necessary forms related to the guidance process (ex: college application forms, transcript release forms, etc.).
- Meeting with their Counselor's *yearly* to discuss and sign the Memorandum of Understanding (MOU).

Parent/Guardian Responsibilities include, but are not limited to

- Discuss assignments that are being completed in the classroom.
- Usage of the Genesis Parent Portal to review your child's progress in each course.
- Communicate to your child the importance of attending school.
- Ensure that your child a well-balanced meal and sufficient rest.
- Become familiar with your child's friends and their families.

School Counselor will assist students in the following:

- Discuss with students the programs of study and course selection process.
- Conduct individual meetings with students to discuss college and career planning.
- Provide programs to assist students and parents with the college selection, application process, scholarships and financial aid.
- Monitor the students' Memorandum of Understanding (MOU) to ensure that graduation requirements are met.
- Develop an understanding of the Naviance Family Connections program.
- Establish an understanding of the college planning timeline.
- Create sessions for student athletes regarding recruitment and NCAA Clearinghouse process.
- Provide seminars and information sessions yearly.

SCHEDULE ADJUSTMENTS

The process of registering and scheduling students is both complicated and challenging. It is therefore necessary to ask students to make careful and deliberate choices when they register for classes. If it becomes necessary to make a program change, students requesting a scheduled adjustment must complete the Schedule Change Request Form. Requests for schedule changes will be processed for **ONLY** the reasons listed below. Students will be asked to identify the reason for the change before the form will be accepted for processing. Valid reasons for which a student may request a change of class include:

- An error in placement prerequisite(s); prerequisite(s) are not met
- Successful completion of courses taken in summer school
- An error or omission in transcript or data entry
- Meeting graduation requirements

All other course changes must be approved by school administration based on availability.

There are several guidelines to which School Counselors will strictly adhere. They include, but are not limited to, the following:

If a student transfers into a closely aligned course within the same discipline, the new course will replace the related course on the student's transcript. A change of this nature must take place before the end of the first marking period.

Counselors will work with students to finalize course selections. Any changes in course choices where prerequisites are not an issue MUST be made before the first day of school, while the counseling staff is still available to address these requests.

Alternate course selections made at the time of registration are considered to be valid choices if the first selections cannot be scheduled (usually due to conflicts in the master schedule). CHOOSE WISELY! Changes in a student's request and/or final schedule MUST be made before the first day of school.

A special note to students:

Please take the time to choose courses that are the best match for you, your interests, your abilities and your goals! Gather information from your teachers, parents, administrators and your counselor as you build your academic program for next year. Careful selections now will mean fewer problems once the academic year begins.

Drop/AddPolicy

Generous and reasonable time limits are given to accommodate students' requests for schedule changes. It is expected that students will use the time limits allotted. If a drop/add includes a change of level, refer to the "Change of Level" section in this catalog for specific guidelines.

It is the intent of this present policy to provide adequate time for each student in conjunction with parents/guardians, counselors and teachers to develop a program best suited to meet his/her needs. The following procedures have been adopted for dropping and adding courses:

Once the school year begins in September, the policy regarding add/drop of courses will only be allowed a level change prior to or on the 10th day of school.

ENGLISH DEPARTMENT

Four years of English is required for all students. **All courses offered are aligned to the New Jersey Student Learning Standards**. Educators at Orange High School provide students with rigorous, high quality curricula and classroom experiences in order to fully prepare students to achieve college and career readiness. The English curricula allow students to explore the richness of language, the sophistication of ideas, and the many genres through which authors express views about the world. In doing so, students must grapple with the fundamental structures, paradoxes and limitations contained in language and the complexities of written, visual and non-representational texts. Students will develop a base of knowledge by engaging with and analyzing works of quality and substance. They will become proficient in new areas through research and study. The courses require students to read, analyze, and critique progressively complex texts purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Through reading, writing, speaking, and listening, students explore what it means to think about language and literature in order to express themselves and become self-directed learners, effectively seeking out and using resources. Students looking for opportunities to challenge themselves are welcome to petition for enrollment in honors or Advanced Placement classes (see the Honors/AP course request form).

English I (5 credits)
Prerequisite: None

This course is designed to introduce, reinforce, and practice literacy skills and literary analysis through the reading of novels, informational texts, primary sources, plays, short stories, poetry, myths, legends, folktales, etc. Emphasis is placed on developing critical thinking skills, identifying the central idea, recognizing theme, analyzing character, and recognizing an author's purpose. Students learn to initiate and participate effectively in a range of collaborative discussions with diverse partners on grade appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly. Additional emphasis is placed on the fundamentals of clear organized writing including: sentence structure, paragraphing, usage, and the conventions of Standard English grammar and usage when writing or speaking. Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. Short as well as more sustained research projects are required as students synthesize multiple sources on subjects while demonstrating understanding of the subject under investigation. Instruction will incorporate test sophistication strategies in preparation for End of Course Exams, as well as the college entrance examinations. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Honors English I (5 credits)
Prerequisites: B or better in 8th grade English; teacher recommendation; or parent or student request

This course introduces students to the challenges and rigors of the Honors English classes. Students who demonstrate competency through test scores, class work, teacher recommendation, and parent/student request have the opportunity to explore English with more intensity. Like students in standard English I classes Honors English students perform analysis of the novel, short story, informational texts, primary source documents, drama, and poetry. The strength of the Honors course of study lies in the extensions of research and tasks related to the analysis of substantive texts, including the use of sophisticated reasoning skills and effective use of technology as students are challenged to become proficient in new areas through research and study. Students will refine and share their knowledge through writing,

speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course Exams, as well as the college entrance examinations. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

English II (5 credits)
Prerequisite: English I

This course is designed to further reinforce and practice literacy skills and literary analysis through the reading of novels, informational texts, primary sources, analytical essays, plays, short stories, and poetry. Emphasis is placed on developing and refining critical thinking skills, identifying the central idea, recognizing theme, analyzing character, and recognizing an author's purpose. Students initiate and participate effectively in a range of collaborative discussions with diverse partners on grade appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly. Emphasis is placed on clear organized writing including: sentence structure, paragraphing, usage, and the conventions of Standard English grammar and usage when writing or speaking. Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. Short as well as more sustained research projects are required as students synthesize multiple sources on subjects while demonstrating understanding of the subject under investigation. Instruction will incorporate test sophistication strategies in preparation for End of Course Exams, as well as the college entrance examinations. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Honors English II (5 credits)
Prerequisites: Honors English I; B or better in English I; teacher recommendation; or parent or student request

This course extends the learnings of the English II classes as students continue to develop knowledge of the research processes that includes written and oral argumentation. Students initiate and participate effectively in a range of collaborative discussions with diverse partners on grade appropriate topics, texts, and issues, building on others' ideas and expressing their own clearly. Students in this course are required to participate in a formal debate. Emphasis is placed on clear organized writing including: sentence structure, paragraphing, usage, and the conventions of Standard English grammar and usage when writing or speaking. Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. Short as well as more sustained research projects are required as students synthesize multiple sources on subjects while demonstrating understanding of the subject under investigation. Instruction will incorporate test sophistication strategies in preparation for End of Course Exams, as well as the college entrance examinations. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

English III (5 credits)
Prerequisites: English II

This course continues to develop students' skills in analyzing complex literary and informational texts as students delve deeply into works by acclaimed authors and historical figures, including classics from William Shakespeare, Virginia Woolf, and Kate Chopin; seminal pieces from W.E.B. Du Bois, Booker T. Washington, and Elie Wiesel; and contemporary literature from Tim O'Brien and Louise Erdrich.

Through the study of a variety of text types and media, students build knowledge, analyze ideas, delineate arguments, and develop writing, collaboration, and communication skills. Students read, discuss, and analyze literary and nonfiction texts focusing on how authors relate textual elements, such as plot, character, and central ideas, within a text; as well as, use word choice and rhetoric to develop ideas and advance their points of view and purposes. As the course progresses students engage in an inquiry-based, iterative process for research; building on work with evidence-based analysis. Students explore topics that lend themselves to multiple positions and perspectives, and gather and analyze research based on vetted sources to establish a position of their own. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course Exams as well as college entrance exams. Summer reading and writing assignments are required.

Honors English III (5 credits)
Prerequisites: Honors English II; B or better in English II; teacher recommendation; or parent or student request

This course is designed for students who have mastered fundamental literacy skills, who wish to work beyond the scope of the College Preparatory English program and who may wish to take AP courses in English. Honors English III extends learning beyond the standard English III course by deeply probing analytical essays that critique and delve into multiple perspectives around complex literary and informational texts of acclaimed authors and historical figures, including classics from William Shakespeare, Virginia Woolf, and Kate Chopin; seminal pieces from W.E.B. Du Bois, Booker T. Washington, and Elie Wiesel; and contemporary literature from Tim O'Brien and Louise Erdrich. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

English IV (5 credits)
Prerequisites: English III

This course is designed to offer a wide range of quality texts that engage students in analysis of autobiographical nonfiction, speeches, poetry, drama, and fiction. The English IV curriculum comprises classic and contemporary voices including Malcolm X with Alex Haley, Leslie Marmon Silko, Henry David Thoreau, Benazir Bhutto, Jared Diamond, William Shakespeare, Tennessee Williams, Jhumpa Lahiri, and Nikolai Gogol. Through the study of a variety of text types and media, students build knowledge, analyze ideas, delineate arguments, and develop writing, collaboration, and communication skills. Students will make effective use of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams.

Honors English IV (5 credits)
Prerequisites: Honors English III; B or better in English III; teacher recommendation; or parent or student request

This course is designed for students who have mastered fundamental literacy skills and who wish to work beyond the scope of the College Preparatory English program. Honors English IV extends learning beyond the standard English IV course by deeply probing analytical essays that critique and delve into multiple perspectives around complex literary and informational texts of acclaimed authors and historical figures, including Malcolm X with Alex Haley, Leslie Marmon Silko, Henry David Thoreau, Benazir Bhutto, Jared Diamond, William Shakespeare, Tennessee Williams, Jhumpa Lahiri, and Nikolai Gogol. Students will make effective us of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams.

Young Adult Literature (5 credits)
Prerequisites: English I and II.
This course can be taken in lieu of English III or IV to fulfill graduation requirements

This course presents the opportunity for students to read some of the most engaging, culturally relevant, and current literature specifically for young adult readers. Carefully selected, thought provoking analysis of themes and messages will engage students in the informational text in this course. Students will analyze these complex texts through comparative complex texts and the inclusion of relevant evidence. Students will make effective us of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Mythology (5 credits)
Prerequisites: English I and II.
This course can be taken in lieu of English III or IV to fulfill graduation requirements

Students will study the various mythologies from around the world. Broken into modules that align with marking cycles, students will investigate the beliefs and stories from the Greeks and Romans, the Egyptians and Sumerians, the Norse deities, the various cultures of the Americas. These are incredibly rich histories from across the globe in which cultures sought to make sense of their origins. Students will make effective us of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. 21st century technologies are incorporated. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Literature and Film (5 credits)
Prerequisite – English I and II
This course can be taken in lieu of English III or IV to fulfill graduation requirements

This course creates themes that students will study through both literature and film. With the inclusion of informational text that examines scholarly analysis of the themes, students will experience the rigor necessary to ensure that they are obtaining college and career readiness. Students will engage in an analysis of substantive text as they cite relevant evidence. Students will engage in reading and writing activities through a mandatory grade-level project over the summer. Students will make effective use of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams.

Advanced Placement English Language and Composition (5 credits)
Prerequisites: Honors English II; B or better in English II; teacher recommendation; or parent or student request

An Advanced Placement (AP) course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of rhetorical contexts, and in becoming skilled writers who compose for a variety of purposes. This course deeply probes rhetoric and historically significant essays that have impacted American Society. Students will analyze the interactions among a writer's purpose, audience expectations, and subjects, as well as the way genre conventions and the resources of language contribute to effectiveness in writing. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Advanced Placement English Literature and Composition (5 credits)
Prerequisites: AP Language and Composition; Honors English III; B or better in English III; teacher recommendation; or parent or student request

The Advanced Placement (AP) English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.

ELECTIVES:

Play Writing (2.5 credits)
Prerequisite: None
Open to students in grades 9

The study of the basic principles of playwriting is the focus of this course. From start to finish, the student will complete a one act play as the final project. The student will learn how to develop plot, character, though, diction, sound and spectacle in the original drama.

This course is an introduction to the craft of playwriting and an exploration of the creative art of the playwright.

The approach will include analysis of works of significant playwrights and a creative writing curriculum where the student experiences the process of the playwright through exercises and the creation of short plays. The Playwriting Program will be strongly committed to the exploration of emotional and behavioral truth, and to helping young artists build awareness and understanding of the range and depth of human experience.

African-American Women Writers of the 20th Century (2.5 credits)
Prerequisite- English I and II
Open to students in grades 11-12

Students in this course will focus their study on the short and long fiction, drama, poetry, and songs that represent the tradition of writing that has become the African –American woman's telling of her dealings with racial and social identity, self-acceptance, and empowerment as major cultural and historical movement took their course. Through class discussion and activities, as well as independent work, students will engage with the major literary themes that connect African-American women's stories over time. Students will make effective use of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Instruction will incorporate test sophistication strategies in preparation for End of Course and college entrance exams. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Creative Writing (2.5 credits)
Prerequisite: None
Open to students in grades 10-12

Creative Writing provides opportunities for students to refine their creative writing skills and abilities beyond those developed in the required English courses. This course encourages students to see creative writing as a unique way of thinking, and as a means of constructing and conveying meaning. Students in the Creative Writing course are encouraged to explore and develop their own ideas. They are also encouraged to explore many different ways of conveying meaning through writing, and to explore how methods and styles vary within cultures and time periods. Through experiences in creative writing, students are encouraged to explore connections between their own writing, the writing of others, and the

broader world around them. Students will make effective us of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Students will complete a mandated summer research project. This course is an English elective and does not fulfill the English course requirements for graduation.

Journalism I (5 credits)
Prerequisite: Students will need to complete each level to move onto the next.
Open to students in grades 9-12

This course prepares students to become a member of the Tornado News Staff which produces the school newspaper, *Tornado News*. In this introductory course, students will develop grammar, punctuation, capitalization, vocabulary, and organization skills needed for successful writing. Additionally, students will work on activities that explore various journalistic forms of expression such as straight news, features, editorials, and sports writing. Finally, students in this class will work on techniques such as interviewing, note-taking, and writing leads and writing articles which will make them superior journalists. The First Amendment will also be studied by students in this class. Students will have the opportunity to produce articles for the Tornado News. Successful completion of this class (an average of 88 or better) will allow a student to enroll in Journalism II.

Journalism II (5 credits)
Prerequisite: Grades 10, 11, AND 12; B or better in Journalism I; teacher recommendation; parent or student request

This is a rigorous journalism class, open only to students who successfully complete Journalism I or have special permission from the instructor. In this course, students will produce the *Tornado News*, the OHS student newspaper. For the *Tornado News*, students will be assigned articles and stories that must be handed in by established deadline days. Journalists will be responsible for researching their articles, and editing their copy through conferences with the teacher. Students may be asked to attend extra-curricular activities in their role as journalists.

Since the *Tornado News* will be printed regularly, students enrolled in this class must have a great interest in disciplined writing. They also must have an intense desire to contribute to a more positive school environment through responsible, mature reporting. Students enrolled in this course will be allowed to take the course for elective credits multiple times.

Public Speaking (2.5 credits)
Prerequisite: English I and II

This course covers the theory and practice of public speaking. Additionally, the course will proved an overview of methods of studying to produce academic and formal presentations. Building on the ancient rhetorical canons including Socrates, Kennedy and Malcolm X speeches; while recognizing unique challenges of contemporary public speaking, the course guides students through topic selection, organization, language, and delivery. Assignments include formal speeches (to inform, to persuade, and to pay tribute), brief extemporaneous speeches, speech analyses, and evaluations. Students will develop

skills and confidence in research and organization to support them in creating intellectual presentations and speeches for a multitude of audiences. Students will make effective us of 21st century technology, become proficient in new areas through research and study, read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. Students will refine and share their knowledge through writing, speaking, listening and the effective use of Standard English. Students will engage in reading and writing activities through a mandatory grade-level project over the summer.

