

HAMBURG HIGH SCHOOL

2020



2021

CURRICULUM HANDBOOK

HAMBURG CENTRAL SCHOOL DISTRICT

Hamburg High School

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Preface

This curriculum handbook has been developed to assist students and parents with planning their high school course of study. Information about graduation requirements, the grading system, and course descriptions are included in this book to assist in the course selection process.

Before you begin the planning process you need to realize that The New York State Education Department has established **minimum** standards for earning a high school diploma. Completion of a High School Diploma is the primary goal for all students. For those students with a desire to attend college, the minimum requirement of a high school diploma does not necessarily mean you will be admitted to the college of your choice.

If your educational goals do include college, you must plan carefully. If you are still deciding on your future goals, plan as if you are going to college. This plan of action will open more paths for you to choose from in the future. All students, regardless of future plans, should select courses that will challenge individual intellectual abilities. Proper course selections and successful completion of those courses will increase the chance of being accepted into the college or career field of your choice.

Parents, we strongly encourage you to participate in the planning process. Your presence is always welcome in the Counseling Center. All of our counselors are there to assist you and our students during this process. Please feel free to contact your child's counselor with any questions. The Counseling Center's phone number is 646-3310 and e-mail addresses are listed below:

Please remember when choosing your courses that, "a goal without a plan is just a wish."

Antoine de Saint-Exupery

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GRADUATION REQUIREMENTS			
Regents Diploma (required courses)		Advanced Designation Regents Diploma Required Course	
ENGLISH	4	ENGLISH	4
SOCIAL STUDIES	4	SOCIAL STUDIES	4
MATH	3	MATH	3
SCIENCE	3	SCIENCE	3
SECOND LANGUAGE	1	SECOND LANGUAGE	3 *
ART/MUSIC	1	ART/MUSIC	1
HEALTH	.5	HEALTH	.5
PHYSICAL EDUCATION	2	PHYSICAL EDUCATION	2
BUSINESS/TECHNOLOGY	.5	BUSINESS/TECHNOLOGY	.5
PERSONAL FINANCE	.5	PERSONAL FINANCE	.5
ELECTIVES	2.5	ELECTIVES	.5
TOTAL	22	TOTAL	22

Regents Diploma
Required Exams

Advanced Designation
Required Exams

Passing Score of 65 or above

CC English Language Arts Regents Exam

CC English Language Arts Regents Exam

CC Algebra or CC Geometry or
CC Algebra 2

CC Algebra and CC Geometry and
CC Algebra 2

Regents Global Studies Exam

Regents Global Studies Exam

Regents in U.S. History Exam

Regents in U.S. History Exam

One Science Regents Exam

Two Science Regents Exams

Comprehensive Second Language Exam

* Students acquiring 5 units in Art, Music, Business or Career/Technical Education may be exempt.

** Students with a disability may have alternative safety nets regarding graduation requirements.

Please contact your counselor for more information.

The following charts outline the diploma and credential requirements currently in effect. The chart is intended to provide an overview of the requirements and identify the student populations that have access to each type of diploma and non-diploma high school exiting credential. Websites are provided to offer specific regulatory requirements and more detailed information regarding the requirements for each diploma or credential.

DIPLOMA OPTIONS

Diploma Type	Available to	Requirements
Regents	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regents
Regents (through Appeal)	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regpasscore
Regents with Advanced Designation	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regpasscore
Local Diploma	Students with disabilities with an individualized Education Plan or 504 Accommodation Plan	http://www.p12.nysed.gov/part100/pages/1005.html#assess http://www.p12.nysed.gov/specialed/publications/localdiplom http://www.p12.nysed.gov/specialed/assessment.html
Local Diploma (through appeal)	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regpasscore http://www.p12.nysed.gov/ciai/gradreq/CurrentAppealForm.pdf
Local Diploma (through Superintendent's Determination)	Students with disabilities with an IEP, not a 504 Plan	http://www.p12.nysed.gov/specialed/publications/superintendent
Local Diploma, Regents Diploma, Regents Diploma with Advanced Designation (with or without Honors), with a Career and Technical Education Endorsement	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#carteched

DESIGNATION OF ACADEMIC ACHIEVEMENT OPTIONS

Diploma Type	Available to	Requirements
Regents with Honors	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors
Regents with Advanced Designation	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents with Advanced Designation with an annotation that denotes Mastery in Math	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents with Advanced Designation with an annotation that denotes Mastery in Science	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents with Advanced Designation with Honors	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors

CREDENTIAL OPTIONS (non-diploma)

Credential Options	Available to	Requirements
Career Development and Occupational Studies Commencement Credential (CDOS)	All students other than those who are assessed using the NYS Alternate Assessment (NYSSA)	http://www.p12.nysed.gov/specialed/publications/CDOScredentialmemo-613.htm
Skills and Achievement Commencement Credential	Students with severe disabilities that are assessed using the NYS Alternate Assessment	http://www.p12.nysed.gov/specialed/publications/SACCMemo.htm http://www.p12.nysed.gov/part100/pages/1006.html

CHART SHOWING OPTIONS

<http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/diplomarequirementsfinal011019.pdf>

Footnotes:

- * Students with a disability may be excused from the LOTE requirement if so indicated on the IEP but must still earn 22 units of credit to graduate.
- ** Students with a disability who are excused from the LOTE requirement per their IEP need not complete a 5-unit sequence in the Arts or CTE in order to meet the requirements for the Regents Diploma with Advanced Designation.
- In all cases students may substitute an assessment from the list of Department Approved Alternative Examinations Acceptable for Meeting Requirements for a Local or Regents Diploma found at <http://www.p12.nysed.gov/assessment/hsgen/archive/list.pdf>
- **Pathway Assessment Options:** All students must pass the following 4 required Regents exams or the corresponding Department approved alternative examination found at <http://www.p12.nysed.gov/assessment/hsgen/archive/list.pdf>: 1 math Regents exam, 1 science Regents exam, 1 social studies Regents exam, and the English language arts Regents exam. In addition all students must choose 1 of the following options:

Complete all the requirements for the CDOS Commencement Credential found here <http://www.p12.nysed.gov/specialed/publications/CDOScredential-memo-613.htm> ; or

Pass an additional math Regents exam in a different course or Department Approved Alternative;
or

Pass an additional science Regents exam in a different course or Department Approved
Alternative; or

Pass an additional social studies Regents exam in a different course or Department Approved
Alternative ; or

Pass an additional English assessment in a different course selected from the Department
Approved Alternative list; or

Pass an approved CTE Assessment after successfully completing an approved CTE program

Pass a Department approved pathway assessment in the Arts

Pass a Department approved pathway assessment in a Language other than English (LOTE)

ADDITIONAL REQUIREMENTS

Minimum Course Load

Each student enrolled at Hamburg High School is required to maintain a course load **EQUIVALENT TO SIX PERIODS OF INSTRUCTION EACH SEMESTER** plus physical education. Students planning to graduate early must meet the minimum course load requirement.