Information Literacy I, II and III (2.5 credits)
Prerequisite: Teacher Recommendation and qualifying HMHISG Student Reading Inventory (SRI) score

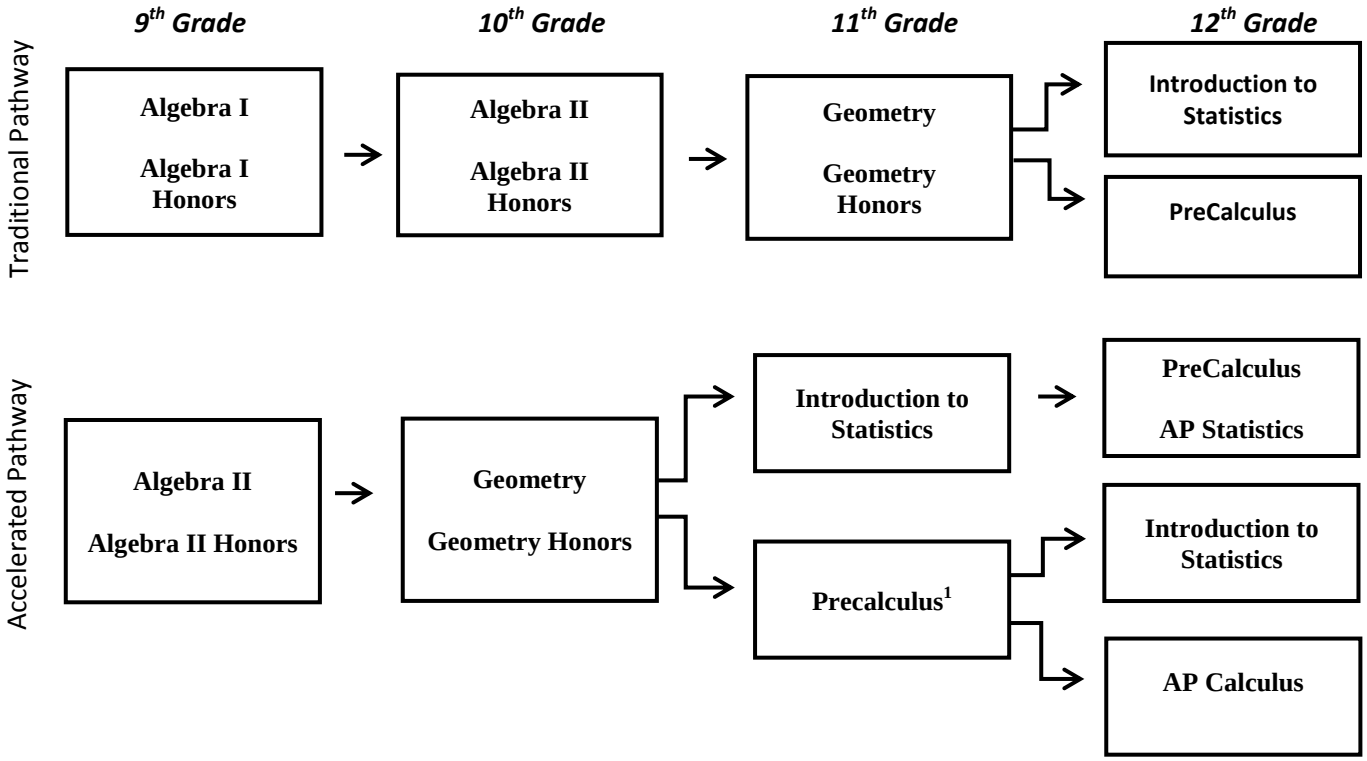
This course is a comprehensive reading intervention program proven to meet the needs of struggling readers. It directly addresses individual comprehension and fluency needs through small group teacher led differentiated instruction and adaptive instructional software focusing on informational texts of varying levels of complexity. Students increase capacity and vocabulary through independently reading high-interest non-fiction and literature. This supplemental program will not fulfill the student's requirement for English for the school year and will be taken in conjunction with the appropriate grade-level English class.

MATHEMATICS DEPARTMENT COURSES

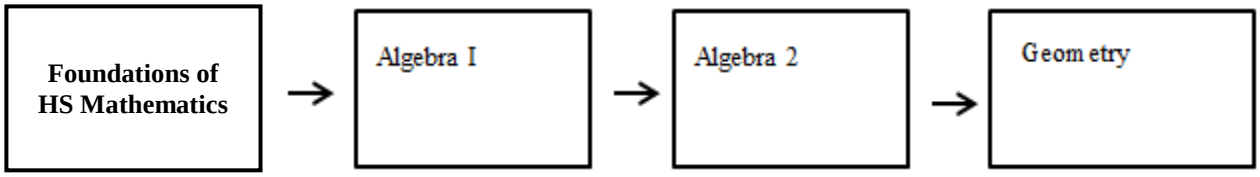
Course Title	Course Weight	Elective	Term	Credits	Prerequisite
Foundations of High School Mathematics	College Prep		Full Year	10	Placement Assessment, or school counselor/teacher recommendation
Algebra I - Intensive	College Prep		Full Year	10	8th grade mathematics
Algebra I	College Prep		Full Year	10	8th grade mathematics
Algebra I - Honors	Honors		Full Year	10	Proficient level or higher in 8th grade state standardized assessment and "B" or higher in 8th grade mathematics; teachers' recommendation or successful completion of the Summer Algebra I Bridge program Proficient level or higher in 7th grade state standardized assessment and "B" or higher in 7th grade mathematics; teacher's recommendation
Intensive Algebra II	College Prep		Full Year	10	Algebra I
Algebra II	College Prep		Full Year	10	Algebra I
Algebra II Honors	Honors		Full Year	10	Proficient level or higher in state Algebra I End of Course assessment (if applicable) and "B" or higher in Algebra I grade; teachers' recommendation
Geometry	College Prep		Full year	5	Algebra II
Geometry - Honors	Honors		Full Year	5	Proficient level or higher in state algebra II End of Course assessment (if applicable) and "B" or higher in Algebra II grade; teachers' recommendation

Integrated Mathematics I	Honors		Full Year	5	STEM Academy Acceptance
Integrated Mathematics II	Honors		Full Year	5	STEM Academy Acceptance; District/Teacher recommendation
Applying Functions & Modeling	College Prep		Full Year	5	Algebra I, II, & Geometry
Introduction to Statistics	Honors	Elective	Full Year	5	Completed all three required mathematics courses (Algebra I, II, & Geometry) and "B" or higher in the previous year mathematics course
PreCalculus	Honors	Elective	Full Year	5	Completed all three required mathematics courses (Algebra I, II, & Geometry) and "B" or higher in the previous year mathematics course
Calculus (AB)	AP	Elective	Full Year	5	PreCalculus
Calculus (BC)	AP	Elective	Full Year	5	PreCalculus

COURSE PATHS FOR HIGH SCHOOL MATHEMATICS[1]



Alternative Pathway (Placement test or school counselor/teacher recommendation needed)[2]



[1] PreCalculus is also offered as a summer accelerated option allowing students on the accelerated pathway to advance to AP Calculus in their 11th grade year.

[2] Newcomers entering post-9th grade and recommended for the Foundations course will follow the progression until completion of high school.

MATHEMATICS DEPARTMENT

The goal of the Mathematics course of study in grades 9 through 12 is to provide students with a strong foundation and experience in the application of mathematics, i.e., to formulate key questions, to analyze and conceptualize, and to transfer computational skills and strategies to new situations. All mathematics courses address the Common Core State Standards, and provide opportunities for success -- encouraging all students to develop a positive attitude about mathematics by engaging them in exploring and solving real life problems, and using mathematics in meaningful ways. The Common Core Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

The outlined courses support the NJ Department of Education's minimum mathematics requirements for graduation --15 credits including Algebra I content, geometry content, and a third year of mathematics that builds upon algebra I and geometry and prepares students for college and 21st century careers (effective with the 2012-2013 9th grade class). The Orange Public Schools encourages students to take a 4th year of high school mathematics. On average, students with four years of high school mathematics score significantly higher on SAT/ACT exams, are less likely to take remediation classes in their first year of college, and are more likely to graduate college within 4 years.

Foundations of High School Mathematics (10 credits)
Prerequisite: *Placement Assessment, or school counselor/teacher recommendation*

In this course, students will build and reinforce the foundational mathematics concepts and skills needed to undertake high school-level mathematics courses with confidence. This course includes standards from the conceptual categories that serve as pre-requisite concepts and skills: Number and Quantity, Algebra, Functions, and Geometry. Through the investigation of meaningful problems, individually or in cooperative groups, and while using appropriate technologies, students will strengthen their foundations of mathematics and be prepared for success in future mathematics courses.

Intensive Algebra I (10 credits)
Prerequisite: 8th grade math

In Intensified Algebra I, students focus on linear functions and equations, which provide the mathematical tools necessary for consolidating and representing what they've learned in elementary and middle school about ratios and proportional reasoning. Students also study exponential and quadratic functions and equations. Throughout the course, students learn to use basic algebraic tools to represent problem situations and to analyze and solve problems. The instructional model of the course "reverses" the process of presenting concepts and skills first and then giving students an opportunity to work on those skills and concepts. Students learn important concepts and skills by "doing math". The course employs an instructional model that supports collaborative and investigative learning. It strives to promote a vision of mathematics as a human endeavor. In addition, it fosters interactive learning through student writing, reading, speaking, and collaborative activities so students can learn to work effectively with peers, communicate about mathematics both orally and in writing, reason, justify, and generalize; and advance positive work habits and learning dispositions.

Algebra I (10 credits)
Prerequisite: 8th grade math

In Algebra I, students formally develop the algebraic skills and concepts necessary to succeed in advanced mathematics courses. During this course, students solve problems and work with different representations of mathematical concepts, ideas, and processes to better understand the world. The topics of the course include patterns and multiple representations, proportional reasoning, percent, and direct variation, solving linear equations, linear functions and inequalities, writing and graphing linear equations, lines of best fit, systems of equations and inequalities, quadratic functions, properties of exponents, polynomial functions rational expressions, probability, statistical analysis, and quadratic and exponential function and logic. To achieve the learning goals of each topic, students respond to questions that ask them to look for patterns, estimate, predict, describe, determine, represent, compare and contrast, calculate, solve, write a rule, generalize, and explain their reasoning.

Algebra I Honors (10 credits)
Prerequisites: Proficient level or higher in 8th grade state standardized assessment and "B" or higher in 8th grade math; teachers' recommendation or successful completion of the Summer Algebra I Bridge program. Proficient level or higher in 7th grade state standardized assessment and "B" or higher in 7th grade math; teacher's recommendation

This honors level Algebra I course is offered to students who have demonstrated superior ability in their previous year math course. Topics studied in the regular Algebra I curriculum are taught at an accelerated pace, and are extended and explored in greater depth. Additionally, real life projects relating to the content studied will be completed within each marking cycle**.**

Intensive Algebra II (10 credits)
Prerequisite: Algebra I

Intensive Algebra II is designed to help students develop successful methods for approaching mathematical learning. In addition to the related content standards for Algebra II, mathematical reasoning, effective communication, making connections, and problem solving are key components of this course. Intensive Algebra II includes seven units of study: linear equations and inequalities, systems of linear equations and inequalities, exponential relationships, quadratic functions and equations, polynomial functions and rational functions, radical functions and rational exponents, and exponential and logarithmic functions.

Algebra II (10 credits)
Prerequisite: Algebra I

Algebra II is a course that extends the content of Algebra I and provides further development of the concept of a function. The course promotes the understanding of both linear and non-linear functional form, as well as the relationship between text, equations, graphs and tables through the mathematical modeling of realistic situations. Topics includes searching for patterns, quadratic functions, graphs of polynomial functions, polynomial modeling, sequences and series, graphs of rational functions, rational expressions and equations, radical functions, graphs of exponential and logarithmic functions, exponential and logarithmic expressions and equations, mathematical modeling, graphs of trigonometric

functions, trigonometric expressions and equations, Interpret Data in a normal probability distribution, make Inference and justify conclusions, and make decisions using complex probability models.

Algebra II Honors (10 credits)
Prerequisites: Proficient level or higher in state algebra I End of Course assessment (if applicable) and "B" or higher in Algebra I grade; teachers' recommendation.

This is an honors level Algebra II course offered to students who have demonstrated superior ability in algebra I course. Topics studied in the regular Algebra II curriculum will be taught at an accelerated pace, and be extended and explored in greater depth. In addition, a real life project related to the content studied will be completed in each marking cycle**.**

Geometry (5 credits)
Prerequisite: Algebra II

This course introduces students to the tools central to the study of space and spatial relationships. Throughout the course, students will understand and apply the structure of—and relationships within—an axiomatic system, become adept with the tools central to the study of space and spatial relationships, use the classical methods of finding the area of two-dimensional shapes, including quadrilaterals and circles, learn basic geometry of three-dimensional shapes including methods of finding simple volumes and surface areas, develop spatial reasoning ability, including the capacity to represent shapes and figures concretely, pictorially, algebraically, and through the use of coordinate systems, and use geometric representations and symbols to solve problems and prove theorems.

Geometry Honors (5 credits)
Prerequisites: Proficient level or higher in state algebra II End of Course assessment (if applicable) and "B" or higher in algebra II grade; teachers' recommendation.

This is an honors level geometry course offered to students who have demonstrated superior ability in Algebra II course. Topics studied in the regular geometry curriculum will be taught at an accelerated pace, and be extended and explored in greater depth. In addition, a real life project related to the content studied will be completed in each marking cycle**.**

ELECTIVES

Applying Functions and Modeling (5 credits)
Prerequisites: Algebra I, II, & Geometry

This is a full year course designed for students to prepare their college math study and future work related to mathematical model. The course provides students an in-depth study of modeling and mathematical functions. Rich problems and applications abound, many designed to develop and sustain algebra skills. Function applications and modeling should be included throughout the course of study. Appropriate technology, from manipulative to graphing calculators and application software, will be used regularly for instruction and assessment.

Introduction to Statistics (5 credits)
Prerequisites: Completed all three required math courses (Algebra I, II, & Geometry) and "B" or higher in the previous year math course.

Introduction to Statistics will introduce students to the practice of elementary statistical tools. The course is a full year, high school level course, designed to prepare its students for future work in Statistics and Probability. The course will involve applying statistical techniques to solving meaningful and practical applications in science, business and various other disciplines. The course will familiarize students with the major concepts and tools for collecting, analyzing and making conclusions about data. The course will cover Probability, Experiment Design, Representation of Data, Measures of Central tendency, Normal distribution, Linear Regression and Multiple Regression. The course will involve the use of a TI-84 calculator.

Precalculus (5 credits)
Prerequisites: Completed all three required math courses (Algebra I, II, & Geometry) and "B" or higher in the previous year math course.

Precalculus focuses on standards to prepare students for more intense study of mathematics. The study of circles and parabolas is extended to include other conics such as ellipses and hyperbolas. Trigonometric functions are further developed to include inverse, general triangles and identities. Matrices provide an organizational structure in which to represent and solve complex problems. Students expand the concepts of complex numbers and the coordinate plane to represent and operate upon vectors.

AP Calculus AB (5 credits)
Prerequisite: Precalculus

AP Calculus AB is intended for students who have a thorough knowledge of college preparatory mathematics including algebra, geometry, and trigonometry. The course provides an opportunity for students to receive credit for college level course work. AP Calculus AB focuses on students' understanding of calculus concepts and provides experience with methods and applications. The main emphasis of the course is on a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The course involves applying derivative and integration techniques to solving practical applications in science, business, and various other disciplines. The course combines theory, pedagogy and design to master these concepts through cooperative work and research-based rich learning tasks. The goal of this course is for students to have a clear concept of Limits, Differentiation, Integration, Fundamental Theorem of calculus, and Area between various curves, Arc Length, Surface, Series and Convergence.
Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college.

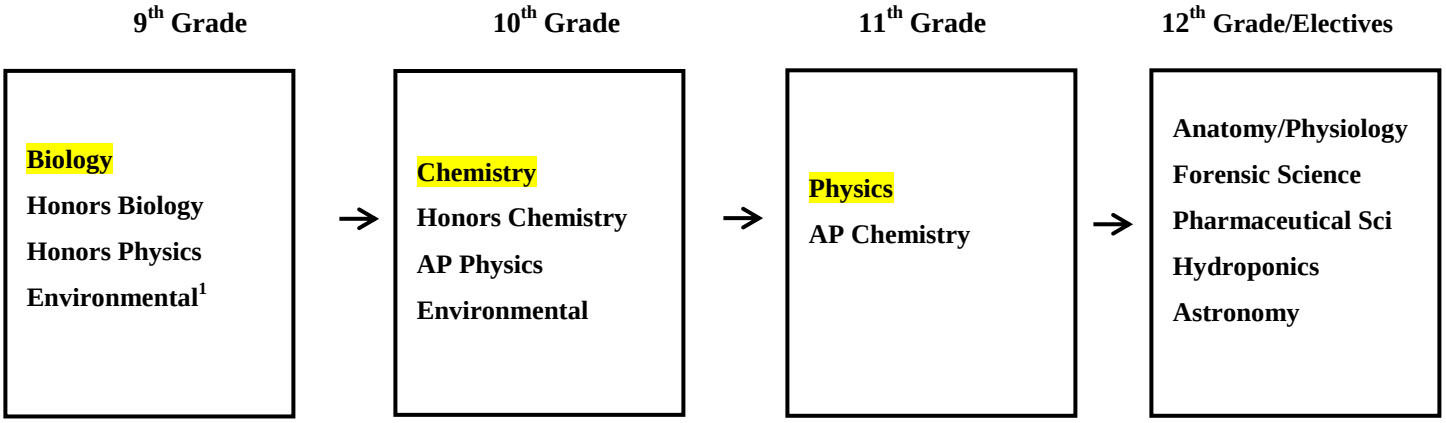
AP Calculus BC (5 credits)
Prerequisite: Precalculus

AP Calculus BC is roughly equivalent to both first and second semester college calculus course. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series and extends the content to different types of equations. The course introduces additional topics including the application of parametric polar and vector functions, applications and derivatives and integrals and polynomial approximations and series. AP Calculus BC teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college.