ADVANCED PLACEMENT PROGRAM

Taking Advanced Placement classes can help students stand out in college admissions, earn college credit while in High School, build college-readiness skills, and possibility skip introductory courses in college.

Admission to college-level Advanced Placement courses requires students to follow application procedures announced by participating departments. Applications may include academic information, writing samples and personal interviews with AP teachers. Students accepted into the program will be required to take the AP exam in May. The fee for the AP exam (approximately \$95) is the responsibility of the student and due in October.

The following AP classes are available for Hamburg High School Students:

- English 11, English 12
- US History, World History, European History
- Calculus AB, Calculus BC, Statistics
- Biology, Chemistry, Environmental Science, Physics
- Computer Science Principals, Computer Science A
- Studio Art, Art History

EARLY GRADUATION

A student planning on graduating early should meet with his/her counselor to ensure all graduation requirements are met. If a student is planning on graduating one full year early, all paperwork must be in to administration by the end of August of the Sophomore year. A student planning on graduating in January of the Senior year, must have all paperwork in to administration by the end of August of the Junior year.

ACCESSIBILITY TO EDUCATIONAL PROGRAMS

Each student is encouraged to develop and achieve individual educational goals. The school will provide every student with equal educational opportunities regardless of gender, race, color, creed, national origin, religion, age, economic status, or disability. No student will be excluded on any such basis from participating in or having access to any course offerings, student athletics, counseling services, employment assistance, extracurricular activities, or other school resources. Inquiries regarding compliance with the title IX of the Education Amendments of 1972 and Section 504 may be directed to: Superintendent of Schools, 5305 Abbott Road, Hamburg, New York 14075. Telephone 646-3220.

HHS

“Committed to Excellence”

2019-2020
Course
Description
Section

ENGLISH

Course #	Course Title	Length	Credit
1100	ENGLISH 9R	40 Weeks	1
1110	ADVANCED ENGLISH 9	40 Weeks	1
1200	ENGLISH 10R	40 Weeks	1
1210	ADVANCED ENGLISH 10	40 Weeks	1
1300	ENGLISH 11R	40 Weeks	1
1310	ADVANCED PLACEMENT ENGLISH 11	40 Weeks	1
1400	ENGLISH 12	20 Weeks	1/2
1410	ADVANCED PLACEMENT ENGLISH 12	40 Weeks	1
1420	BEST SELLERS & MODERN FICTION	20 Weeks	1/2
1430	CREATIVE WRITING	20 Weeks	1/2
1440	CRIME FICTION	20 Weeks	1/2
1450	FILM APPRECIATION	20 Weeks	1/2
1460	GREEK MYTHOLOGY, FOLKLORE, AND LEGENDS	20 Weeks	1/2
1470	HUMAN RIGHT IN LITERATURE	20 Weeks	1/2
1480	PUBLIC SPEAKING	20 Weeks	1/2

1100 ENGLISH 9R (Regents Level)

40 Weeks Credit: 1 Unit **Prerequisite:** English 8

This course is a language arts course which reinforces and extends previous study of oral and written communication and which strongly emphasizes writing and reading. Vocabulary, spelling, and grammar are developed through frequent writing, both personal and formal, as well as, through group work and oral presentations. Students will write for many purposes and audiences, striving for clear expression and correct standard written English.

1110 **ADVANCED ENGLISH 9**

40 Weeks Credit: 1 Unit **Prerequisite:** 85 or above average in Advanced English 8 **OR** recommendation from English 8 teacher

This course offers a rigorous study and analysis of literature and its authors, along with extensive writing, both personal and formal. Students will write for many purposes and audiences while developing voice, vocabulary and grammar, as well as critical thinking and research skills.

1200 **ENGLISH 10R (Regents Level)**

40 Weeks Credit: 1 Unit **Prerequisite:** English 9R

This course is a language arts/literature course, which strongly emphasizes reading and writing. Students will write for many purposes and audiences, and will read a wide variety of works of literature. Vocabulary, spelling, grammar, and research skills are developed through frequent writing, both personal and formal, as well as, through group work and oral presentations.

1210 **ADVANCED ENGLISH 10**

40 Weeks Credit: 1 Unit **Prerequisite:** 85 or above average in Advanced English 9 **OR** recommendation from English 9 teacher

This course offers a more challenging, in-depth study of literature and its greatest authors. Extensive reading, personal and formal writing, critical thinking, research, oral presentations, and the development of a portfolio will further develop language skills.

1300 **ENGLISH 11R (Regents Level/Exam)**

40 Weeks Credit: 1 Unit **Prerequisites:** English 9R and English 10R

This course investigates American literature through thematic units with emphasis on writing skills, reading comprehension, and the elements of literature. Vocabulary, spelling, grammar and, research skills are developed through frequent writing, both personal and formal, as well as, through group work and oral presentations.

1310 **ADVANCED PLACEMENT ENGLISH 11**

40 Weeks Credit: 1 Unit **Prerequisite:** Application required

Advanced Placement English Language and Composition is designed to challenge the highly motivated student who has been successful in prior writing and literature classes. This course allows students the opportunity to read a variety of texts with an emphasis on how language shapes society. The course emphasizes intensive writing in a range of forms and styles including narration, exposition, argumentation, and literary analysis. Students take the AP exam for English Language and Composition in May

1400 ENGLISH 12

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11R

This twenty week course examines the human condition based on a study of world literature both classical and contemporary. Students will write with increasing maturity and complexity. Students are required to write a literary-based research paper. In addition, students will develop a personal writing style and voice by focusing on their own personal memoirs.

1410 ADVANCED PLACEMENT ENGLISH 12

40 Weeks Credit: 1 Unit **Prerequisite:** Application required

Advanced Placement English Literature and Composition builds upon the skills developed in English 11AP. Students will engage in intensive literary analysis of selected works from world literature. Students will discuss and write about the philosophy and psychology of great literature in a seminar atmosphere. Students take the AP exam for English Literature and Composition in May. The class is comparable to a freshman college English course. *See page 5 for additional information on AP courses.*

1420 BEST SELLERS & MODERN FICTION

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

Students in this course will read and analyze literature from the post World War II era and discuss its place in society. Discussion will range from analysis of the changing writer's voice to highly relevant, contemporary issues. They will be expected to actively discuss these modern selections, produce written responses, and complete various projects.

1430 CREATIVE WRITING

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

The creative writing course allows students to experiment with writing in different genres in order to achieve an authentic voice. It is a writing intensive course that focuses on the process of creating original, meaningful, and authentic prose and poetry. Students who succeed in this course are self-directed and self motivated.

1440 CRIME FICTION

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

In this course students will examine the literary and cultural factors that contributed and influenced crime fiction writing from the beginning of the century to present day. We will begin reading American crime fiction stories by notable writers from the 1920s to the 1950s. From this exciting period in American fiction, American readers witnessed the rise of a popular genre: Noir or hard boiled fiction. The survey of crime fiction continues through the decades as we read current novels by the most notable mystery writers. In addition, we will take a close look at a related art form: film noir and other films related to hard boiled fiction and the mystery genre.

1450 FILM APPRECIATION

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

This course is designed to change the way we watch films; the student will go from being a passive viewer of films to an active viewer. The films studied represent significant contributions to the field from the early 1900s to present day. Focus is placed on both technical and thematic interpretation. There is a significant amount of reading and writing required to succeed in this course.

1460 GREEK MYTHOLOGY, FOLKLORE, AND LEGENDS

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

This course offers students the opportunity to study various world cultures as they appear in myths, folklore, and legends. The scope of the Greek myths is astounding; they offer passionate love stories, adventure stories, superhuman tales, fairy tales, and tales of gods, monsters and, beasts. These stories offer mythic explanations for the existence of the universe, human beings, and the problem of evil. We have inherited these myths in the form of art and literature. A significant amount of reading and writing is required for success in this class.

1470 HUMAN RIGHTS IN LITERATURE

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

This course provides an introduction to human rights issues through literature, primarily first-person accounts by survivors and witnesses. Students who participate in the class will study the creation of the Universal Declaration of Human Rights, historical and contemporary human rights violations (including the Holocaust, Rwandan genocide, Native American genocide, slavery in the US, and the ongoing conflict in Syria), as well as American and international responses to human rights violations. Additionally, students will research, develop and participate in a project that addresses a human rights issue important to them.

1480 PUBLIC SPEAKING

20 Weeks Credit: 1/2 Unit **Prerequisite:** English 11

Public speaking instruction will focus on methods of preparing and delivering a speech and methods of gaining complete control as a speaker. Expect to prepare and deliver speeches of the following types: impromptu, introductions, demonstrations, and persuasive. Peer evaluations and videotaping will also play a role in class.

SOCIAL STUDIES

Course #	Course Title	Length	Credit
2100	GLOBAL HISTORY AND GEOGRAPHY 1	40 Weeks	1
2200	GLOBAL HISTORY AND GEOGRAPHY 2	40 Weeks	1
2250	ADVANCED PLACEMENT WORLD HISTORY	40 Week	1
2300	U.S. HISTORY AND GOVERNMENT	40 Weeks	1
2350	ADVANCED PLACEMENT UNITED STATES HISTORY	40 Weeks	1
2400	ECONOMICS	20 weeks	1/2
2410	PARTICIPATION IN GOVERNMENT	20 Weeks	1/2
2420	CRIMINAL JUSTICE	20 Weeks	1/2
2430	HERSTORY	20 Weeks	1/2
2450	ADVANCED PLACEMENT EUROPEAN HISTORY	40 Weeks	1
2460	PSYCHOLOGY	20 Weeks	1/2

2100 GLOBAL HISTORY AND GEOGRAPHY 1

40 Weeks Credit: 1 Unit **Prerequisite:** Grade 8 Social

This course is the first part of a two-part learning experience which focuses on common themes that reoccur over time and place. The five social studies learning standards are applied through a chronological approach to global history examining Pre-History - 1700 A.D. A **local** exam will assess the students' understanding of Global History and Geography at the end of ninth grade.

2200 GLOBAL HISTORY AND GEOGRAPHY 2

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Global 1

This course is a continuation of the chronological approach of Global 1. The curriculum examines World History from 1700– Present. A comprehensive Regents examination at the end of this course will assess the students' understanding of Global History and Geography 1 and 2.

2250 ADVANCED PLACEMENT WORLD HISTORY

40 Weeks Credit: 1 Unit **Prerequisite:** Application and successful completion of Global 1

Advanced Placement World History is a college-level course designed for highly motivated students interested in the evolution of human societies throughout the world and their subsequent interaction with each other. Content for this course is broken down into 5 major chronological units, ranging from prehistory to present day with each receiving equal attention. Lecture, daily discussions, textbook and primary source reading and essay writing are emphasized as students will be expected to analyze the continuities and changes of societies throughout time, and how globalization has made them interdependent. All students are required to take the Advanced Placement examination in May. *See page 5 for additional information on AP courses.*

2300 U.S. HISTORY AND GOVERNMENT

40 Weeks Credit: 1 Unit **Prerequisites:** Successful completion of Global 1 & 2

U.S. History and Government focuses on the study of the structure and function of the national government using key documents such as the Constitution. Also, case law is used to study Americans' efforts to improve democracy. The remainder of the year is devoted to the study of the history of our nation with an emphasis on the twentieth century. A comprehensive Regents examination at the end of this course will assess the students' understanding of U.S. History and Government.

2380 ADVANCED PLACEMENT UNITED STATES HISTORY

40 Weeks Credit: 1 Unit **Prerequisite:** Application and summer reading assignment required

AP United States History is a college-level course open to qualified juniors which will satisfy the eleventh grade social studies requirement. Students will be expected to demonstrate an understanding of major events in American history as presented through lecture, textbook reading, critical analysis of historical interpretations, documents, and novels by major American writers. Emphasis will be placed upon essay-writing skills. Although hard work is expected, those students who accept the challenge will find their efforts rewarding. Juniors taking the course will be required to take the Regents examination in U.S. History and Government in June. All students are required to take the Advanced Placement examination in May. *See page 5 for additional information on AP courses.*

2400 **ECONOMICS**

20 Weeks Credit: 1/2 Unit **Prerequisite:** Successful completion of US History **OR** approval by instructor

This one semester course is designed to provide students with the economic knowledge and skills that will enable them to function as informed and economically literate citizens in our society and in the world. It is not meant to be a course in consumer education, although the emphasis on rational decision making in economic areas will surely encourage students to become wiser consumers, as well as, better citizens.