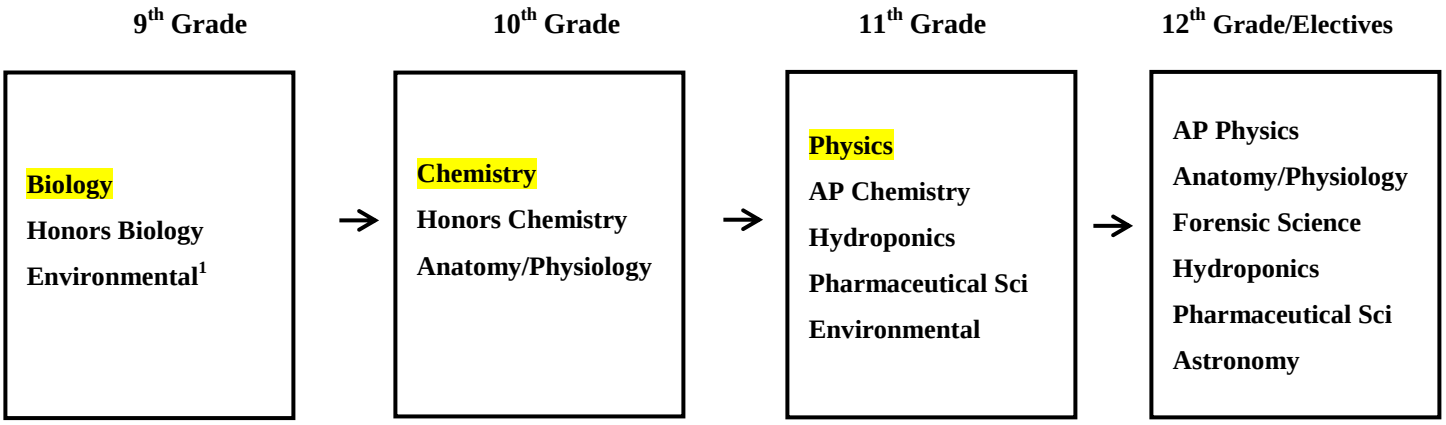
AP Calculus LAB (1 Credit)

AP Calculus Lab course is designed to develop mathematical knowledge conceptually, guiding students to connect topics and representations throughout each unit in AP calculus course and to apply strategies and techniques to accurately solve diverse types of problem, interpret results, and support conclusions.

SCIENCE DEPARTMENT PATHWAY
2017-2018



SCIENCE DEPARTMENT PATHWAY
2018-2019



[1] 9th grade option for LEP students only

SCIENCE DEPARTMENT COURSES

The goal of the Science course of study in grades 9 through 12 is to provide students with a strong foundation and experience in the application of topics in science. The majority of the science offerings are laboratory/inquiry-based; thereby providing students with opportunities to design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings. For science to be taught properly and effectively, labs must be an integral part of the science curriculum. (NRC 2006, p.127).

The outlined courses support the NJ Department of Education's minimum science requirements for graduation --15 credits including at least five credits in laboratory biology/life science or the content equivalent; an additional laboratory/inquiry-based science course including chemistry, environmental science, or physics; and a third laboratory/inquiry-based science course. The district encourages students interested in Science/STEM-related pursuits to elect an additional course of study in science (e.g. Astronomy, Anatomy and Physiology, Pharmaceutical Science, etc.)

Physical Sciences

Environmental Science (5 credits)
Prerequisite: None

Environmental Science examines the mutual relationships between organisms and their environment. The course allows students to become aware of the interrelationships among plants, animals, and humans. Students apply scientific concepts and principles of modern science to analyze environmental issues in topics such as ecology; humans and the environment; Earth's resources and sustainability. Studies in Environmental Science include the examining the role of private and governmental decisions involving the environment, and engaging in evidence-based decision making in real world contexts. The Environmental Science course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

Physics (5 credits)
Prerequisite: Algebra I[3]

In this laboratory-based course, students learn the basic motions of the universe and the equations that describe them. Students will perform experiments and interpret the results of observations through topics that include forces and motion, types of interactions, energy, electricity and magnetism, and waves and their applications. The Physics course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

[3] Can be taken concurrently with Algebra I

Honors Physics (5 credits)
Prerequisite: Algebra I[1]; teacher recommendation

This course is designed for students who have developed a strong background in science. Coursework includes the study of classical mechanics, thermodynamics, electricity, magnetism and nuclear physics. Students will do extensive independent reading and writing assignments, including laboratory reports and research papers. The Honors Physics course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

AP Physics 1 (5 credits)
Prerequisite: 'B' or better in Honors/Physics and Algebra I and II; successful completion of Physics Entrance Examination; student should be enrolled in Geometry although the basic use of trigonometric functions can be gained either in the concurrent mathematics course or in the AP Physics 1 course itself.

AP Physics 1 replaces the former one-year AP Physics B course. The course focuses on the big ideas typically included in the first and second semesters of an algebra-based, introductory college-level physics sequence and provide students with enduring understandings to support future advanced course work in the sciences. Through inquiry-based learning, students will develop critical thinking and reasoning skills, as defined by the AP Science Practices as they explore the "big ideas:"

- Objects and systems have properties such as mass and charge. Systems may have internal structure.
- Fields existing in space can be used to explain interactions.
- The interactions of an object with other objects can be described by forces.
- Interactions between systems can result in changes in those systems.
- Changes that occur as a result of interactions are constrained by conservation laws.
- Waves can transfer energy and momentum from one location to another without the permanent transfer of mass and serve as mathematical model for the description of other phenomena.
- The mathematics of probability can be used to describe the behavior of complex systems and to interpret the behavior of quantum mechanical systems.

Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college.

Chemistry (5 credits)
Prerequisite: Algebra 1

This course addresses the study of the composition, properties, and reactions of substances. Fundamental concepts include the properties of matter, atomic theory, nuclear chemistry, qualitative rate and equilibrium, periodic trends, bonding and types of reactions. The Chemistry course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with

opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings. Through in-depth hands-on laboratory experiences with an emphasis on the utilization of mathematical, analytical, and data acquisition skills, key concepts (such as the behaviors of solids, liquids, and gases; acid/base and oxidation/reduction reactions; and atomic structure) are further examined.

Honors Chemistry (5 credits)
Prerequisite: 'B' or better in Algebra 1; teacher, parent, student recommendation

This course highlights the chemical and physical properties of the elements and their compounds. Lab experiments, problem solving and critical thinking skills are emphasized in this course. Honors Chemistry is designed for the student who plans to major in science in college. Topics include: properties of matter, quantum theory, nuclear chemistry, periodic trends, bonding and types of reactions, stoichemistry, qualitative, rate, and equilibrium. The Honors Chemistry course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

AP Chemistry (5 credits)
Prerequisite: 'B' or better in the following - Honors/Chemistry and Honors/Algebra 2; teacher, parent, student recommendation, and/or successful completion of entrance exam

AP Chemistry is the second of a two-year sequence that is designed to prepare students to take the AP Chemistry examination. Topics include atomic theory and structure; chemical bonding; nuclear chemistry; states of matter; and reactions (stoichiometry, equilibrium, kinetics, and thermodynamics). AP Chemistry laboratories are equivalent to those of typical college courses. The key concepts and related content that define the AP Chemistry course and exam are organized around underlying principles that encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the particulate nature of matter underlying the observations students make about the physical world:

- Chemical elements are the building blocks of matter, which can be understood in terms of the arrangements of atoms.
- Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.
- Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.
- Rates of chemical reactions are determined by details of the molecular collisions.
- The laws of thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter.
- Bonds or attractions that can be formed can be broken. These two processes are in constant competition, sensitive to initial conditions and external forces or changes.

Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college.

AP Chemistry Lab (1 Credit)
This course requires that 25 percent of the instructional time engages students in lab investigations. This includes a minimum of 16 hands-on labs (at least six of which are inquiry based), and it is recommended that students keep a lab notebook throughout. Students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress

Life Sciences

Biology (5 credits)
Prerequisite: None

The Biology course is designed to provide information regarding the fundamental concepts of life and life processes. This course is a comprehensive study of molecular, cellular, and organismic biology. A key goal of the course is to give students an integrated insight into the modern scientific view of the world. This course includes such topics such as cell structure and function, general plant and animal physiology, genetics, and taxonomy. Classwork includes the study of basic structures and functions and energy requirements of living organisms at the cellular and system level, environmental studies with an emphasis on human impact on the environment, genetics, and evolution. The course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

Honors Biology (5 credits)
Prerequisite: Teacher, parent, student recommendation

This course is a comprehensive study of molecular, cellular, and organismic biology. A key goal of the course is to give students an integrated insight into the modern scientific view of the world. Classwork includes the study of basic structures and functions and energy requirements of living organisms at the cellular and system level, environmental studies with an emphasis on human impact on the environment, genetics, and evolution. Each topic will be illustrated with lab exercises or demonstrations. Students will do extensive independent reading and writing assignments, including laboratory reports and research papers.

AP Biology (5 credits)
Prerequisite: 'B' or better in the following – Honors Biology and Honors/Algebra 2; teacher, parent, student recommendation, and/or successful completion of entrance exam.

AP Biology is the second of a two-year sequence that is designed to prepare students to take the AP Biology examination, and is the equivalent of a two-semester college introductory biology course. The current framework focuses on depth of student understanding achieved through a change in instruction for acquiring enduring conceptual understanding and the supporting content through Big Ideas. Students will spend more time in inquiry-based learning and developing the reasoning skills necessary to engage in the science practices.

Big Ideas include:
1. The process of evolution drives the diversity and unity of life.
2. Biological systems utilize free energy and molecular building blocks to grow, reproduce and and maintain dynamic homeostasis.
3. Living systems store, retrieve, transmit and respond to information essential to life processes.
4. Biological systems interact, and these systems and their interactions possess complex properties.

Students who earn a qualifying score on an AP Exam are typically eligible to receive college credit and/or placement into advanced courses in college.

ELECTIVES

Anatomy and Physiology I (5 credits)
Prerequisite: Biology[4]

This course follows a sequential study of the major body systems in an organized and structured curriculum. Anatomy and Physiology courses present the human body and biological systems in more detail. The course is designed to give students an overview of human anatomical structure and an analysis of physiological principles. In order to understand the structure of the human body and its functions, students learn anatomical terminology, study cells and tissues, explore functional systems (skeletal, muscular, circulatory, respiratory, digestive, reproductive, nervous, and so on). Topics include laboratory investigations, slide work via microscope studies, computer simulated and/or actual dissections of various animal parts and the study of the human skeleton and other organ models. The Anatomy and Physiology course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

Astronomy (5 credits)
Prerequisite: Physics, Algebra II

Astronomy is a quantitative physical science that applies physics, mathematics, and statistical analysis to observing, describing, and modeling the universe. This course is aimed at exposing students to interstellar space from the smallest fundamental particles to galaxies. In this course students will learn about the life processes of stars and galaxies, how to model movements of planets and spacecraft, as well as what goes into space travel. The course includes labs to further students understanding of Earth's place in the universe including a series of computer simulation activities using real data and realistic astronomy tasks. Designed activities will involve graphing, calculations and other procedures.

Forensic Science (2.5 credits)
Prerequisite: Biology, Chemistry, and Physics

Forensic science is a senior-level course that focuses on the skills and concepts behind crime scene investigation. It is rich in exploration and lab investigation which applies many disciplines of scientific study such as biology/anatomy, chemistry, and physics. This course will help students hone their investigative skills through the exploration of a wide range of science concepts including crime scene processing, physical evidence, fingerprinting, autopsies, forensic anthropology & archeology, forensic entomology, drugs & toxicology, glass comparison, serology & DNA, hair & fiber trace evidence, soil comparison, firearm comparison, tool marks & impressions, document examination, and digital forensics. The Forensic Science course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models

[4] Chemistry may be taken concurrently

(NRC 2006, p. 3). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

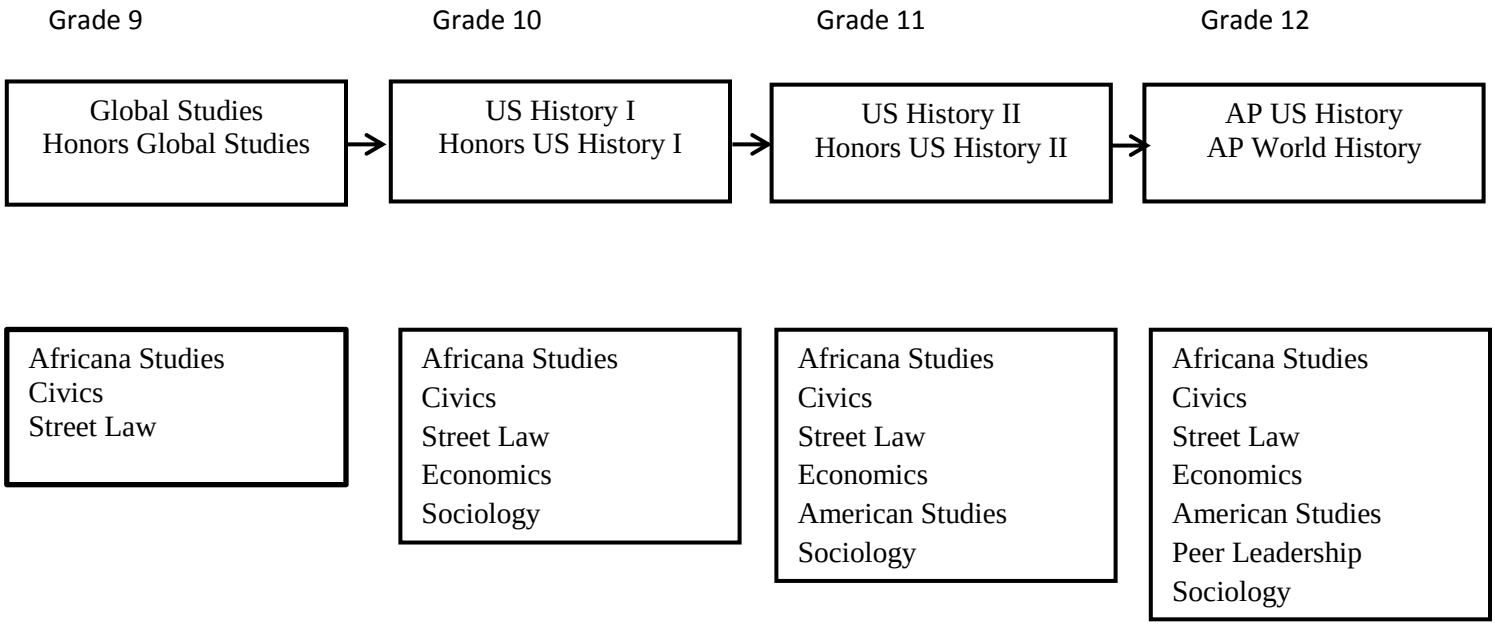
Hydroponics (2.5 credits)
Prerequisite: Biology and Chemistry

In this course, students will investigate growing mechanisms and their variables through a hands-on approach. The hydroponics greenhouse, serving as a closed hydroponics system, allows students to grow various fruits and vegetables without the use of soil. Students will learn to address topics such as food production, water management (including testing for water quality, dissolved oxygen, PH, and ammonia), genetics, nutrient exchange and nutrition while simultaneously learning about the world of business, production and marketing. The purpose of the hydroponics course is to nurture students in to apply critical thinking skills around relevant and timely issues affecting their environment, including sustainability and food justice.

Pharmaceutical Science (5 credits)
Prerequisite: Algebra I, Biology and Chemistry; teacher, parent, student recommendation, an/or successful completion of entrance exam

This course provides students with an introduction to the Pharmaceutical Sciences; providing a foundation for those pursuing advanced degrees in health and medicine. Coursework includes the study of organic chemistry, biochemistry, principles of Pathophysiology and Drug Action, Drug Discovery and Development, and Drug classification and mechanism.

SOCIAL STUDIES DEPARTMENT



In social studies classes, students confront questions about the wonder, excitement and humankind in the world. How have humans defined themselves and made meaning of the world? How are we connected to and different from those who have come before us? What do all humans have in common? In short, social studies classes help students understand their roots, see their connections to the past, comprehend their context, recognize the commonality of people across time, appreciate the delicate balance of rights and responsibilities in an open society, and develop the habits of thoughtful analysis and reflective thinking. All courses address the Common Core State Standards: Literacy in History/Social Studies, as well as the NJ Student Learning Standards.

Global Studies (5 credits)
Prerequisite: None

This course is designed to enhance basic comprehension of Global Studies with an emphasis in global geography, Holocaust and genocide studies, political science, social institutions, political institutions, economic systems, and world cultures from the Renaissance period, Age of Reason, and Colonialism to the present era. The course analyzes these areas and tracks their evolution throughout the continents of Africa, Asia, America, and Europe. In addition, students are exposed to an in-depth analysis of the humanities in relation to world history and current political world events. The course ultimately enables students to place current global events into a historical context, develop a greater understanding of diverse world cultures, and possess a heightened awareness of multiculturalism in their community.

Honors Global Studies (5 credits)
Prerequisite: Teacher recommendation based on data from Social Studies 8

This course is designed for students who have mastered fundamental social studies skills, who anticipate taking AP courses in History. Students will examine the development of nationalism and the emergence of the modern world from the Middle Ages to the twentieth century. It will provide an introduction to various schools of historic criticism beginning with the process for how history is created. Students should expect extensive reading and writing assignments throughout the year.