2410 **PARTICIPATION IN GOVERNMENT**

20 Weeks Credit: 1/2 Unit **Prerequisite:** Successful completion of US History **OR** approval by instructor

Participation in Government is designed to give students an awareness of the process by which political decisions are made in the United States. Equally important is the goal of helping students gain the skills necessary to effectively participate in the making of decisions at the local, state, and national levels of our government. A research paper and/or final exam or project is required at the conclusion of the course.

2420 **CRIMINAL JUSTICE**

20 Weeks Credit: 1/2 Unit **Prerequisite:** Successful completion of US History

Criminal Justice is an elective course for seniors who want to learn more about the Criminal Justice System. This course studies the Criminal Justice System including the history of the legal system, violent crimes, property crimes, organized crimes, white-collar crimes, and internet-based crimes. It is an in-depth study of causes and prevention of criminal behavior. Through the use of videos and many outside speakers from police agencies, law departments, correctional guards, etc. the student will have a thorough knowledge of the Criminal Justice System.

2430 **HERSTORY**

20 Weeks Credit: 1/2 Unit **Prerequisite:** Successful completion of Global Studies 2

2440 HOLOCAUST AND GENOCIDE STUDIES

20 Weeks Credit: 1/2 Unit **Prerequisite:** Successful completion of Global Studies 2

This twenty week course will focus on the Jewish genocide that occurred during WWII. It will include an intensive investigation of The Holocaust, and will include topics ranging from historical persecution of Europe's Jews, to the Final Solution. The course will also touch on other modern genocides including, but not limited to, the Massacre of Nanking, and the Rwandan Genocide. We will also discuss topics including warning signs, recipes for Genocide, as well as, things we can do to prevent and/or bring attention to genocide. Course work will include projects, reading, writing, research, film review, as well as, regular examination.

2450 ADVANCED PLACEMENT EUROPEAN HISTORY

40 Weeks Credit: 1 Unit **Prerequisite:** Application and summer reading assignment required

AP European History is a college-level course intended for students who have an interest in history, are willing to work hard, and have completed Global Studies 2. Students will be expected to demonstrate knowledge of basic chronology and of major events and trends from approximately 1450 A.D. (the High Renaissance) to the present. In addition to providing a basic narrative of events and movements, the goals of the course are to develop an understanding of some of the principal themes in modern European history, to develop the ability to analyze historical evidence, and to express historical understanding in writing. All students are required to take the Advanced Placement examination exam in May. *See page 5 for additional information on AP courses.*

2460 PSYCHOLOGY

20 Weeks Credit: 1/2 Unit **Prerequisite:** None

This course prepares students to develop an understanding of the principles and application of psychology. It covers such topics as how we learn, how behavior develops, what intelligence is, personality theories, and more. Assessment includes tests, experiments, and a final project.

MATHEMATICS

Course #	Course Title	Length	Credit
3000	FUNDAMENTALS OF ALGEBRA	40 Weeks	1
3100	COMMON CORE ALGEBRA	40 Weeks	1
3110	ADV COMMON CORE GEOMETRY	40 Weeks	1
3200	GEOMETRY	40 Weeks	1
3210	COMMON CORE GEOMETRY	40 Weeks	1
3220	ADV COMMON CORE ALGEBRA 2	40 Weeks	1
3300	QUANTITATIVE REASONING	40 Weeks	1
3310	COMMON CORE ALGEBRA 2	40 Weeks	1
3320	ADVANCED PRE-CALCULUS	40 Weeks	1
3400	FINITE MATH	40 Weeks	1
3410	STATISTICS	40 Weeks	1
3420	PRE-CALCULUS	40 Weeks	1
3430	ADVANCED PLACEMENT CALCULUS AB	40 Weeks	1
3440	ADVANCED PLACEMENT CALCULUS BC	40 Weeks	1
3450	ADVANCED PLACEMENT STATISTICS	40 Weeks	1

3000 FUNDAMENTALS OF ALGEBRA

40 Weeks Credit: 1 Unit **Prerequisite:** None

This course is designed for students who need to continue building a stronger math foundation for success in Common Core Algebra I. Students will understand mathematics and become more mathematically confident through the study of elementary algebra prior to entering the more rigorous Common Core Algebra I course. Graphing calculators are required. Students will take a local assessment in June.

3100 COMMON CORE ALGEBRA I

40 Weeks Credit: 1 Unit **Prerequisite:** None

The primary purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The content extends understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data. Students engage in methods for analyzing, solving, and using quadratic functions. Students will take the Common Core Algebra exam in June. Graphing calculators are state mandated for use in this course and on the Common Core exam.

3110 ADVANCED COMMON CORE GEOMETRY

40 Weeks Credit: 1 Unit **Prerequisite:** Common Core Algebra I

In this course, students will explore complex geometric situations and explain geometric relationships including using formal methods of proof. Congruency and similarity will be studied by using construction tools, transformations, proof and coordinate Geometry. Other topics include the volume and mass of 3-dimensional figures, trigonometric ratios and right triangles, and circles in and out of the coordinate plane. Advanced topics and geometric relationships will be explored including Law of Sines and Law of Cosines. Students will take the Common Core Geometry exam in June. Graphing calculators are state mandated for use in this course and on the Common Core exam.

3200 GEOMETRY

40 Weeks Credit: 1 Unit **Prerequisite:** Fundamentals of Algebra

In this course, students will explore complex geometric situations and explain geometric relationships including using formal methods of proof. Congruency and similarity will be studied by using construction tools, transformations, proof and coordinate Geometry. Other topics include the volume and mass of 3-dimensional figures, trigonometric ratios and right triangles, and circles in and out of the coordinate plane. Students will take a local exam in June. Graphing calculators are required for this course

3210 COMMON CORE GEOMETRY

40 Weeks Credit: 1 Unit **Prerequisite:** Common Core Algebra I

In this course, students will explore complex geometric situations and explain geometric relationships including using formal methods of proof. Congruency and similarity will be studied by using construction tools, transformations, proof and coordinate Geometry. Other topics include the volume and mass of 3-dimensional figures, trigonometric ratios and right triangles, and circles in and out of the coordinate plane. Students will take the Common Core Geometry exam in June. Graphing calculators are state mandated for use in this course and on the Common Core exam.

3220 ADVANCED COMMON CORE ALGEBRA 2

40 Weeks Credit: 1 Unit **Prerequisite:** Advanced Common Core Geometry

Students enrolled in Advanced Algebra 2 and Trigonometry are sophomores who took Geometry in 9th grade. This course is designed to continue building strong intermediate Algebra and Trigonometry skills. This is the third year in the traditional sequence in High School Mathematics. Students will take the Regents Algebra 2/Trigonometry exam in June. Graphing calculators are state mandated for use in this course and on the end of the year state assessment.

3300 QUANTITATIVE REASONING

40 Weeks Credit: 1 Unit **Prerequisite:** ~~Prerequisite:~~ Recommended for students who earned a 70 or below on both the Common Core Algebra Exam and the Common Core Geometry Exam.

This course is designed to build a strong algebra and number reasoning skills foundation for college bound students. Topics include functions, quadratics, radicals, complex numbers, polynomials, absolute value, and exponentials. Students will take a local exam in June. Graphing calculators are required.

3310 COMMON CORE ALGEBRA 2

40 Weeks Credit: 1 Unit **Prerequisite:** Common Core Geometry

This course is designed to build on students work with linear, quadratic, and exponential functions from Algebra, students extend their repertoire of functions to include polynomial, rational, and radical functions solving algebraically and graphically. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students extend trigonometric functions with the values of sine, cosine, and tangent at $\pi/6$, $\pi/4$, $\pi/3$, $\pi/2$, etc. They compute and interpret probabilities from those models for compound events, attending to mutually exclusive events, independent events, and conditional probability. Graphing calculators are required for this course and for the end of the year assessment. NOTE: This course is NCAA approved.

3320 ADVANCED PRE-CALCULUS

40 Weeks Credit: 1 Unit **Prerequisite:** Advanced Algebra 2 and Trigonometry or Teacher Recommendation

This course is offered to Juniors who are in the advanced track. It is a prerequisite for AP Calculus AB and AP Calculus BC in senior year. Every student will need a graphing calculator. The topics covered are typical of a fourth year math course and are essential for senior year AP Calculus. Upon successfully completing this course students will have a choice between AP Calculus AB (College Calc I) or AP Calculus BC (College Calc I & II). Students who complete Math 4 ADV Pre-Calculus and decide not to take AP Calculus in senior year may take the regular Pre-Calculus course as a senior and receive credit for both since many of the topics are different. The course will conclude with a final exam in June.

3400 FINITE MATH

40 Weeks Credit: 1 Unit Prerequisite: Senior Level

This is a one year credit bearing math elective course *for seniors*. This course counts towards a students mathematical commencement qualifications and meets the New York State's mathematical requirements towards earning a Regents Diploma. Students will focus on mathematical model building, matrix algebra, linear programming, logic, probability & statistics. Concepts are introduced with concrete, real life examples chosen from current topics and issues in the media. Students will make sense of problems and persevere in solving them. They will reason abstractly and quantitatively while constructing viable arguments and critiquing the reasoning of others. This course is NCAA approved.

3410 STATISTICS

40 Weeks Credit: 1 Unit **Prerequisite:** CC Algebra and Geometry

Statistics in the real world is designed for students who wish to further increase their understanding of data collection and analysis in an applied setting. Students will use descriptive statistics, graphical displays, probability and simulation to make inferences (draw conclusions) from real data. Students will research how statistics are used in the real world throughout each unit. Much of the course will be devoted to project-based learning activities that incorporate the fundamentals of statistics. This is an excellent introductory course for seniors needing to take statistics in college but who may not be ready for the rigors of AP Statistics. A graphing calculator is required for this course.

3420 PRE-CALCULUS

40 Weeks Credit: 1 Unit **Prerequisite:** Algebra 2 and Trigonometry

The main purpose of this class is to analyze functions, understand conic sections, matrices, analytic geometry, trigonometry, limits and derivatives to prepare students to take a calculus course or any other fifth year advanced mathematics course. Graphing calculators are required for all course work. A comprehensive final exam will be given in June.

3430 ADVANCED PLACEMENT CALCULUS AB

40 Weeks Credit: 1 Unit **Prerequisite:** Math 4 Advanced Pre-Calculus

This course is offered to seniors who are in the advanced track who have successfully completed Math 4 ADV. Every student will need a graphing calculator. The topics covered are determined by the national AP Calculus syllabus, which is set by the College Board and represents what is typically covered during the first semester of college calculus. All students are required to take the Advanced Placement exam in May. The course will conclude with a final exam in June. *See page 5 for additional information on AP courses.*

3440 ADVANCED PLACEMENT CALCULUS BC

40 Weeks Credit: 1 Unit **Prerequisite:** Math 4 Advanced Pre-Calculus

This course is offered to seniors who are in the advanced track who have successfully completed Math 4 ADV. Every student will need a graphing calculator. The topics covered are determined by the national AP Calculus syllabus, which is set by the College Board and represents what is typically covered during the first two semesters of college calculus. All students are required to take the Advanced Placement exam in May. The course will conclude with a final exam in June. *See page 5 for additional information on AP courses.*

3450 ADVANCED PLACEMENT STATISTICS

40 Weeks Credit: 1 Unit **Prerequisite:** Algebra 2 and Trigonometry (grade of 80+ on Regents and for class)

This course is equivalent to an introductory statistics course typically required for majors such as business, health science, and social science. The purpose of the course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to the following themes: exploring data, planning a study, anticipating patterns, probability and statistical inference. The AP Statistics course is an excellent option for any secondary school student who possesses sufficient mathematical maturity and quantitative reasoning ability. All students are required to take the Advanced Placement exam in May. A graphing calculator is required for this course. *See page 5 for additional information on AP courses.*

SCIENCE

Course #	Course Title	Length	Credit
4100	LIVING ENVIRONMENT – BIOLOGY	40 Weeks	1
4200	PHYSICAL SETTING - EARTH SCIENCE	40 Weeks	1
4220	EARTH SCIENCE	40 Weeks	1
4230	ADV PHYSICAL SETTING - EARTH SCIENCE	40 Weeks	1
4300	PHYSICAL SETTING - CHEMISTRY	40 Weeks	1
4320	CHEMISTRY IN ACTION	40 Weeks	1
4330	ADVANCED PLACEMENT BIOLOGY	40 Weeks	1
4340	ADVANCED PLACEMENT CHEMISTRY	40 Weeks	1
4400	PS PHYSICS	40 Weeks	1
4420	PROJECT PHYSICS	40 Weeks	1
4430	ADVANCED PLACEMENT PHYSICS C	40 Weeks	1
4440	AP ENVIRONMENTAL SCIENCE	40 Weeks	1
4450	SCIENCE DISASTERS 1	40 Weeks	1
4455	SCIENCE DISASTERS 2	40 Weeks	1
4460	FORENSIC SCIENCE	20 Weeks	1/2
4470	GEOGRAPHIC INFORMATION SYSTEMS	20 Weeks	1/2
4475	INTRODUCTION TO METEOROLOGY	20 Weeks	1/2
4480	MICROBIOLOGY 1—GENETICS	20 Weeks	1/2
4485	MICROBIOLOGY 2—INFECTIOUS DISEASE	40 Weeks	1
4490	HUMAN PHYSIOLOGY	20 Weeks	1/2