United States History I (5 credits)
Prerequisite: Global Studies

This course focuses on the historical development of the United States to 1877 covering Pre-Columbian civilizations, early European settlements, American colonies and cultural comparison, North and South America, American War for Independence, U.S. Constitution, national growth and expansion, Civil War and Reconstruction. The course also analyzes the role of geography, culture, social movements, political institutions, political philosophy, economic systems, contribution of women and minorities, and examines the causal relationships between these factors and events in early American History.

Honors United States History I (5 credits)
Prerequisite: A or B in Honors Global Studies and/or teacher recommendation

This course is designed for students who have mastered fundamental social studies skills. US History I explores the emergence of the United States from England's rebellious colony to an imperial world power at the dawn of the twentieth century. Historical criticism is analyzed, including the process of how history is created. Students should expect extensive reading and writing assignments in the year.

United States History II (5 credits)
Prerequisite: United States History I

This course centers on the historical development of the United States from 1877 to present including the industrial transformation of the nation, expansionism, the industrial revolution, Imperialism, the growth of cities and immigration, the rise and fall of populism, progressive movement and the culture of the 1920's, the Great Depression, World Wars I & II, the Cold War, the Holocaust, the Korean War, the Vietnam Conflict, the Civil Rights Era, and the 1960s to current issues in American politics and society. The course also analyzes the role of geography, culture, social movements, political institutions, political philosophy, economic systems, contributions of women and minorities and the examination of the causal relationships between these factors and events in modern American History.

Honors US History II (5 credits)
Prerequisites: A or B in Honors US History I or teacher recommendation

This course is designed for students who have mastered fundamental social studies skills. Students are introduced to various schools of historic criticism continues with the process of how history is created, and covers Social History, including Marxian Historiography, History as Mythology and Socio-cultural Historiography. Student should expect extensive reading and writing assignments throughout the year.

A.P. US History (5 credits)
Prerequisite: "B" or better in US History I and US History II and/or teacher recommendation

This course is designed to prepare students to successfully take the Advanced Placement exam in U.S. History and to provide the equivalent of a first year college U.S. History course. Students will be expected to do extensive research on topics ranging from Pre-Columbian America & the Colonia period to current day. Students will be expected to examine both primary and secondary source documents and develop pertinent vocabulary, reading, writing, and higher order thinking skills. In addition, students will be able to link historical literature of the periods, to relate past and future events with the current events, to establish extensive library skills, and to further develop geography skills such as map, chart, and graph reading. Students will be exposed to small group and large group discussions, debates, panel discussions, interviewing, extensive writing.

A.P. World History (5 credits)
Prerequisite: "B" or better in US History I and US History II and/or teacher recommendation

This course focuses on developing students' understanding of world history from approximately 8000 B.C.E. to the present. The course has students investigate the content of world history for significant events, individuals, developments, and processes in six historical periods, and develop and use the same thinking skills and methods (analyzing primary and secondary sources, making historical comparisons, chronological reasoning, and argumentation) employed by historians when they study the past. The course also provides five themes (interaction between humans and the environment; development and interaction of cultures; state building, expansion, and conflict' creation, expansion, and interaction of economic systems; development and transformation of social structures) that students explore throughout the course in order to make connections among historical developments in different times and places encompassing the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania. AP World History is designed to be the equivalent of a two-semester introductory college or university world history course. Students are expected to read college-level materials and write critically and analytically.

Electives:

Africana Studies (2.5 credits)
Elective open to all students in grades 9-12

This course will analyze the history of the African diaspora from the ancient empires through the modern times. Students will conduct an in-depth study of African history and culture through art, music, literature, religion, politics, law, science, and business. All aspects of the African diaspora, which include all African descendants on the African continent, the Caribbean, Latin America, and the U.S. respectively, will be closely analyzed. Past and present issues surrounding Pan-Africanism as a movement for liberation and independence will carefully be studied as well. As an extension of the curriculum, students will be afforded the opportunity to attend trips and special presentations. Students will be assessed based on individual and group projects, presentations, and traditional assessments.

Civics (2.5 credits)
Elective open to all students in grades 9-12

This course is designed to prepare students to be informed, active, and responsible citizens committed to the fundamental values and principles of the American constitutional democracy. Effective and responsible participation in American society requires knowledge and understanding of laws and the impact it has on the individual and society. Students will gain a basic understanding of government, law, politics, and top world affairs. As an extension of the curriculum, students will be afforded the opportunity to participate in related trips. Students will be assessed based on individual and group projects, presentations, and traditional assessments.

Economics (2.5 credits)
Elective open to all students in grades 10-12

Economics includes a study of the foundations of economics, a comparative study of major economic systems in the world today, and an attempt to utilize basic economic ideas and principles for everyday life. The materials used to teach the course as well as the student-centered approach require that students who elect Economics deal with complex concepts, daily reading assignments, active class participation, essay questions on tests, and both independent and group research projects. This course fulfills the Financial Literacy requirement for graduation.

Criminal Justice/Street Law (2.5 credits)
Elective open to all students in grades 9-12

Criminal Justice/Street Law will analyze the theories and practices of the criminal justice system in the U.S. Traditional studies in juvenile justice, constitutional law, individual rights, fair trial, free press, voters' rights, civil rights, and the penal system are investigated, in addition to exploring students' abilities to think critically about logical information.

Peer Leadership (5 credits)
Open to students in grade 12 with teacher recommendation

Peer -Leadership is a student-to-student mentoring program that utilizes seniors to help freshmen acclimate to their a high school environment by helping them cope with academic and social issues they may encounter. Peer -leaders must also engage in activities within the school that promote good citizenship, social activism, and volunteerism.

Sociology (2.5 credits)
Open to students in grades 10-12

This semester course aims to provide students with comprehensive knowledge and relevant skills in the field of sociology in preparation for more advanced educational exploration into the subject and

application to real life experiences. By investigating classical and contemporary sociological theorists, students can apply distinct perspectives of sociology to evaluate social groups, institutions, and problems. The process of socialization occurs for individuals in different ways and through various life stages, and the agents contributing to socialization are essential to this study. In every society, individuals are stratified by social class; recognizing the classification and impact of social class is a complex and rich subject explored as a way to understand why individuals are treated differently based on their background. As students examine how American society operates and how its people behave, they explore topics including: family, minority groups, crime, prison, and poverty.

Paralegal I (5 credits)
Prerequisite: Teacher recommendation

This course provides an introduction to the legal profession in general, the specific role of paralegals, and their relationship to other legal professionals. Students explore the American legal system and are introduced to federal and state courts. The course examines in detail the Code of Professional Ethics and other related standards of proper conduct.

Humanities:

American Studies (5 credits)
Elective: Teacher recommendation; students in grades 11-12

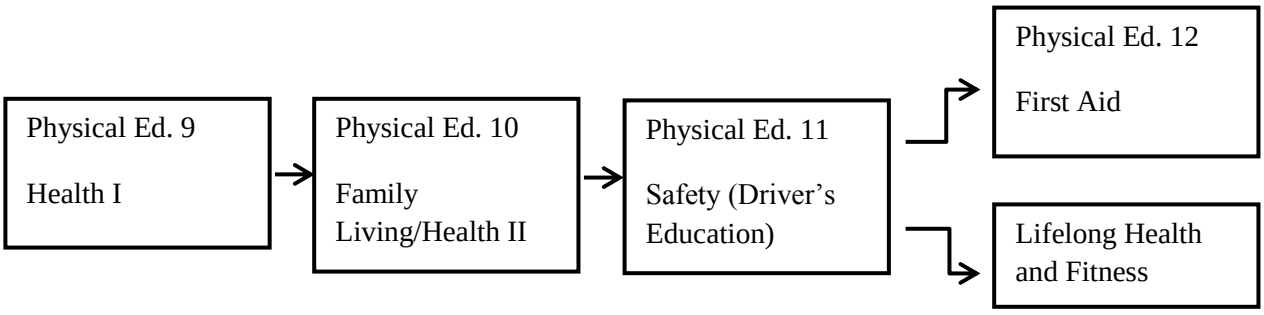
Students will analyze how music, literature, and popular culture impacted historical events and how they were, in some cases, an outgrowth of political events. This course, co-taught by an English teacher and a social studies teacher, examines American historical events through the lens of literary themes, political philosophies, cultural developments and how the voices of the people have shaped this country. Literary analysis and writing skills will be enhanced. Class size is limited and teacher recommendation is necessary.

Political Studies (10 credits)

Prerequisites: STEM Academy Acceptance; American Experiences

The Political Studies Course integrates the study of various political systems, both nationally and internationally. It maintains a concentrated focus on the development of the state of the nation, political parties and use of power. Also discussed will be the importance of the use of power as an influential tool, and its impact on political figures throughout history and current world politics. Students use literary interpretation, analysis, comparisons, and evaluations to read and respond to representative works of historical and cultural significance appropriate for the grade. This course is truly interdisciplinary in that students are enriched by an analysis of the Political experience from the perspective of both literature and history.

PHYSICAL EDUCATION, HEALTH AND SAFETY DEPARTMENT



Students must take 1 marking period of Health and Safety and 3 marking periods of Physical Education for each year of high school to meet the New Jersey State requirements. The Physical Education curriculum attempts to stimulate interest and enjoyment in physical skills, sports and other such activities in an effort to promote the importance of physical fitness and to encourage an appreciation for good health habits. Students are taught to develop a sense of responsibility and leadership, improve and maintain muscular control, and become knowledgeable of rules which govern these activities. They will develop habits, which will promote physical fitness. **Option 2 may be substituted for those students participating on an Orange High School sports team, enrolled in dance courses, or enrolled in Navy ROTC courses.**

Physical Education 9, 10, 11, 12 (4 credits)

ACTIVITY OFFERINGS

Basketball	Baseball/Softball	Cricket
Football	Floor Hockey	Soccer
Volleyball	Relay	Cooperative Games
Ultimate Frisbee	Handball	Pickleball
Physical Fitness	Speedball	Aerobics

Health I – Grade 9 (1 credit)
One Marking Cycle

The Health Education curriculum is designed to promote information and skills students need to become health literate, maintain and improve health, prevent disease and reduce the health-related risk behaviors. The purpose of the program is to insure that each child will grow to understand the importance of personal health for a lifetime of wellness. The following topics are covered:

1. Male/Female Reproductive System (Growth & Development)
2. Communicable Diseases (Diseases & Health Conditions)
3. Nutrition
4. Alcohol Tobacco and Other Drugs

Family Living, Health II – Grade 10/11 (1 credit)
One Marking Cycle

This course focuses on developing skills in problem solving, interpersonal relationships, family management issues, citizenship, and social health problems. The following topics are covered:

Defining Yourself, Understanding Others, Loving Relationships, Taking Responsibilities, Getting Married, Making Adjustments, Today's Families, Having a Baby, Growing and Learning, Parenting, Facing Family Changes, Resolving Family Crises, Choosing a Career. Balancing Needs and Resources, Managing Your Environment, Managing Independent Living, Keeping Healthy and Enjoying Good Nutrition, STD and STD Prevention.

Safety – Grade 10/11 (1 credit)
One Marking Cycle

This course covers laws that control our driving privileges, understanding traffic signs, signals and pavement markings, rules of the road, defensive driving, driver problems and what to do in emergencies. It culminates with students taking the New Jersey State Driver's Written Exams, hopefully followed by their receiving driving permits. Students will be able to complete the following:

1. Define and demonstrate the cause of traffic accidents and methods to decrease the number of accidents.
2. Define and demonstrate knowledge and respect for traffic rules and regulations.
3. Demonstrate self-discipline and emotional control while operating a motor vehicle.
4. Demonstrate the proper procedures in operating a motor vehicle and to demonstrate the relationship of such procedures to skillful and safe driving.
5. Pass the state written examination.

TOPICS TO BE COVERED:

1. Proper position of hand on steering wheel.
2. Proper speed limits in New Jersey.
3. Proper procedure for making turns (right, left, K and U turns).
4. Proper use of signals and lights.
5. Driving procedures (Highway, City and Parking).
6. Fines and Penalties

First Aid – Grade 12 (1 credit)
One Marking Cycle

American Red Cross standard course is taught. Emphasis is on safety, prevention of further injury and cardio-pulmonary resuscitation. Students will be able to:

1. Demonstrate the correct procedure in reporting symptoms of an illness to a doctor.
2. Recognize how accidents occur and how they can be prevented.
3. Demonstrate first aid procedures for all types of wounds.
4. Demonstrate the proper use and mechanics of artificial respiration.
5. Demonstrate proficiency in CPR.

Lifelong Health and Fitness- (5 Credits)
Prerequisite-Physical Education 9, 10, and 11

This course can provide students with an understanding of the concepts of physical fitness, and how to apply & incorporate these concepts into their lives today & in the future. This course will cover fitness concepts including, but not limited to:

Training Principles
Nutrition
Motivation
Components of Health Related Fitness: Aerobic Fitness, Muscular Strength & Endurance, Flexibility
Body Composition
Components of Skill Related Fitness: Agility, Balance, Coordination, Power, Reaction Time, Speed
Assessments
Program Design
Fitness & Aging
Activities & Fitness for Life
First Aid

WORLD LANGUAGE DEPARTMENT

The World Language program is designed to stimulate curiosity for the love of learning a new language while focusing on developing academic skills in all content areas, as well as promoting cultural awareness, and expanding critical and analytical thinking. The World Language Department encourages the study of one or more languages to promote global understanding. Language expresses the essence of a people and its study fosters a gradually deepening knowledge of the culture, geography, history, and social institutions of other countries. In addition, it provides a differing perspective on one's own culture and language.

All students will be administered the STAMP assessment in grade 8. This assessment measures language proficiency in the target language (French, Spanish or Mandarin). If a sufficient score if obtained, the student is not required to take the 2 years of World Languages to graduate. It will also assist in accurate level placement for the student.

French I (5 credits)
Prerequisite: None

This course aims to develop the necessary basic skills for listening, speaking, reading and writing of French. Writing is limited to basic sentence structure culminating in the ability to structure short compositions. The students are assessed in diverse manners ranging from individual to collective assessments.

French II (5 credits)
Prerequisite: French I or an "A" average in 8th grade French with teacher recommendation

This course utilizes the skills obtained in French I in order to continue developing the students within the French language. Greater emphasis is placed on listening and speaking. Students acquire a basic grammatical background, enabling them to read French literature in the next two courses.

French III (5 credits)
Prerequisite: French II

This course consolidates the first two years' work. Emphasis shifts from the oral production to reading and writing skills. Longer reading assignments from selections of both modern and classical French literature are required as well as essay production.

AP French Language (5 credits)
Prerequisites: Three to four years of French or equivalent native fluency

This course aims to prepare the students for the AP Exam and for further study of French language, culture, and literature. It uses the previous knowledge gained from French Language courses. It demands a great amount of grammar, vocabulary, listening, reading, and writing skills in order to be successful.

Native Speaker French I (5 credits)
Prerequisites: STAMP Placement Test

This course is designed for students who have been formally exposed to listening, speaking, reading and writing French and are interested in continuing their study of the language. It aims to review grammar rules and the orthography. Students will read and write extensively, give oral presentations, and participate in debates, all while learning about the fundamental grammatical structures of French. It is open to any student making high proficiency on the STAMP assessment.

Native Speaker French II (5 credits)
Prerequisites: Placement Test and Teacher Recommendation

This course is designed for students who have been formally exposed to listening, speaking, reading and writing French and are interested in continuing their study of the language. It aims to review grammar rules and the orthography. Students will read and write extensively, give oral presentations, and participate in debates, all while learning about the fundamental grammatical structures of French. It is open to any student making high proficiency on the STAMP assessment.

Spanish I (5 credits)
Prerequisite: None

This course aims to develop understanding and speaking the language by developing basic skills for listening, speaking, reading and writing of Spanish. Students must master the present tense, as well as basic grammatical structures. Stress is placed on good pronunciation and a strong command of vocabulary.

Spanish II (5 credits)
Prerequisite: Spanish I or Placement test

This course reinforces skills learned in Spanish I while adding the development of reading and writing skills. It also aims to increase vocabulary and nuances of words in Spanish and more use of Spanish is infused.

Spanish III (5 credits)
Prerequisite: Spanish II

This course reinforces the skills learned in Spanish II and it also aims to develop other skills in listening, speaking, reading and writing. It concentrates on vocabulary development and verb tenses. Students are expected to comprehend, understand, and participate in discussions and correctly write short paragraphs in Spanish.

AP Spanish Language (5 credits)
Prerequisites: Three to four years of Spanish or equivalent native fluency

This course aims to prepare the students for the AP Exam and for further study of Spanish language, culture, and literature. It uses the previous knowledge gained from French Language courses. It demands a great amount of grammar, vocabulary, listening, reading, and writing skills in order to be successful.

Native Speaker Spanish I (5 credits)
Prerequisites: STAMP Placement Test

This course is designed for students who have been formally exposed to listening, speaking, reading and writing Spanish and are interested in continuing their study of the language. It aims to review grammar rules and the orthography.
Students will read and write extensively, give oral presentations, and participate in debates, all while learning about the fundamental grammatical structures of Spanish. It is open to any student making high proficiency on the STAMP assessment.

Native Speaker Spanish II (5 credits)
Prerequisites: Placement Test and Teacher Recommendation

This course is designed for students who have been formally exposed to listening, speaking, reading and writing Spanish and are interested in continuing their study of the language.

It aims to review grammar rules and the orthography. Students will read and write extensively, give oral presentations, and participate in debates, all while learning about the fundamental grammatical structures of Spanish. This course aims to assist the Spanish native speaker meet the college foreign language requirement. It is open to any student making high proficiency on the STAMP assessment.

Mandarin I (5 credits)
Prerequisite: None

This course aims to develop the necessary basic skills for listening, speaking, reading and writing of Mandarin. The students are assessed in diverse manners ranging from individual to collective assessments.

Mandarin II (5 credits)
Prerequisite: Mandarin I

This course aims to develop the necessary basic skills for listening, speaking, reading and writing of Mandarin. Writing is limited to basic sentence structure culminating in the ability to structure short compositions. The students are assessed in diverse manners ranging from individual to collective assessments.

Mandarin III (5 credits)
Prerequisite Mandarin II

This course reinforces the previously taught skills learned in Mandarin II, through the four skills of listening, speaking, reading and writing. Students will broaden their ability to communicate effectively and properly in various real-life situations, learn complex grammatical structures, and increase vocabulary using a significant number of characters. The Chinese characters will be reviewed and more characters introduced systematically, as they relate to the listening and speaking activities conducted throughout the course. Students will also further their study of contemporary and traditional Chinese cultural elements.

CAREER AND TECHNOLOGY EDUCATION DEPARTMENT

The Career and Technical Education Department offers career pathways that lay the foundation for entry into future careers in culinary arts, business and accounting, computer networking, health fields, graphic arts, engineering and media production. In grade 8 all students take a career inventory assessment on the Naviance system. This opens the discussions with guidance counselors to place students in areas of interest for future careers. In grades 9-12, students who have chosen a career pathway will follow a series of elective classes that culminates with the student receiving an industry recognized certification and/or a professional portfolio. Networking with professionals in the field as well as voluntary internship experience is also offered.

Many of the courses in this department cross paths with the Mathematics and Science departments. Under the STEM umbrella, students must take identified mathematics and science classes and reach levels of proficiency that will ensure their success in the CTE pathways.

Tomorrow's Teachers (5 credits)
This course is available to students in grades 11 and 12

This course is designed for students who want to explore careers in the area of education. Students will be given challenging real-world projects and assignments typical of the education field. Classroom activities will include reading, research, projects, problem-solving, and observations. Projects will include working with other students in an educational setting. Assessment methods will include reflective writings, hands-on activities, observations, oral and written projects, reading assignments, and a portfolio. This course can fulfill a practical or a fine and performing arts requirement.

GRAPHIC ARTS PATHWAY COURSES

Graphic Arts (2.5 credits)
Prerequisite: SMARTLab, Computer Applications, or Teacher recommendation

Graphic Arts is an introduction to digital imaging and computer-based art. Students will explore different avenues of visual communication, self-expression, and creative problem-solving through the creation of commercial, interactive, and fine art. All work is based upon the study, aesthetics, purpose, and criticism of digital art forms.

Web Design (2.5 credits)
Prerequisite: SMART Lab or Teacher recommendation

This course is an introduction to the design, creation, and maintenance of web pages and websites. Students learn how to critically evaluate website quality, learn how to create and maintain quality web pages, learn about web design standards and why they're important, and learn to create and manipulate images. The course progresses from introductory work on web design to a culminating project in which students design and develop websites.

Graphic Arts Production (5 credits)
Prerequisite: Graphic Arts or Teacher recommendation

This program is the production course graphic arts and gives students the opportunity to participate in advanced projects as well as work-based learning situations related to Graphic Communications. Students produce page designs and write, edit, and proofread copy, captions, and headlines. Students will have the opportunity to build their portfolios.

Print Shop I (2.5 Credits)
Prerequisite: None

This course is intended to teach the fundamentals of digital printing by exploring its "hows" and "whys." Knowing how something works prepares people to complete a specific task. Knowing why people chose one technology over another helps to understand the business impact of those choices. The content of this course and its curriculum have been structured within the context of PrintED's Digital Production Printing Competencies and highlights the use of Xerox digital production printing solutions.

Print Shop II (2.5 credits)
Prerequisite: Print Shop I

The second section of Print Shop is a deeper exploration of print concepts and topics through learning activities mentioned in Print Shop I. Your choice to learn more about digital production printing contributes, not only, to the success of the technology but also yourself and the businesses you will work for. Sharing the knowledge you acquire with others will carry on your journey in understanding digital print. The lessons and exercises complement the Digital Production Printing Competencies published by PrintEd and contribute to the greater requirement for the student to become PrintED Certified upon completion of this program.

Portfolio I/II - (5 credits) (Visual and Performing Arts)
Prerequisite: Drawing, Painting, Graphic Arts, Graphic Arts Production or Teacher recommendation

Portfolio is for the advanced art student who is willing to experiment with conventional and unconventional media. The students will also participate in numerous award winning contests and exhibitions. This class will also prepare finished works of art for preparation to college. Computer generated art will be a component of this course. Some of the assignments or media are painting, drawing, sculpture, stage design and architectural drawings and models.

ACCOUNTING AND BUSINESS COURSES

Introduction to Business (2.5 credits)
Prerequisite: None

Students will be introduced to the world of business and be prepared for the economic roles of consumer, worker and citizen. This course will serve as a background for other, more detailed business courses, such as accounting, marketing and business law, as well as preparation for future employment and consumer decision making. It satisfies the Financial Literacy requirement for graduation.

Financial Literacy (2.5 credits)
Prerequisite: None

Students will acquire the skills necessary to develop financial, economic, business, entrepreneurial, critical thinking and writing skills to deal with personal finance. The course focuses on career skills, personal financial literacy, career awareness, exploration, and preparation. Students will learn to assess financial opportunities and determine the relevance, reliability, and importance of financial resources. This course fulfills the Financial Literacy requirement for graduation.

Business Finance (2.5 credits)
Perquisite: Introduction to Business or Financial Literacy

The course is designed to provide students with an overview of the principles of business finance. The curriculum focuses on major areas of study, including economics, marketing, accounting procedures, and the global financial market. An integral component of the curriculum is the application of decision-making skills that enables students to become more responsible consumers, producers, or business entrepreneurs.

Business Law (2.5 credits)
Perquisite: Introduction to Business or Financial Literacy

Students will gain a solid foundation in understanding the legal issues related to topics of business law and personal law. Areas of study will include how laws were formed, procedures in civil and criminal cases, making contracts, terminating contracts, responsibilities of minors, being a consumer, purchasing power, purchasing insurance, personal and real property rights, starting a business and leadership skills.

Accounting I (5 credits)
Prerequisites: Introduction to Business, Business Law, and Business Finance
Open to students in Grades 11 and 12

This course addresses accounting concepts and principles applicable to business enterprises. Students will classify items as assets, liabilities or owner's equity. The advantages and disadvantages of the three forms of business ownership, sole proprietorship, partnership, and corporation will be analyzed.

Preparation and presentation of a variety of source documents will demonstrate the language of business by recording, analyzing, and interpreting financial data.

(Students may elect to take Accounting II or International Business Practice Firm as the final course in the career pathway according to their interest area.)

International Business Practice Firm (5 credits)
Prerequisites: Introduction to Business, Business Law, and Business Finance
Open to students in Grades 11 and 12

This full year course is based on the International Business Practice Firm concept. The IBPF is a simulated business that mirrors the real world. It is a "company" set up by students with the assistance of the teacher. In an authentic setting, linked by technology, the student/employee engages in simulated business transactions with other firms both domestically and internationally. Students/employees

participate in the four main business functions: marketing/sales; purchasing; human resources and finance. The IBPF classroom is a student-centered learning environment. Students master knowledge by constructing it. Content is learned in a relevant context.

Accounting II (5 credits)
Prerequisite: Accounting I
Elective open to Grade 12

This second year course is a review and expansion of topics covered in Accounting I. Accounting II will incorporate accounting principles and procedures in managerial, intermediate, and cost accounting with an emphasis on corporate accounting. Accounting II is designed to prepare students who plan to pursue a career in accounting or business.

DIGITAL MEDIA COURSES

Introduction to Digital Media (2.5 credits)
Prerequisite: SMARTLab I or Computer Applications

Students will learn the fundamentals of digital photography and video production and create a number of short films. Participants will also edit video on Apple MACs, and create music for their projects on Garage Band. Students will also learn basic screenwriting skills using Celtx screenwriting application.

Digital Media (2.5 credits)
Prerequisite: SMARTLab I or Introduction to Digital Media

Students will build upon the techniques that were introduced in the prior course with more emphasis on project-based learning. Students will videotape school events, learn pre-production techniques, directing, advanced screenwriting, lighting techniques, and acquire producing skills. Students will work on a series of projects where they will have the opportunity to learn how to promote their film projects.

Broadcast Journalism (5 credits)
Prerequisite: Digital Media or teacher recommendation

Students will produce video and audio news programs for distribution on television and the internet. In this course students will study the history and major developments of broadcast journalism through radio, standard newscasts, magazine format, short and long form documentaries, "reality" documentaries Learn to conduct broadcast news research, explore the process through which news is gathered and prepared for reporting for broadcast, become familiar with the news broadcasting process and technical production.

Every student will regularly write about their ongoing projects. Subjects to be covered will include topics such as sports, politics, culture, and current events.

Video Production (2.5 credits)
Prerequisite: Broadcast Journalism or teacher recommendation

In this course, students will film school events, create dynamic video productions and broadcasts live over the internet to parents and the school community. It's a fun and engaging way to develop communications and language skills as you build 21st Century skills such as critical thinking, project planning, team building, and collaboration.

Filmmaking (5 credits)
Prerequisite: Video Production
This class is a hands-on approach to creating, producing and displaying short films. Students will learn the basics and produce their own short films as well as explore film genres.

CULINARY

Diet and Nutrition (2.5 credits)
Open to students in grades 9-12

This one semester course emphasizes personal nutrition and healthy food preparation skills via lessons in personal safety, consumerism, and healthy eating habits. Students are taught the proper use of kitchen tools and equipment and the current dietary guidelines recommended by the USDA.

Basic Foods (2.5 credits)
Prerequisite: Diet and Nutrition. This course is open to students in grades 10-12.

This one semester course builds upon the foundations learned in Diet and Nutrition. Students learn about a variety of foods, the best methods to purchase food products, and various cooking techniques used in food preparation. Students will work together as a team to create dishes from many different cultures.

Foods Service and Preparation *(5 credits)*
Prerequisite: Diet and Nutrition and Basic Foods

A full year course preparing students for employment in the food service industry, preparation of foods, career exploration, service, and serving are the topics covered in this course. Field trips to commercial establishments and culinary schools reinforce the program.

Culinary Arts (5 credits)
Prerequisite: Food Service and Preparation

This is an in-depth study of the different types of menus and station set-up pertaining to the culinary cuisine techniques of preparation of various foods and trays used for presentation. The emphasis will be that students learn about yields of foods, organization, and utilization of fundamental cooking techniques. Students will also learn the *functions of catering.*

HEALTH SCIENCES

Introduction to Health Care in Society (2.5 credits)
Open to Grade 9 students

This course is designed to introduce students to the many facets of the health care field. This includes exploration of various careers and an introduction to some basic skills. Field trips and speakers will be utilized to help students make career decisions wisely. Some basic medical terminology is incorporated to help students feel comfortable in the medical environment. Only students who have some interest in the possibility of working in health care are encouraged to enroll in this course.

Dynamics of Health Care in Society (5 credits)
Prerequisite: This is a sophomore level course

Dynamics of Health Care in Society is an orientation to health care and delivery, from an interdisciplinary perspective, with a focus on process skills to include critical thinking, ethical reasoning, effective communication, and self-directed learning abilities. The professional competencies stress application to general issues and topics common to all health care providers. Emphasis is placed on the role of the health care practitioner as both provider and consumer of health care services. This course is a dual enrollment class with Rutgers School Health Science Program for college credit.

Dual Enrollment: Dynamics of Health Care in Society – The student will receive an Orange High School grade and a Rutgers grade. The Rutgers grade for Dynamics of Health Care in Society - 100% of Rutgers, SHRP standardized exam grade = Rutgers, SHRP grade listed on transcript.

Scientific Principles of Nutrition (5 credits)
Prerequisite: This is a sophomore level course

Scientific Principles of Nutrition outlines the relationship of diet, lifestyle, and the prevention of disease. An overview of the digestion, absorption, and metabolism of protein, carbohydrates, fat, vitamins, and minerals is provided. Nutrition needs at various stages of the lifespan are stressed. Applying the science of nutrition to your life including needs for fitness and physical activity, evaluating nutrition claims, food labeling, and other consumer concerns are emphasized.

Dual Enrollment: Scientific Principals of Nutrition – The student will receive an Orange High School grade and a Rutgers grade. The Rutgers grade for Scientific Principles of Nutrition - 100% of Rutgers, SHRP standardized exam grade = Rutgers, SHRP grade listed on transcript.

Fundamentals of Health and Wellness (5 credits)
Prerequisite: Dynamics of Health Care in Society for students who want credit in the Health Science Track. No prerequisite for students who want to use the class for their elective in the CTE.

This course provides a comprehensive overview of health and wellness. The impact of lifestyle choices on all aspects of personal health are discussed including physical, mental, emotional, social, and environmental. The course will explore topics related to nutrition, physical fitness, stress management, disease prevention, substance abuse, and healthy relationships. The information and skills necessary for

making informed and healthful decisions to promote wellness will be discussed with an emphasis on self-responsibility. Students taking this course have the potential to be dual enrollment in the Rutgers School Health Science Program for college credit.

Dual Enrollment: Fundamentals of Health and Wellness – The student will receive a Orange High School grade and a Rutgers grade. The Rutgers grade is 50% Rutgers, SHRP standardized exam grade + 50% high school grade = Rutgers, SHRP grade listed on transcript.

Anatomy and Physiology (Science Department)

Medical Terminology 1 and 2 (5 credits)
Prerequisite: Dynamics of Health Care in Society, Biology and Algebra

Medical Terminology is the study of words that pertain to body systems, anatomy, physiology, medical processes and procedures and a variety of diseases. It provides specialized language for the health care team, enabling health care workers to communicate in an accurate, articulate and concise manner. This course is designed to give the students a comprehensive knowledge of word construction, definition and use of terms related to all areas of medical science. The course includes but is not limited to terms related to anatomy of the human body, functions of health and disease, and the use of language in processing medical/dental records and claim forms.

Dual Enrollment: Medical Terminology - The student will receive an Orange High School grade and a Rutgers grade. The Rutgers grade is 50% Rutgers, SHRP standardized exam grade + 50% high school grade = Rutgers, SHRP grade listed on transcript.

Emergency and Clinical Care (2.5 credits)
Prerequisite: Dynamics of Health Care in Society, Medical Terminology and Chemistry
This class is designed for Senior Students Only

Emergency and Clinical Care is a course that describes how to respond to emergencies before medical help arrives. The course is designed to give the student the knowledge of how to recognize and respond to an emergency. The intent of the course is to help the student feel more confident in his/her ability to act appropriately in the event of an emergency. Students are prepared to 1) obtain a patient medical history, 2) take and record vital signs relative to medical/dental treatment, and 3) acquire cardiopulmonary resuscitation certification.

Dual Enrollment: Emergency and Clinical Care- The student will receive a Orange High School grade and a Rutgers grade. Emergency and Clinical Care -. Instructor submits grade based composite of class work and exam from either the American Red Cross or the American Heart Association.

Health Occupations Education (2.5 credits)
Prerequisite: Dynamics of Health Care in Society, Medical Terminology and Anatomy and Physiology. ***This class is designed for Senior Students Only***

Health Occupations Education is the final step in a five course pathway. The course provides students opportunities for career and college readiness. This course focuses on fundamental knowledge and clinical skills necessary for assistants in various health care areas. The first unit will focus on providing the student with a strong knowledge base on the healthcare delivery system. In addition, the student will learn about workplace safety and the roles and responsibilities of a healthcare worker. The focus of the second unit is on the understanding of the administrative skills needed by a medical assistant. Students will identify basic roles and responsibilities of an administrative medical assistant. Students will also practice patient scheduling and financial accounting. In addition, the student can obtain a basic understanding of the medical billing process. The focus of the third unit is on understanding the actual clinical skills needed by a medical assistant. Students will demonstrate actual skills and practice performance of the skills on volunteers and in medical settings as permitted. They will also begin to understand employability skills.

WoodShop (C.I.A.O.) (5 credits)

This course is offered for the student interested in learning lifelong skills in the area of construction and manufacturing. The student will have a variety of areas of study to select from including cabinet making, carpentry and other advanced areas. During this course students will build their knowledge in planning a project, selection and use materials, including tools and machines to produce a finished product. Emphasis will be on safety and quality of workmanship. The students will do 1 required project and then they (with direction) will select the rest. (The instructor will decide if the student has the ability for any given project.) This class is about the world of work and each student will need to be in attendance and participate fully in all activities.