4100 LIVING ENVIRONMENT - BIOLOGY

40 Weeks Credit: 1 Unit **Prerequisite:** None

The Living Environment is a biology course that emphasizes reproduction and development, homeostasis, cellular biology, genetics, evolution, ecology and human influence on the environment. Students will understand and apply scientific concepts, principles and theories pertaining to the living environment. The course will also lead them to recognize the historical development of ideas in science. One laboratory period per 4-day cycle will accompany the classroom experience. Students are required to successfully complete 30 labs as well as four required New York State Labs, to be able to take the Living Environment Regents examination.

4200 PHYSICAL SETTING - EARTH SCIENCE

40 Weeks Credit: 1 Unit **Prerequisite:** None

Regents Earth Science is a survey course that includes several natural science disciplines. Geology, properties of minerals, theory of plate tectonics, earthquakes, volcanoes, astronomy, meteorology, map and graph interpretation are a few of the topics covered. Critical thinking is emphasized in this course. One laboratory period per 4-day cycle will accompany the classroom experience. Students are required to complete 30 labs before taking the Regents Physical Setting/Earth Science examination.

4220 EARTH SCIENCE

40 Weeks Credit: 1 Unit **Prerequisite:** None

Non-Regents Earth Science is a survey course that includes several natural science disciplines. Geology, properties of minerals, theory of plate tectonics, earthquakes, volcanoes, astronomy, meteorology, map and graph interpretation are a few of the topics covered. This course promotes the development of science research and writing as it relates to everyday life. Through the use of hands on activities and technology, students will develop a better understanding of the Earth, Earth cycles and how humans are part of the Earth system.

4230 PHYSICAL SETTING - ADVANCED EARTH SCIENCE

40 Weeks Credit: 1 Unit **Prerequisite:** 8th grade Biology or teacher recommendation

Advanced Earth Science is recommended for freshmen who took Regents Living Environment in 8th grade. This course is designed to continue building advanced thinking skills in science. The curriculum will follow the Regents requirements for Physical Setting - Earth Science, with greater depth of content and an emphasis on skill development related to scientific analysis and problem solving via field trips and enrichment lab activities. One laboratory period per 4-day cycle will accompany the classroom experience. Students are required to complete 30 labs before taking the Regents Physi-

4300 PHYSICAL SETTING - CHEMISTRY

40 Weeks Credit: 1 Unit **Prerequisites:** Living Environment, Strong Algebra skills recommended

Students who plan a science-related major or a strong science background for liberal arts are encouraged to take this course. Major topics covered include bonding, atomic structure, molecular structure, acid-base, equilibrium, redox reactions, thermodynamics and chemical applications. There is heavy emphasis in mathematical relationships and equation problem solving; therefore, students will need a strong math background. One laboratory period per 4-day cycle will accompany the classroom experience. Students are required to complete 30 labs before taking the Regents Physical Setting/Chemistry examination.

4320 CHEMISTRY IN ACTION

40 Weeks Credit: 1 Unit **Prerequisites:** None

Chemistry is a class designed for non-Regents science students who want to learn about chemistry. This course is designed to follow Regents Chemistry, but without the needed higher level math skills. This course can be used as a third science credit needed for graduation. Chemistry can also be used as a preparation course for students not yet ready to take on the challenges of Regents Chemistry but would like to in the future.

4330 ADVANCED PLACEMENT BIOLOGY

40 Weeks Credit: 1 Unit **Prerequisite:** Living Environment , Regents Chemistry

The AP Biology course is offered to students who wish to pursue college-level studies while still in high school. The course is open to exceptionally well-qualified juniors and seniors as determined by scholastic records and personal interviews. This course meets two periods a day. Successful completion of Regents Chemistry is strongly suggested. All students are required to take the AP exam in May. *See page 5 for additional information on AP courses.*

4340 ADVANCED PLACEMENT CHEMISTRY

40 Weeks Credit: 1 Unit **Prerequisite:** Physical Setting - Chemistry and Algebra 2 and Trigonometry

Recommended for students interested in pursuing science, this college freshman course provides an in-depth look at topics introduced in Regents Chemistry. A firm knowledge of math, including an understanding of decimal, exponents, logarithms, quadratics, and algebra equations, is essential to success in the course (Calculus is not required) major topics include: stoichiometry, reaction kinetics, and equilibrium. There is also a rigorous laboratory component. This class meets for two periods each day. Students have the option to take the AP Exam in May, or register as a SUNY Erie Community College student and earn up to 9 college credits (approx. cost \$500.00). The earned college credits are fully transferrable to all SUNY schools and most private colleges. *See page 5 for additional information on AP courses.*

4400 PHYSICAL SETTING - PHYSICS

40 Weeks Credit: 1 Unit **Prerequisite:** Strong Math Trigonometry skills

Physics is the study of how things work. This course will cover such topics as motion, energy, electricity, magnetism, light, sound, and nuclear atomic physics. Laboratory reports are writing intensive. Minor computer knowledge is needed. Graphing skills, mathematical analysis, and organizational skills will be developed. Microsoft Word and Excel are used for lab reports. One laboratory period per 4-day cycle will accompany the classroom experience. Students are required to complete 30 labs before writing the Physical Setting/Physics Regents examination.

4420 PROJECT PHYSICS

40 Weeks Credit: 1 Unit

Prerequisite: CC Algebra, 1 Regents Science
Recommended: CC Geometry, 2 Regents Science

Project physics is a **hands-on course** where you will learn about various topics of physics while performing and constructing experiments. The class will use discovery to build **higher level thinking** strategies. Students will learn to problem solve while **learning lifelong skills** like basic electricity wiring, cost basis analysis, developing budgets, home energy audits.

Project Physics is a non-regents science course which will give you a science credit necessary for graduation. Students will cover such topics as the physics of flight, boomerangs, basic electricity, simple machines, roller coasters, photography, catapults, bridges, rockets, energy conservation, circuitry, radios, astronomy, and several more. The classes will build and test many models and then write up reports of their findings.