CISCO NETWORKING ACADEMY

Computer TIA A+ (5 credits)
Prerequisite: Smart Lab

The CompTIA A+ course is the industry standard for computer support technicians. The international, vendor-neutral certification proves competence in areas such as installation, preventative maintenance, networking, security and troubleshooting. CompTIA A+ is part of the certification track for corporations such as Microsoft, Hewlett-Packard, Cisco and Novell. Other technology companies, including CompuCom and Ricoh, have made CompTIA A+ certification mandatory for their service technicians.

Cisco Networking Academy I (5 credits)
Prerequisite: TIA A+

The Academy Lab is designed to accommodate 12 students per class/section. Successful completion of this program leads to a *Cisco Certified Network Associate* (CCNA) certificate. The program is designed to teach students the skills needed to design, build, and maintain small to medium sized networks. This

provides them with the opportunity to enter the workforce and/or further their education and training in the computer networking field.

Instruction includes, but is not limited to, the following curriculum components: OSI model and industry standards, network topologies, IP addressing, networking components, basic network design, beginning router configurations and routing protocols.

Cisco Networking Academy II (5 credits)
Prerequisite: Cisco Networking Academy I

Course topics include: advanced router configurations, LAN switching theory and VLANs, advanced LAN and LAN switched design, Novell IPX, and threaded case studies. Additional skills include: WAN theory and design, WAN technology, PPP, frame relay, and ISDN, network troubleshooting, national SCANS skills, and threaded case studies.
Particular emphasis is placed on the use of decision-making and problem-solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems. In addition, instruction and training are provided in the proper care, maintenance, and use of networking software, tools, equipment, local, state, and federal safety, building, and environmental codes and regulations. Students who successfully complete this series of courses may take the examination to become a Cisco Certified Network Associate.

PLC – Computer Integrated Manufacturing (5 credits)
Prerequisite: Teacher recommendation

Computer-integrated manufacturing (CIM) refers to the use of computer-controlled machineries and automation systems in manufacturing products. CIM combines various technologies like computer-aided design (CAD) and computer-aided manufacturing (CAM) to provide an error-free manufacturing process that reduces manual labor and automates repetitive tasks. The CIM approach increases the speed of the manufacturing process and uses real-time sensors and closed-loop control processes to automate the manufacturing process. It is widely used in the automotive, aviation, space and ship-building industries.

STEM WITH EMPHASIS ON ENGINEERING

Computer Applications I (2.5 credits)
Prerequisite: None

Computer Applications I is designed to bring students to a basic level of proficiency in applying computer technology in the educational setting. Emphasis will be placed on file-management and appropriate technology use in a network environment. Students will be introduced to fundamental computer concepts, beginning keyboarding skills, word-processing, multi-media presentations, Internet applications and spreadsheets. Special attention will be devoted to legal issues, copyright law, and safety. Application of technology in the workplace will be emphasized.

Computer Applications II (2.5 credits)
Prerequisite: Computer Applications I

Computer Applications II focuses on a simulated work environment with clients and work orders using Word, Excel, Desk Top Publishing, Access and PowerPoint. To successfully complete Computer Applications II, students must complete all work orders in the Word segment, taking them from basic to advanced word processing skills. It's anticipated that students will progress towards taking the Microsoft Office Specialist Certification exam. Microsoft Office Certification is a workplace skill that will open many career pathways for students who obtain this certification.

Introduction to Programming (5 credits)
Prerequisite: None

Intro to Programming is a full-year course aimed at exposing students to the world of coding. Coding, the language of the future, is used in every piece of technology. Intro to Programming is intended for student. The course, which is taught in JavaScript, equips students with the programming fundamentals to learn any programming language. The course focuses on the problem solving and critical thinking skills required to properly code, skills that will benefit students in all of their future endeavors.

AP Computer Science A (5 credits)
Prerequisite: Introduction to Programming

Computer Science A focuses on further developing computational-thinking skills through the medium of Android™ App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, Java™ programming language, XML, and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. This course aligns with the AP Computer Science A course.

SMARTLABS

SMARTLab I (2.5 credits)
Prerequisite: None

SMARTLab1 is an elective course that features a 21st century learning lab designed for the exploration of STEM (science, technology, engineering, and mathematics), digital media arts, alternative energy exploration, college and career pathway exploration and other academic topics through applied technology.

Students engage in real world activities using advanced hardware, scientific and media equipment, hands-on construction kits and flexible furniture systems. Students progress through a series of curriculum guided and self-directed project engagements. As they tackle these projects, they learn essential technology skills and systems, including Mechanics and Structures, Computer Graphics, Science and Data Acquisition, Publishing and Multimedia, Alternative and Renewable Energy, Robotics and Control Technology, Circuitry, and Computer Simulation. This course is a perquisite for career pathways and is additionally open to any student interested in this as an elective.

SMARTLab II (2.5 credits)
Prerequisite: SMART Lab I

SMARTLab II includes 21st century learning labs designed for the exploration of STEM, digital media arts and other academic topics through applied technology. SMARTLabs are fully-integrated classroom systems that include hardware, software, scientific and media equipment, hands-on construction kits and flexible furniture systems. Students progress through a series of curriculum-guided and self-directed project engagements. As they tackle these projects, they learn essential technology skills and systems. The support systems provided a*uthentically* assess real learning and the development of 21st century skills

Learning Launchers include: Alternative and Renewable Energy, Circuitry, Computer Graphics, Digital Communications, Mechanics and Structures, Robotics and Control Technology, Scientific Data and Analysis, and Software Engineering.

SMARTLab III (2.5 credits)
Prerequisite: SMART Lab II

Smart Lab III continues the learning launchers from SMARTLab II. Learning Launchers guide SMARTLab learning with a wide selection of hands-on, minds-on projects in STEM and applied technology. Project activities link technology concepts to core academic content in a way that's engaging, relevant and learner-centered. SMARTLabs meet learners where they are and take them as far as they are able to go. Students have the option of completing level two of the Learning Launchers they worked on in SMARTLab II or begin work on additional areas.

Learning Launchers include: Alternative and Renewable Energy, Circuitry, Computer Graphics, Digital Communications, Mechanics and Structures, Robotics and Control Technology, Scientific Data and Analysis, and Software Engineering.

ENGINEERING

In PLTW (Project Lead the Way) Engineering, students engage in open-ended problem solving, learn and apply the engineering design process, and use the same industry-leading technology and software as are used in the world's top companies. Students investigate topics such as aerodynamics and astronautics, biological engineering and sustainability, and digital electronics and circuit design, giving them an opportunity to learn about different engineering disciplines before beginning post-secondary education or careers. Schools offer a minimum of three courses by the end of the third year of implementation: Introduction to Engineering Design, Principles of Engineering, and any specialization course or the capstone course.

Foundation Courses

Introduction to Engineering Design (5 credits)
Prerequisite: None

Students dig deep into the engineering design process, applying mathematics, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

Principles of Engineering (5 credits)
Prerequisite: Introduction to Engineering Design

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

Digital Electronics (5 credits)
Prerequisite: Principles of Engineering

From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry including logic gates, integrated circuits, and programmable logic devices.

VISUAL & PERFORMING ARTS DEPARTMENT

An education in the arts is an essential part of a student's human, social, and economic growth. The Visual & Performing Arts Department offers OHS students visual arts, dance, music, and theater. Graduation requirements in New Jersey include at least **five credits** in visual, practical or performing arts and is critical to the your success as you move through life.

Ballet I (F/Y) (5 credits)
Freshman
The goal of Ballet Level I is to introduce the fundamentals of classical ballet. The course will focus on basic ballet technique, proper body alignment, French terminology and musicality. Students will be acquainted with basic barre and center work.

Modern I (Semester)(2.5 credits)
Freshman – Prerequisite: Ballet I
Students in the Modern Dance Course must meet the expectations of an advanced dancer. Elements of dance will include an emphasis on the modern technique, which introduces the dancer to the world of Modern and Post Modern genres of dance. The Modern Dance course includes teacher supervised choreography and an increased level of understanding the elements of dance and techniques. In theory the students will study modern dance with an advanced ability to observe, analyze, evaluate, and interpret the different techniques. The study of Modern Dance is introduced and developed as well as a study of continuing education in the world of Modern Dance. This class will culminate in a small studio performance culminating at the semester's end with a composition, which the students designed. Dance classes require students to be properly dressed and participation is essential requirement.

Modern II (Semester) (2.5 credits)
Freshman – Prerequisite: Modern I
Students will expand on the elements of dance, which will include an emphasis on the modern technique that expands the dancer beyond beginner and intermediate levels of proficiency. This class will culminate in a dance performance culminating at the semester's end with a composition, which the students designed. Dance classes require students to be properly dressed and participation is essential requirement.

Beginning Dance (5 credits)
Prerequisite: None

This beginner course is an introduction to the fundamentals of dance. The units covered will be elements of movement, basic ballet and a theory class. Elements of movement include a basic beginner modern jazz technique, ballet includes a beginner syllabus, and in theory we will explore the history of dance as well as being exposed to concert performances and important personalities of the dance world. This course will culminate in a concert performance. Dance classes require the student to be dressed appropriately and participation is essential to the fulfillment and completion of this the course.

Intermediate Dance (5 credits)
Prerequisite: Beginning Dance or previous formal dance experience; audition

This intermediate level of dance requires students to take beginning dance and/or by recommendation of the teacher. Intermediate dance will take the elements of movement and its beginner technique to the next level. Ballet class will expand upon a basic barre and center syllabus to exercises that involve more concentration and skill. Ethnic styles are introduced and discussed for their social relevance. In theory, we will discuss history and concert works with a more critical point of view. This course will culminate with a concert performance. Dance classes require the student to be properly dressed and participation is essential to the fulfillment and completion of this course.

Advanced Dance (5 credits)
Prerequisite: Intermediate Dance or Previous Formal Dance Experience, Audition

This advanced level of dance requires that students complete beginning and intermediate dance or by recommendation of the teacher. This class meets every day for a full year and therefore must meet the expectations of an advanced dancer. Elements of dance will include a modern jazz technique that expands the dancer beyond beginner and intermediate levels of proficiency. Ballet class includes choreography in this style and an increased level of understanding of the syllabus and technique. In theory we will study history and other styles of dance with an advanced ability to observe, analyze, critique, evaluate, and interpret the study of choreography is introduced and developed as well as a study of continuing education in dance.This class will participate in public concerts and the year will culminate with a composition of their own. Dance classes require the student to be properly dressed and participation is essential the the fulfillment and completion of this course.

Honors Dance (5 credits)
Prerequisite; Advanced Dance with a grade of B or higher

This Honors offering can be taken as an Independent Study offering if scheduling allows and students must meet the expectations of an advanced dancer. There will be an emphasis on performing and choreography. Elements of dance will include a contemporary lyrical technique that expands the dancer beyond beginner and intermediate levels of proficiency. Modern class includes choreography in this style and an increased level of dance concepts of the syllabus and technique. There will be an emphasis on Modern, Jazz, Contemporary, Lyrical, Pointe Work, Improvisational dance techniques, choreographers and career opportunities. In theory we will study history and other styles of dance with an advanced ability to observe, analyze, evaluate, and interpret. This class functions as a performing ensemble and students will be required to participate in performances throughout the year and mandatory rehearsals as well as the annual winter and spring concerts. The year will culminate in the creation of original choreography.

The students must maintain a minimum total G.P.A. of 3.0. The dance classes require the student to be properly dressed in required female and male leotard and tights and participation is essential to the fulfillment and completion of this course. Students of Honors Dance will often mentor students with lesser skills to encourage growth and strengthen the ensemble.

Concert Band I (Semester) (2.5 credits)
Freshman
This course is an integral part of the instrumental pathway and is a requirement for all instrumental music majors with a specialty in woodwind, brass, and/or percussion. Educational emphasis is placed on performing in a concert band, taking direction from the conductor, and contributing their part to the whole. The course will advance the student in instrumental technique, and further their development of music reading and comprehension skills. Students will learn how to perform standard and contemporary chamber music and be expected to perform at concerts, recitals, and music festivals.

Concert Band II (Semester) (2.5 credits)
Freshman – Prerequisite: Concert Band I
Scaffolding on Concert Band I, this course continues to expand on students' group performance skills in woodwind, brass, and/or percussion instruments. This course furthers the development of music theory and reading comprehension. Students will perform in traditional and contemporary chamber music and be expected to perform at concerts, recitals, and music festivals.

Orchestra I (Semester) (2.5 credits)
Freshman
This course is an integral part of the instrumental pathway and is a requirement for all instrumental music majors with a specialty in strings. Educational emphasis is placed on performing in an orchestra, taking direction from the conductor, and contributing their part to the whole. The course will advance the student in instrumental technique, and further their development of music reading and comprehension skills. Students will learn how to perform classical and popular music and be expected to perform at concerts, recitals, and music festivals.

Orchestra II (Semester) (2.5 credits)
Freshman– Prerequisite: Orchestra I
Educational emphasis is placed on the advancement of instrumental technique, further development of music reading and comprehension skills, independent musicianship, style, and a deeper understanding of small group ensemble music, and orchestral literature. Literature will contain both Classical and Popular music. Students will perform both in small group ensemble projects and as a large group. Orchestra II students will perform at spring concert.

Beginning Band (5 credits)
Prerequisite: None

Designed for students with no instrumental music background, skill improvements, such as tone, counting and reading music are taught. Students are issued an instrument and are solely responsible for its care. Lessons are in groups, with home practice required daily for at least 30 minutes. Students should naturally progress into the *Advanced Band* course.

Intermediate Band (5 credits)
Prerequisite: Beginning Band, 8th Grade Band, or audition

This course is an extension of Beginner Band. It offers experience in physical marching and playing march music, concert band, small ensemble and various types of music. A prerequisite to Intermediate Band is either satisfactory completion of Beginning Band, satisfactory competition of Instrumental Music at Orange Middle School or another school outside the district or by audition with the Band Director prior to enrollment. Students must practice a *minimum* of 30-minutes daily beyond the normal class schedule.

Advanced Band (5 credits)
Prerequisite: Intermediate Band, previous formal Band experience, or audition

This course is designed for the experienced instrumentalist. Student will be required to perform in programs including football events, concerts and parades. In winter months emphasis is placed on concert music, i.e., transcription, classical, standards and contemporary/pop music.

Honors Band (5 credits)
Prerequisite: Advanced Band with a grade of B or higher

This Honors offering can be taken as an Independent Study offering if scheduling allows. Students who take this class will be required to perform in programs including football events, concerts and parades. In winter months emphasis is placed on concert music, i.e., transcription, classical, standards and contemporary/pop music. Students of Honors Band will often mentor students with lesser skills to encourage growth and strengthen the ensemble.

Chorus I (5 credits)
Freshman
This course is an integral part of the vocal pathway and is a requirement for all vocal music majors. Students will learn breath support and practice vocal exercises designed to strengthen the young voice and expand on range. Educational emphasis is placed on performing in a choir, taking direction from the conductor, and contributing their part to the whole. The course will advance the student in vocal techniques and further their development of music reading and comprehension skills. Students will learn how to perform Classical and Popular music and be expected to perform at concerts, recitals, and music festivals.

Chorus II (5 credits)
Freshman -- Prerequisite Chorus I
Scaffolding on Chorus I, this course continues to expand on students' group performance skills in vocal ensembles and choirs. Students will continue to develop their voice as they learn music notation and reading. This course furthers the development of music theory and reading comprehension. Students will sing classical and contemporary repertories and be expected to perform at concerts, recitals, and music festivals.

Beginner Chorus (5 credits)
Prerequisite: involvement in k-8 chorus or audition.

This course is designed for singers who have a basic understanding of music and vocal pedagogy. They will learn breathing techniques, breath control, basic music theory and note reading as well as rhythm and basic sight singing. This is a performance class and students will be required to perform in the Winter and Spring music concert in order to receive class credit.

Intermediate Chorus (5 credits)
Prerequisite: Beginner Chorus or audition.

This course is designed to continue the development of the high school singer. More focus will be spent on vocal pedagogy and technique. Students will continue to learn how to read and sign-sing music. This is a performance class and students will be required to perform in the Winter and Spring music concert in order to receive class credit.

Advanced Chorus (5 credits)
Prerequisite: Intermediate Chorus or audition.

This course is the follow up to Intermediate Chorus. Students will master reading and sigh-singing music. Students will take a leadership position in the chorus and help the beginners in their mastery of vocal pedagogy. This is a performance class and students will be required to perform in the Winter and Spring music concert in order to receive class credit.

Honors Chorus (5 credits)
Prerequisite: Advanced Chorus Recording with a grade of B or higher.

This Honors offering can be taken as an Independent Study offering if scheduling allows. Students who take this class will complete their training in preparation for further education in vocal technique. Students will continue mastery of technique, repertoire, etc. This is a performance class and students will be required to perform in the Winter and Spring music concert in order to receive class credit.

Students of Honors Chorus will often mentor students with lesser skills to encourage growth and strengthen the ensemble.

Music Theory (5 credits)
Prerequisite: Formal music experience of two or more years or a competency test given by instructor.
Final eligibility is determined by teacher consultation.

An advanced course designed for junior or senior high school students to explore the underlying fundamentals of music theory, composition, notation and application. This course will prepare the future music major for college entry-level acceptance with appropriate rigor. Piano keyboard skills are covered; however, prior keyboard skills will help students to progress to their fullest potential. Students will analyze existing compositions and create works of their own.

AP Music Theory (5 credits)
Prerequisites: Music Theory. Final eligibility is determined by teacher consultation.

This course will introduce students to musicianship, theory, musical materials, and procedures. This course may emphasize one aspect of music, such as harmony; more often, however, it integrates aspects of melody, harmony, texture, rhythm, form, musical analysis, elementary composition and, to some extent, history and style. Musicianship skills such as dictation and other listening skills, sight-singing, and keyboard harmony are considered an important part of the theory course.

The student's ability to read and write musical notation is fundamental to such a course. It is also strongly recommended that the student will have acquired at least basic performance skills in voice or on an instrument.

Piano I (5 credits)
The course objective is to gain basic knowledge of piano focusing on proper posture and hand positions. Students' repertoire will consist of many folk songs in hands alone and hands together setting. Students will obtain basic knowledge in grand staff reading, sight reading single-line melodies, and performing basic scale preparation exercises.

Introduction to Music (2.5 credits)
Prerequisite: None

Designed to develop an appreciation for and understanding of the non-performing depths of music. Small units make it possible to introduce many subjects, stimulating the desire for further learning. Students enrolled in this class learn the importance of music in their lives. Field trips to Performing Arts Centers and other theaters are usually included.

Honors Percussion (5 credits)
Prerequisite: None

This Honors offering can be taken as an Independent Study offering if scheduling allows. Students who take this class will be required to perform in the Honors/Advanced Band programs including football events, concerts and parades. Students of Honors Percussion will often mentor students with lesser skills to encourage growth and strengthen the ensemble.

Strings I, II, III, and IV (5 credits)
Prerequisite: None

This class can accommodate anyone from the beginning violinist to the experienced string player. Students will be offered an ensemble experiences and individual studies. If you played violin in elementary and/or middle school, sign up to continue your violin playing.

Strings Ensemble (5 credits)
Prerequisite: None

This class can accommodate anyone from the beginning violinist to the experienced string player. Students will be offered an ensemble experiences and individual studies. If you played violin in elementary and/or middle school, sign up to continue your violin playing.

Basic Elements of Digital Recording (5 credits)
Prerequisite: Computer literacy (PC/MAC) Music experience (plays an instrument, read music, perform in a group etc.). Final eligibility is determined by teacher consultation. (Class size restriction: 15)

The beginning aspects of a course designed to explore the elements of recording, mixing, mastering, and burning CDs in the digital realm. The roles of engineer, producer, technician, and musician will be covered. Students will participate in studio positions with group and individual projects. Actual recordings of musical material will be produced. Written exams, as well as hands-on projects, will give students actual experience in a studio environment. Students will learn basic computer literacy in music production in preparation for the intermediate course.

Intermediate Elements of Digital Recording (5 credits)
Prerequisite: Basic Elements of Digital Recording or Teacher recommendation.
(Class size restriction: 15)

Intermediate Elements of Digital Recording is a course that continues on the path of music production and elements of digital recording. Students will use continue to explore more in-depth concepts of music production focusing on mixing, mastering, plug-ins, virtual-instruments and sequencing on DAW's (Digital Audio Workstations) such as Pro Tools, Digital Performer and Logic. Students will have more hands on time and produce original material.

Advanced Elements of Digital Recording (5 credits)
Prerequisite: Intermediate Elements of Digital Recording or Teacher recommendation.
(Class size restriction: 15)

This is a follow-up course after Intermediate that is designed to take the mastery of digital recording to a higher level. Students will produce high quality work and be responsible for capturing many live events, editing, and producing a superior product. The serious recording student will be well prepared for private commercial work after completing this course.

Honors Elements of Digital Recording (5 credits)
Prerequisite: Advanced Elements of Digital Recording with a grade of B or higher.
(Class size restriction: 15)

This Honors offering can be taken as an Independent Study offering if scheduling allows and is for the student who has mastered all three levels of recording classes. The goal of this Honors course is to create a commercial reel that demonstrates the students' mastery of music production and engineering. Students of Honors Digital Recording will often mentor students with lesser skills to encourage growth and strengthen the program.

Introduction to Theater (2.5 credits)
Prerequisite: None

Designed to develop an appreciation for and understanding of the theater. Small units make it possible to introduce many subjects, stimulating the desire for further learning. Students enrolled in this half-year

class learn the importance of drama as seen in movies, television and live theater. Students are required to attend at least one live theatrical presentation.

Acting I (Semester) (2.5 credits)
Freshman
Acting I is an introduction to the basic elements of acting. Students train in exercises to develop concentration, imagination, and life observation. Course work includes exercises and improvisations exploring awareness in relaxation, observation, and emotions. Students will also explore the physical senses, movement, and voice. Out-of-class assignments include required readings from acting texts and plays. Attendance, responses, and participation in a number of stage productions are required.

Beginning Drama (5 credits)
Prerequisite: None

In the Creative Drama offering, students explore the fundamentals of acting as the actor uses his voice, mind, and body, through the utilization of exercises and games, through which the students develop ensemble and individual performance skills. Students understand basics of auditioning and must audition for one high school play, either in an acting or supportive role, or in stage crew capacity. Students should progress into the *Principles of Acting* course.

Intermediate Drama (5 credits)
Prerequisite: Beginning Drama or audition

This performance course will include the history of theater and develop, through workshop exercises, dramatic techniques in acting from improvisation to play production. Students will perform skits, scenes and plays to enjoy the experience of acting. Actors hone in on their prior acting skills and develop different characters. Students must participate in one high school play, either in an acting or supportive role, or in stage crew capacity. Students should progress into the *Advanced Theater Workshop* course.

Advanced Drama (5 credits)
Prerequisite: Intermediate Drama or audition

This course is designed for the advanced students of drama. Students will write and perform skits, improvisations, pantomimes, scenes, and plays. Stage management and stagecraft are covered. Students are expected to audition for high school plays and be involved in one production.

Honors Drama - (5 credits)
Prerequisite: Advanced Drama with a grade of B or higher.

This Honors offering can be taken as an Independent Study offering if scheduling allows and is for the student who has advanced drama skills. Students are expected to audition for high school plays and be involved in one production.

Students of Honors Drama will often mentor students with lesser skills to encourage growth and strengthen the program.

Stagecraft (5 credits)
Prerequisite: A year of formal theater class and/or a year of stage crew membership.

Stagecraft will introduce to the students, both novice and experienced a practical approach to the technical and production aspects of musical theater and drama.

Students will learn the skills needed to construct scenery, hang and focus lighting instruments, implement a sound system for effects and reinforcement, and scenic artistry, all in a variety of techniques. In conjunction with the Visual & Performing Arts Department, students will take an active role in each of the major productions for the high school. Additionally, students will be introduced to theatrical design, and will be given an opportunity to draft their own designs for scenery and/or lighting of a theatrical production.

Elements of Art I: **(5 credits)**
In this course, students will be introduced to the basic elements of art including line, shape, form, value, space, color, and texture. This beginner level class is a foundation course, from which all other courses will build upon. Students will be using a variety of art materials and mediums in this course while learning about a variety of art themes and styles.

Elements of Art II (5 credits)
Prerequisite: Elements of Art I
In this course, students will continue the work they have begun in Elements of Art I, and will have the opportunity to explore various styles and mediums of art. By the end of this course, students will gain a better understanding of the basic elements of art and will discover which direction of visual art they would like to further investigate for future course decisions and possible career path.

Introduction to Art (2.5 credits)
Prerequisite: None

This is an introductory course designed to teach artistic skills and appreciation. The course covers drawing, design, painting, and development of hand-eye coordination. We will also explore various cultures, and examine many of the most well-known art styles, artists, and techniques. The class goes on field trips to local museums and art exhibits. Student work is on display during various art shows throughout the year.

Introduction to Crafts (2.5 credits)
Prerequisite: None

This is a half-year course that explores the art of different cultures as well as beginning to explore basic artistic techniques needed to create these works of art. Introduction to Crafts has no prerequisite and is open to all grade levels. Explore the fascinating world of Art through the eyes of the cultures being studied. Students will learn artistic skills in such areas as, but no limited to, basket weaving, sculpture, mosaics, jewelry-making, masks, metal work, wire techniques, and much, much more. Students will make many projects during their time in class and student work is often displayed in display cases around the school and in the annual school-wide art show held in June.

Drawing I (5 credits)
Prerequisite: None

This course teaches skills in style and techniques, using professional tools and materials. Lessons include, but are not limited to, pencil, pen and ink, charcoal and crayon, using a variety of subject matter with natural and artificial lighting. Freehand and computer exploration in many media will be offered. Students will experiment with transferring finished drawings to t-shirts and various surfaces. Student work will be displayed in many contests and exhibits. Students could progress naturally into the Drawing II and/or Painting courses

Drawing II (5 credits)
Prerequisite: Drawing I or teacher approval

Offers advanced work in pencil, pen, crayon, etc., with more attention paid to refinement of techniques introduced in Drawing I. This course also offers exploration of numerous tools and combinations of various media and techniques.

Student work will be displayed in many contests and exhibits. Students would naturally progress into the *Painting* course.

Advanced Illustration (5 credits)
Prerequisite: Drawing I and Drawing II, or teacher approval

Builds upon the advanced mediums learned in Drawing II, and to further enhances illustration skills learned in Drawing I, and Drawing II. The course offers the students a hands-on in applying their skills in professional setting such as storyboarding, character development, and airbrush on canvas. Student work will be displayed in many contests, and exhibits.

Painting (5 credits)
Prerequisite: Drawing I, or teacher approval

Painting is the oldest form of communication. Students' work with tempera, watercolor, pastels, acrylics and oils utilizing the skills mastered in Drawing I. Coursework includes still life, life studies, landscapes and non-objective art. Exploring the medium of painting is exciting and fun and helps you understand *aesthetics* (the study of what is pleasing). Paintings will be done on various backgrounds such as plaster-clay, as well as canvas and paper. Student work will be displayed in many contests and exhibits.

AP Studio Art (5 credits)
Prerequisite: Portfolio I and II

The Advanced Placement program is comprised of a college-level course and exam for highly motivated students of visual arts. The two Studio Art portfolios are designed for students who are seriously interested in the practical experience of art. AP Studio Art is not based on a written examination; instead, students submit portfolios for evaluation at the end of the school year.

Fiber Arts I (2.5 credits)
Prerequisite: None

In this class students will learn to work with fibers in a variety of techniques and functions including: yarns for tapestry and functional weaving, reeds for developing woven and coiled baskets, beads for weaving and jewelry making and designing decorative fabrics and papers for creating their own books. (Fiber refers to any type of yarn, thread, fabric or reed.) The elements of design will be applied to the form and function of each work of art.

Fiber Arts II (2.5 credits)
Prerequisite: Fiber Arts I

This course is open only to students who have successfully completed the prerequisite course with a grade of B or above. This course offers students the opportunity to explore further the techniques and functions previously attained. Students will be required to work independently and in-depth on long-range projects exploring and experimenting with surface designs.

Ceramics I (2.5 credits)
Prerequisite: None

This course is open to all grade levels. Students will learn to work with clay and understand the properties of clay (how it is formed, where it comes from, etc.). Students will also learn the basic hand-building techniques, i.e., pinch, coil, and slab. Decorative techniques incorporating glaze, painting and under-glaze will be explored.

Ceramics II (2.5 credits)
Prerequisite: Ceramics I

This course is open only to students who have successfully completed the prerequisite course with a grade of B or above. This course offers students the opportunity to explore hand-building techniques in more complex projects. The pottery wheel will be introduced and time will be spent on proficiency. In addition, the course will cover further decorative techniques, loading the kiln, and studio responsibilities.

Portfolio I/II (5 credits)
Prerequisite: Drawing, Painting, Graphic Arts, Graphic Arts Production or Teacher recommendation

Portfolio is for the advanced art student who is willing to experiment with conventional and unconventional media. The students will also participate in numerous award winning contests and exhibitions. This class will also prepare finished works of art for preparation to college. Computer generated art will be a component of this course. Some of the assignments or media are painting, drawing, sculpture, stage design and architectural drawings and models.

NON-TRADITIONAL PROGRAMS

Naval Junior Reserve Officer Training Corps (NJROTC)

NJROTC is a four-year program offering an opportunity for students to develop skills and knowledge in key areas. This includes classroom study, physical fitness, respectful conduct, good personal appearance, and leadership training. It also gives the student a look at the Navy's role in U.S. history. NJROTC may be substituted for the Physical Education-Health requirement for graduation.

For students participating in the program, there is no obligation for students to serve in any of the military services after leaving high school. However, for those few students who choose to enter the military, successful participation in NJROTC can enhance admittance to one of the service academies (e.g. West Point, Annapolis, etc.), or earn advanced promotion if enlisting in one of the military branches (e.g. Army, Navy, Coast Guard, etc.).

Male and female students physically qualified to participate in physical education are eligible to apply. Non-physically qualified students may be accepted as special students on a case-by-case basis. Students may apply at any grade level; however, all new students, whatever they grade level, will be placed in a Naval Science I class. Cadets are provided with a complete Navy uniform at no expense to parents. Cadets are expected to wear their complete Navy uniform at least once a week throughout the school year. Grooming standards are consistent with active duty Navy requirements. Cadets are expected to maintain good classroom and school behavior.

The NJROTC program carries out a full schedule of community events and orientation visits. NJROTC is a participatory program. Cadets are expected to actively engage themselves in unit activities. This includes parades, community service projects, memorial programs and orientation visits to military installations. Cadets also work in maintaining the NJROTC program including working in supply and joining academic competitions. Selected older cadets are placed with the
Naval Science I classes to exercise their leadership abilities in helping the new cadets.

The NJROTC program runs extensive after school activities including: drill team, color guard, physical fitness team and air rifle team. These teams compete against other JROTC programs in the region and throughout the nation. Successful participation can earn cadets Varsity and Junior Varsity letters.

Naval Science I - 5310 (5 credits)
Prerequisite: None
Open to all Grade Levels: 9, 10, 11, 12

A general introduction to the NJROTC program and the information needed to properly wear the Navy uniform. Specific training is provided in basic drill and military formations. Detailed academic units cover the basics of naval science including: leadership, naval ships, civics, sea power, maritime geography, oceanography, seamanship, navigation, naval history and first aid.

Naval Science II - 5320 (5 credits)
Prerequisite: Naval Science I

Building on the fundamentals of Naval Science I, this course moves into more detail on program basics. Aspects of moving squads and platoons in military formation are emphasized. Detailed academic units that expand on material presented in Naval Science I includes: leadership, citizenship, naval history and navigation. New material introduced includes naval career planning, shipboard organization, naval weapons, meteorology, survival training and small boat seamanship.

Naval Science III - 5330 (5 credits)
Prerequisite: Naval Science II

Building on the detailed material provided in Naval Science II, this course continues to expand leadership training and coverage of naval history. Aspects of cadet leadership within the unit are emphasized. New academic units presented include: military justice, astronomy, international law and the sea, sea power and national security, maneuvering board, naval electronics and naval operations, communications and intelligence.

Naval Science IV - 5340 (5 credits)
Prerequisite: Naval Science III

As the capstone of the NJROTC program, this course seeks to bring together all the elements of the NJROTC curriculum. Extensive coverage is given to practical leadership problems, both theoretical and those in the unit itself. Students at this level are expected to be involved in the running of the unit. Students will be involved in preparing the unit for inspection by the Navy and in running the assorted activities of the unit. Seminar-type academic units will look at the fundamentals and responsibilities of leadership. Detailed material on effective communication will be covered.

ENGLISH AS A SECOND LANGUAGE (ESL) DEPARTMENT

Orange Public Schools implements a high-intensity English as a Second Language (ESL) Program for Port-of- Entry, Beginner and Intermediate students in grades 9-12. These students are taught English by an ESL certified teacher. They also receive mathematics, science and social studies instruction from certified content area teachers along with an ESL certified teacher who co-teaches in these classes to facilitate the learning for ESL students.

Newcomers' Academy I and II (5 credits each)
Prerequisite: Qualifying Test Score

The Newcomers' Academy (NCA) serves students who are port-of-entry or beginning students in grades 9-12. Through a high-intensity ESL model, students receive ESL instruction in the four language domains (listening, speaking, reading and writing). Students are also exposed to literature while utilizing ESL methodologies, READ 180/System 44, and Rosetta Stone. These ESL courses each satisfy one year of English towards graduation.

ESL Intermediate (5 credits)
Prerequisite: Qualifying ACCESS test scores

This course utilizes interventions and a comprehensive reading program designed to develop and increase reading fluency and comprehension skills for English-language learners. Students receive daily interactive instruction in critical reading, vocabulary, writing and language skills. In addition, daily computer work with the instructional software provides reading, writing, vocabulary and spelling practice using highly interesting nonfiction content. Students also read fiction and/or nonfiction daily for independent reading and writing, thus helping them becomes skilled, independent English readers and writers. This ESL course satisfies one year of English towards graduation.

ELL Classes- Students will receive credit as per the subject area course catalog
To provide rigorous and appropriate content instruction while maintaining support in English Language acquisition through the ESL program, English Language Learners (ELL) classes are offered at OHS. The delivery model for this class consists of one content teacher and one ESL teacher who facilitate instruction by clarifying vocabulary and concepts in the content presented. Students are scheduled according to their current appropriate grade level.