4430 ADVANCED PLACEMENT PHYSICS C

40 Weeks Credit: 1 Unit

Prerequisite: Exceptional grasp of mathematical principals

The AP Physics C: Mechanics course is equivalent to a one-semester, calculus-based, college-level physics course. It is especially appropriate for students planning to specialize or major in physical science or engineering. The course explores topics such as kinematics; Newton's laws of motion; work, energy and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation. Introductory differential and integral calculus is used throughout the course. Laboratories consist of open-ended investigations and comprehensive written reports. This course focuses on inquiry-based learning supporting student development in the areas of scientific critical thinking and reasoning skills. The course is open to juniors and seniors wishing to pursue fields in engineering, medical, technical and related areas. This course meets for a double period every day. All students are required to take the AP exam in May.

4440 AP ENVIRONMENTAL SCIENCE

40 Weeks Credit: 1 Unit

Prerequisite: PS Earth Science

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science.

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them.

4445 ENVIRONMENTAL SCIENCE

40 Weeks Credit: 1 Unit

Prerequisites: Successful completion of Physical Setting - Earth Science **and** Living Environment - Biology, Physical Setting - Chemistry or Chemistry in Action

Environmental Science is an elective course intended for juniors and seniors who want to learn more about the inter-workings of the environment. It will provide a solid base for the student to formulate their thoughts concerning environmental issues. Students who wish to pursue a career in environmental consulting, ecology, conservation, or other related disciplines will find Environmental Science essential. This course utilizes a multi disciplinary approach to study ecological inter-relationships, aquatic ecology, wetland issues, population studies, pollution biology and current environmental issues. Laboratory and field collections are an important aspect of this challenging but rewarding course.

4450 DISASTERS 1

20 Weeks Credit: 1/2 Unit **Prerequisites:** Junior or Senior

Disasters 1 is an elective course intended for juniors and seniors who want to learn more about natural and manmade disasters. It will provide a solid base in the geologic and meteorological processes including floods, earthquakes, volcanoes, landslides, avalanches, hurricanes, tsunamis, severe weather and other natural hazards. The course will include discussion of major events in the geologic and historical record as well as future hazard potential. We will assess the risks humans face in different regions, including local hazards, our contribution to hazards, and how we can minimize and cope with future events. Students who are interested in the earth sciences should find this course interesting and worthwhile.

4455 DISASTERS 2

20 Weeks Credit: 1/2 Unit **Prerequisite:** Science Disasters 1

Disasters 2 is continuation of Disasters 1, which is an elective course intended for juniors and seniors who want to learn more about natural and manmade disasters. This portion of the course will provide a basis for geologic, astronomical, meteorological, and environmental processes including wild land fires, pests and plagues, hazards from space, major global concerns, environmental deterioration, and impacts of war and terrorism. The course will include discussion of major events in the geologic and historical record as well as future hazard potential. We will assess the risks humans face in different regions, including local hazards, our contribution to hazards, and how we can minimize and cope with future events. Students who are interested in the earth sciences should find this course interesting and worthwhile.

4460 FORENSIC SCIENCE

20 Weeks Credit: 1/2 Unit **Prerequisites:** Junior or Senior

Forensic Science is an elective course intended for juniors and seniors who want to learn the science behind crime scenes. In this interdisciplinary course students will investigate the application of science with respect to law in criminal activity. Students will explore forensic laboratory techniques such as fingerprint analysis, blood typing, microscopic examination of evidence, and DNA fingerprinting. Computer simulations and historically significant cases will be examined. Upon successful completion of the course students can receive college credit and possible scholarship at Hilbert College.

4470 GEOGRAPHIC INFORMATION SYSTEMS

40 Weeks Credit: 1 Unit **Prerequisites:** Junior or Senior

GIS is a computer based mapping program allowing you to model, question, and analyze lots of information to understand relationships, patterns, and trends in your world. It gives you the power to create maps, integrate information, visualize scenarios, present powerful ideas, and develop solutions to real world problems. In this course you will be immersed in a community project that is based around an issue that is important to you. GIS has a wide variety of practical applications and is used in many fields including biology, engineering, forestry, city planning, crime investigation, military, real estate, marketing and more. You can earn up to three college credits through SUNY Fredonia.

4475 **INTRODUCTION TO METEOROLOGY**

20 Weeks Credit: 1/2 Unit **Prerequisites:** Junior or Senior, recommended completion of Earth Science and Living Environment

This elective course is intended for juniors and seniors who want to learn more about the Earth's atmosphere. It will provide a solid base in the structure of the atmosphere, weather processes and weather systems, including climatic process, severe weather, and weather forecasting. Students who are interested in earth science (specifically weather) will find this course an interesting and worthwhile course. Laboratory and field collections are an essential piece of this challenging class. Students are required to complete a research project of their choice and make several oral presentations.

4480 **MICROBIOLOGY 1—GENETICS**

20 Weeks Credit: 1 Unit **Prerequisites:** Two full year science classes, completion of Regents Biology course and exam (85% overall average in course) or teacher recommendation

Students interested in learning more about heredity, genetic engineering, genetic diseases, etc. will benefit from taking this course. Opportunities for hands-on learning will be emphasized.

4485 **MICROBIOLOGY 2—INFECTIOUS DISEASE**

20 Weeks Credit: 1 Unit **Prerequisites:** Completion of Regents Biology and Chemistry course and exam (80% overall average in course) or teacher recommendation

Students interested in learning more about not only the benefits of microorganisms but also the harms. Various diseases caused by pathogens will be explored. Opportunities for hands-on learning will be emphasized.

4490 **HUMAN PHYSIOLOGY**

20 Weeks Credit: 1/2 Unit **Prerequisites:** Junior or Senior, recommended completion of Living Environment and Chemistry

This is an introductory study of the human body, directed at making the students more aware of scientific inquiry about body structures and functions. The systems of the body and their related anatomy and physiology are covered in this course. In addition, relevant pathophysiological issues and current developments in the medical and health fields are also investigated to provide students with immediate and meaningful application of the subject matter and the opportunity to develop and apply critical thinking skills.