Summer ESL Academy
This program is designed to assist students with interrupted formal education (SIFE) earn a high school diploma. Students will complete classes, using the appropriate number of hours, to fulfill graduation requirements in all subject areas. Classes will be co-taught by content area and ESL teachers.

SPECIAL EDUCATION SECONDARY PROGRAMS

The Department of Special Education of the Orange Township Public Schools is committed to providing all students, regardless of skill level, an appropriate and meaningful secondary education.

Orange Preparatory Academy and Orange High School Special Services follows a normal progression of programs as students from middle school transition to high school. The Child Study Team plays a major role in overseeing the education and implementation of the Individual Education Plans (IEP's) for classified students. In accordance with student IEP's, classified students are scheduled in general education classes in all areas of the curriculum to the fullest possible extent. Secondary programs include in-class support and resource replacement.

Our self-contained classes (Autism and Mild Cognitive programs) operate at the high school level. The programs provide Functional Life Skills and vocational opportunities. The academic program follows IEP goals. Components include small group instruction and opportunities to integrate into the school community. Social skills are addressed through the community and vocational programs. Students attend a vocational program where they are afforded opportunities for job training.

Students participate in a variety of regular education settings, including physical education, health and multiple electives. They also have the opportunity to participate in sports and after school clubs.

Students over the age of fourteen participate in their individual transitional planning. Staff members assist in the development of skills that students will need to acquire after high school. Students are encouraged to understand the nature of their disability, identify the information included in their IEPs, and take an active role in their annual reviews. Students are to take ownership of their rights and responsibilities according to state and federal law.

OPTION II

ORANGE BOARD OF EDUCATION POLICY:
2320- INDEPENDENT STUDY PROGRAMS (hereafter "**OPTION II"**)

The Board of Education authorizes an independent study program aimed at achieving the Core Curriculum Content Standards for promotion and graduation purposes in accordance with the requirements of N.J.A.C. 6A:8-5.1(a)ii.

An independent study program and appropriate assessments shall be planned for individuals and/or a group based on specific instructional objectives aimed at meeting or exceeding the Core Curriculum Content Standards. The Principal shall certify completion of the independent study program based on specific instructional objectives.

The Principal may utilize a performance or competency assessment to approve pupil completion of an independent study program, including those occurring all or in part prior to the pupil's high school enrollment.

A group independent study program shall be approved in the same manner as other approved courses. Independent study programs shall be on file in the school district and subject to review by the Commissioner of Education or designee. (N.J.A.C. 6A:8-5.1 et seq.)

Option II is designed to ensure our scholars are College and Career Ready and have every opportunity for academic achievement to further their education. Our courses are, but not limited to, the following:

1. Credit Recovery;
2. Advanced/Accelerated Credit;
3. Additional Credit;
4. College Credit (in collaboration with our college/university partners);
5. Alternative to Physical Education Course offerings;
6. Independent Study; and
7. Practical Learning Experiences.

Option II requires a comprehensive application that must be completed by the student and signed by the parent and building principal. Option II applications will be made available by the Orange High School Guidance Department. ***Credits are determined based on the content area in which the Option II is replacing a traditional course offering.***

COURSE PATHS FOR STEM INNOVATION ACADEMY MATHEMATICS[5]

	9	10	11	12
English	American Experiences (5)	Political Studies (5)	HUM 101 English Composition: Writing, Thinking, Speaking I (5)	HUM 102 English Composition: Writing, Thinking, Speaking II (5)
History	American Experiences (5)	Political Studies (5)	World History (5)	
Math	Integrated I (5)	Integrated II (5)	Integrated III/PreCalc (5)	MATH 111 Calculus I (5) MATH 112 Calculus II (5)
Science	Biomedical Science (5)	Chemistry (5) OR Physics (5)	PHY 111/A Physics I & Lab (5) PHY 121/A Physics II & Lab (5) OR CHEM 125/A General Chem I & Lab (5) CHEM 126/A General Chem I & Lab (5)	PHY 111/A Physics I & Lab (5) PHY 121/A Physics II & Lab (5) OR CHEM 125/A General Chem I & Lab (5) CHEM 126/A General Chem I & Lab (5)
Engineering	Introduction to Engineering/Design (10)	Computer Integrated Manufacturing Systems *OR* Computer Science Essentials *OR* Human Body Systems (10)	Principles of Engineering and Design *OR* PLTW Computer Science Principles *OR* Medical Interventions (10)	Senior Capstone (10)
Health/Physical Education	Health Phys Ed (5)	Health Phys Ed (5)	Health Phys Ed (5)	Health Phys Ed (5)
World Language			World Language 1 (5)	World Language 2 (5)
Financial Literacy				Financial Lit (2.5)
Visual/Performing Arts	Art 1 (5)	Art 2 (5)		
21st Century Life and Careers	Career Readiness (2.5)	Career Readiness (2.5)	Career Readiness (2.5)	
Electives	TBD	TBD	CS 113 Roadmap to Computing (3 credits) Econ 265 Microeconomics (3 credits) Econ 266 Macroeconomics (3 credits) FED 101 Fundamentals of Engineering Design (2 credits) SS 201 Economics (3 credits) MET 103 Engineering Graphics & Intro to CAD (2 credits) MET 105 Applied CAD (2 credits) IT 101 Introduction to Information Technology (3 credits)	

***EGR 1010 is required for students not passing the Mathematics Proficiency Assessment (a prerequisite for NJIT's Calculus I offering; 4 credits).**

Integrated Mathematics I Honors (5 credits)
Prerequisites: STEM Academy Acceptance

The Integrated Mathematics I curriculum is designed to promote depth of knowledge and conceptual understanding in 6 critical areas organized into units designed to deepen and extend students' understanding of linear relationships; done in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Topics studied in the regular Integrated Mathematics I curriculum are taught at an accelerated pace, and are extended and explored in greater depth using real life projects incorporated into each marking cycle.

Critical Area 1: Students work with expressions and creating equations; using quantities to model and analyze situations, to interpret expressions, and by creating equations to describe situations.

Critical Area 2: Students model relationships between quantities; using function notation and develop the concepts of domain and range; exploring examples of functions, including sequences; interpreting functions given graphically, numerically, symbolically, and verbally, and translating between representations, and understand the limitations of various representations. They compare and contrast linear and exponential functions, distinguishing between additive and multiplicative change. They interpret arithmetic sequences as linear functions and geometric sequences as exponential functions.

Critical Area 3: Students analyze and explain the process of solving an equation and to justify the process used in solving a system of equations.

Critical Area 4: Students use more formal means of assessing how a model fits data. Students use regression techniques to describe approximately linear relationships between quantities and graphical representations and knowledge of the context to make judgments about the appropriateness of linear models.

Critical Area 5: Students establish triangle congruence criteria, based on analyses of rigid motions and formal constructions. They solve problems about triangles, quadrilaterals, and other polygons. They apply reasoning to complete geometric constructions and explain why they work.

Critical Area 6: Students use a rectangular coordinate system to verify geometric relationships, including properties of special triangles and quadrilaterals and slopes of parallel and perpendicular lines.
The Mathematical Practice Standards apply throughout each unit together with the content standards and prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Integrated Mathematics II Honors (5 credits)
Prerequisites: STEM Academy Acceptance; District/Teacher recommendation

The Integrated Mathematics II curriculum is designed to promote depth of knowledge and conceptual understanding in 6 critical areas organized into units designed to deepen and extend students' mathematical understanding. The focus of Mathematics II is on quadratic expressions, equations, and functions; comparing their characteristics and behavior to those of linear and exponential relationships. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. The link between probability and data is explored through conditional probability and counting methods, including their use in making and evaluating decisions. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. Circles, with their quadratic algebraic representations, round out the course. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Topics studied in the regular Integrated Mathematics II curriculum are taught at an accelerated pace, and are extended and explored in greater depth using real life projects incorporated into each marking cycle.

Critical Area 1: Students extend the laws of exponents to rational exponents and explore distinctions between rational and irrational numbers and explore relationships between number systems: whole numbers, integers, rational numbers, real numbers, and complex numbers.

Critical Area 2: Students consider quadratic functions, comparing the key characteristics of quadratic functions to those of linear and exponential functions. They expand their experience with functions to include more specialized functions -- absolute value, step, and those that are piecewise-defined.

Critical Area 3: Students create and solve equations, inequalities, and systems of equations involving exponential and quadratic expressions.

Critical Area 4: Students expand their ability to compute and interpret theoretical and experimental probabilities for compound events and make use of geometric probability models wherever possible.

Critical Area 5: Students build a formal understanding of similarity and congruence and apply similarity in right triangles to understand right triangle trigonometry and develop facility with geometric proof.

Critical Area 6: Students prove basic theorems about circles and use the Cartesian coordinate system to write the equation of a circle, graph in the coordinate plane, and apply geometric techniques for solving quadratic equations.

American Experiences Honors (10 credits)

Prerequisites: STEM Academy Acceptance

The American Experiences course takes an interdisciplinary approach to the study of the role of history, geography, culture, social movements, political institutions, political philosophy, economic systems, etc. through the examination of historical contexts (namely the historical development of the United States, 1585 - 1877). Through these experiences, students will explore how Americans create meaning in their lives and make sense of the world in which they live. This integrated approach to the literary, political, social, and economic patterns of our past and present develops in the students the capacity to work critically, independently, and collaboratively. Students use literary interpretation, analysis, comparisons, and evaluations to read and respond to representative works of historical and cultural significance appropriate for grade 9. This course is truly interdisciplinary in that students are enriched by an analysis of the American experience from the perspective of both literature and history.

Students grow in their knowledge of the fundamentals of two disciplines as they develop a sophisticated and critical understanding of American history and culture and also learn how to use written language in effective and powerful ways. The strength of the Honors course of study lies in the extensions of research and tasks related to the analysis of substantive texts and includes real life projects incorporated into each marking cycle.

Introduction to Engineering Design Honors (10 credits)
Prerequisites: STEM Academy Acceptance

Introduction to Engineering Design (IED) is a high school level foundation course in the PLTW Engineering Program. In IED students are introduced to the engineering profession and a common approach to the solution of engineering problems, an engineering design process. Utilizing the activity-project-problem-based (APB) teaching and learning pedagogy, students will progress from completing structured activities to solving open ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Through both individual and collaborative team activities, projects, and problems, students will solve problems as they practice common engineering design and development protocols such as project management and peer review.
Students will develop skill in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3D design and modeling software to represent and communicate solutions. In addition the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented.
The following is a summary of the NGSS- and Common Core aligned units of study that are included in the course for the 2017 - 2018 academic year.

- Unit 1 Design Process
- Unit 2 Technical Sketching and Drawing
- Unit 3 Measurement and Statistics
- Unit 4 Modeling Skills
- Unit 5 Geometry of Design
- Unit 6 Reverse Engineering
- Unit 7 Documentation
- Unit 8 Advanced Computer Modeling
- Unit 9 Design Team
- Unit 10 Design Challenges

Principles of Biomedical Science Honors (5 credits)

Prerequisites: STEM Academy Acceptance

The Principles of Biomedical Science (PBS) course provides an introduction to biomedical science through exciting hands-on projects and problems. Students investigate concepts of biology and medicine as they explore health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Students will investigate lifestyle choices and medical treatments and demonstrate how the development of disease is related to changes in human body systems. The activities and projects in PBS introduce students to human physiology, basic biology, medicine, and research processes and allow students to design experiments to solve problems. Key biological concepts, including maintenance of homeostasis in the body, metabolism, inheritance of traits, and defense against disease are embedded in the curriculum. This course is designed to provide an overview of all the courses in the biomedical science program and lay the scientific foundation for subsequent courses. Students practice problem solving with structured activities and progress to open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. The PBS course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings.

The following is a summary of the NGSS- and Common Core aligned units of study that are included in the course for the 2017 - 2018 academic year. The course emphasizes laboratory investigation (experiences in the laboratory, classroom, or the field that provides students with opportunities to interact directly with natural phenomena or with data collected by others using tools, materials, data collection techniques, and models (NRC 2006, p. 3)). Throughout the process, students design investigations, engage in scientific reasoning, manipulate equipment, record data, analyze results, and discuss their findings. Real life projects are incorporated into each marking cycle.

PBS Unit Summary

- Unit 1 The Mystery
- Unit 2 Diabetes
- Unit 3 Sickle Cell Disease
- Unit 4 Heart Disease
- Unit 5 Infectious Disease
- Unit 6 Post Mortem
-

* Additional units of study include extension related to content tested on the New Jersey Biology Competency Test (organization and development, matter and energy transformation, interdependence, heredity, reproduction, evolution and diversity, etc.)

Industry/Workplace Readiness (2.5 credits)

Prerequisites: STEM Academy Acceptance

Success in the workplace is dependent upon more than just academic knowledge or technical and occupational skills. Employers need critical thinkers, problem solvers, and leaders to tackle the challenges of today's workplace.

Employees with successful career paths learn to communicate effectively, engage appropriately with others, and be self-reliant. Effective career readiness and employability strategies are those that develop the whole learner and include personal and social capabilities; critical thinking and problem-solving skills; and academic and occupational knowledge. The Academy's Industry readiness courses are experiential opportunities in which students participate in an ongoing, sequenced workplace learning curriculum informed by current and future industry standards. This includes career goals, mentoring, guest speakers, workplace visits and internships. Additionally, students will acquire the skills necessary to develop financial, economic, business, entrepreneurial, critical thinking and writing skills to deal with personal finance and to underscore the course's focus on career skills, personal financial literacy, career awareness, exploration, and preparation. This course fulfills the Financial Literacy requirement for graduation.

INTERNSHIPS AND APPRENTICESHIPS

Structured Learning Experience (Credits determined by length of internship or apprenticeship)
Prerequisites: Open to students in Grades 10-12

Structured Learning Experiences are experiential, supervised, educational activities designed to provide students with exposure to the requirements and responsibilities of specific job titles or job groups. The learning experience can be aligned with a student's career and educational goals. The experience may be helpful in making career and educational decisions.

Students are provided with a planned program of job training and work experience appropriate to individual ability. This program is coordinated with learning in the school-based learning component. It provides real or simulated tasks that promote and develop a broad range of transferable skills.

The Structured Learning Experience Coordinator (SLEC) collaborates with businesses, colleges and community based organizations to develop meaningful paid or unpaid internships and apprenticeships for eligible students throughout the district.

Participating sites and programs are selected based on location, student learning potential, and future hiring potential

COLLEGE AND CAREER READINESS PARTNERSHIPS

Project Acceleration-Seton Hall University

Since 1978, Project Acceleration, a concurrent enrollment program within the College of Arts and Sciences at Seton Hall University, has allowed high school students in New Jersey and New York to get a head start on their university careers. Over the course of their high school career, students can earn up to 22 credits from Seton Hall University for approved courses taken in their secondary schools.

Subjects include mathematics, computer science, biology, chemistry, physics, economics, psychology, political science, sociology, history, communication, English, French, German, Spanish, Italian, Latin, Greek, Japanese, music, art, and education. The college credits earned through Project Acceleration are accepted at more than 200 colleges and universities. There are currently 70 high schools offering Project Acceleration courses and approximately 3000 students participate each year.

NJIT Real World Connections

Open to students in grades 9-12

NJIT Real World Connections as a network of networks, the multidisciplinary Real world connections program is changing how classrooms operate and redefining how students learn, running a free real world open university year-round, transforming the way business work with education, impacting K-12 education, health care and social services in NJ and partnering with the world to empower our students. Real World Connections classes work as a very social "learning organization" co-designed by students, university and industry. These classes adapt to students' demands. Students learn from weekly feedback and respond rapidly and dynamically to real world clients' expectations so education becomes more relevant, exciting and rewarding. In addition to industry-sponsored projects, Real World Connections offers hands-on training in project management, leadership, entrepreneurship, research and development, software tools, programming, engineering, social, presentation and communication skills. The training is integrated with a mentorship focus by industry, university and peers.

NJ SEEDS College Preparatory Program

The SEEDS College Preparatory Program prepares academically motivated, financially-limited students for admission to selective four-year colleges. The Program includes weekend and summer honors classes, cultural enrichment and assistance with the college admissions and financial aid process.

College Preparatory Program students participate in classes throughout the school year and each summer of high school. Students have class once per week during the school year and for six weeks each summer (a significant portion of the summer program is spent on a college campus). A one-week orientation for the program is held the summer after 8th grade. SEEDS assist the College Preparatory Program students throughout the college admission process. SEEDS organize college visits, helps students identify appropriate first- and second-choice schools, gather transcripts and letters of recommendation, and prepare the necessary financial aid forms. SEEDS aim to place every CPP student at a selective four-year college where they will receive financial aid.

Rutgers Dual Credit Program (See Health Science)

Fundamentals of Health and Wellness
Dynamics of Health Care in Society
Scientific Principals of Nutrition
Emergency and Clinical Care
Health Occupations Education

Hudson County Community College

Students in the Culinary Pathway have the opportunity to take a course at the Jersey City campus for dual credit.

NJ City University

Students in the Business Management or Accounting Pathways will have the opportunity to take classes at the Jersey City campus for dual credit.

Jr. MBA Seton Hall Program