WORLD LANGUAGES

Course #	Course Title	Length	Credit
5000	FRENCH 1	40 Weeks	1
5010	LATIN 1	40 Weeks	1
5020	SPANISH 1	40 Weeks	1
5100	FRENCH 2	40 Weeks	1
5105	ADVANCED FRENCH 2	40 Weeks	1
5110	LATIN 2	40 weeks	1
5120	SPANISH 2	40 Weeks	1
5125	ADVANCED SPANISH 2	40 Weeks	1
5200	FRENCH 3	40 Weeks	1
5205	ADVANCED FRENCH 3	40 Weeks	1
5210	LATIN 3	40 Weeks	1
5220	SPANISH 3	40 Weeks	1
5225	ADVANCED SPANISH 3	40 Weeks	1
5300	FRENCH 4	40 Weeks	1
5305	ADVANCED FRENCH 4	40 Weeks	1
5310	LATIN 4	40 Weeks	1
5320	SPANISH 4	40 Weeks	1
5325	ADVANCED SPANISH 4	40 Weeks	1
5400	FRENCH 5	40 Weeks	1
5420	SPANISH 5	40 Weeks	1

5000 FRENCH 1

40 Weeks Credit: 1 Unit **Prerequisite:** None

This course is an introduction to written and spoken French. The student will learn basic vocabulary of home, school, hobbies, place, and environment in the context of simple structures. Oral and written exercises reinforce the basic sentence structure and vocabulary development. Emphasis is given to good pronunciation and the understanding of spoken French. Career opportunities will also be introduced.

5100 **FRENCH 2**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of French 1

French 2 continues to develop communication in French through the development of listening, speaking, reading and writing. Vocabulary and complex structures are developed through oral and written practice. A local exam is given at the end of the course.

5105 **ADVANCED FRENCH 2**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Advanced French 1 or Teacher recommendation

French 2 continues to develop communication in French through the development of listening, speaking, reading and writing. Extended vocabulary and more complex structures are developed through oral and written practice as well as independent Authentic readings. A local exam is given at the end of the course.

5200 **FRENCH 3**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of French 2

Regents French is offered to students who have a foundation in basic French grammar, vocabulary, comprehension and pronunciation. The skills of speaking, listening, reading and writing are developed while more advanced sentence structures are learned. The final exam is the New York State Regents Comprehensive Examination, which assesses speaking, listening, reading and writing. Successful completion of the course and exam satisfies the second language requirement for receiving an Advanced Regents Diploma.

5205 **ADVANCED FRENCH 3**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Advanced French 2

"Advanced French 3 is offered to students who have successfully completed Advanced French 2. Advanced grammar and vocabulary is introduced while focusing on listening, reading, speaking and writing skills. Students are required to be more independent as the coursework moves at a faster pace than French 3. Cultural comparisons are discussed as we focus on the communicative aspects of these topics. The final exam is a regionally developed New York State Regents Comprehensive Examination. Successful completion of the course and exam satisfies the second language requirement for receiving an Advanced Regents Diploma."

5300 **FRENCH 4**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Regents French 3

This course will cover culture, business, travel careers and films. Grammar will be studied and used in essays, writing critiques and comparisons. The study of culture will include France and French speaking countries. Career content will include functional language for use in business and travel industries, as well as other careers. French films will be included in the course.

5305 ADVANCED FRENCH 4

40 Weeks Credit: 1 Unit **Prerequisites:** Successful completion of Regents French 3 **and** Teacher recommendation

Comparable in content and difficulty to a college level course, this program encompasses speaking/listening skills, reading comprehension, advanced grammar and composition. A local exam is given at the end of the program. At the end of the course, the student has the opportunity to advance to French 5AP, or French 5 to earn college credit.

5400 FRENCH 5

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of French 4 or Advanced French 4

French 5 is a continuation of French 4, with two options for college credit: Hilbert College French 103 Program, and/or the CLEP exam. The curriculum includes advanced grammar, composition, speaking and reading French authors. Films are used to increase listening and speaking skills, as well as to increase cultural awareness. A local exam is given at the end of this year for high school credit. The student *MUST* choose to take the Hilbert College French 103 Program and/or the CLEP exam for college credit at a cost of approx. \$70.00 per exam. The Advanced Placement exam is *not* an option for this course.

5020 SPANISH 1

40 Weeks Credit: 1 Unit **Prerequisite:** None

This course is an introduction to written and spoken Spanish. The student will learn basic vocabulary of home, school, hobbies, place and environment in the context of simple structures. Oral and written exercises reinforce the basic sentence structure and vocabulary development. Emphasis is given to good pronunciation and the understanding of spoken Spanish. The course explores the culture and civilization of various Spanish-speaking countries and investigates career opportunities.

5120(5) SPANISH 2 (2A)

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Spanish 1

Spanish 2 continues to develop communication in Spanish through the development of listening, speaking, reading and writing. Extended vocabulary and more complex structures are developed through oral and written practice. Hispanic influence around the world is also studied. A local comprehensive exam is given at the end of the course.

5220(5) SPANISH 3 (3A)

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Spanish 2

Regents Spanish 3 is offered to students who have a good foundation in basic Spanish grammar, vocabulary, listening comprehension, and pronunciation. More emphasis is placed on independent reading and writing and on more complex grammatical structures. Units of study revolve around contemporary themes and students use Spanish to practice real life situations, including using foreign languages in the workplace. The final exam is the New York State Regents Comprehensive Examination, which assesses four skills: speaking, listening, reading, and writing. This exam encompasses all three years of study. Successful completion of the course and exam satisfies the second language requirement for receiving an Advanced Regents Diploma.

5320(5) SPANISH 4 (4A)

40 Weeks Credit: 1 Unit **Prerequisites:** Successful completion of Spanish 3

This is an advanced level course for those who have successfully completed the Regents course. Spanish 4 continues to develop the four basic language skills of listening, speaking, reading and writing. Vocabulary and grammar will be expanded through class discussion, oral presentations, written essays, independent readings and Spanish videos. Specific activities related to job skills are also presented throughout the course.

5420 SPANISH 5

40 Weeks Credit: 1 Unit **Prerequisites:** Successful completion of Advanced Spanish 4 **and** teacher recommendation

Spanish 5 is a continuation of Advanced Spanish 4 with two options for college credit: Hilbert College Spanish 103 (approx. cost of \$75.00) and the CLEP exam (approx. cost of \$85.00). The curriculum includes grammar, composition, speaking, reading, short works by contemporary Hispanic authors, and viewing films. A local exam is given at the end of this year for high school credit. The advanced placement exam is not an option for the course.

5010 **LATIN 1**

40 Weeks Credit: 1 Unit **Prerequisite:** None

Students learn the basics of the Latin language, ancient Roman culture, and the applications of both to other courses and modern life. Students begin the *Ecce Romani* series, in which they follow an ancient Roman family through their daily lives. There is also an emphasis on Greek and Roman mythology, English word derivation, and the improvement of skills connecting the Latin and English languages.

5110 **LATIN 2**

40 Weeks Credit: 1 Unit **Prerequisites:** Successful completion of Latin
1

This course is a continuation of Latin I with an emphasis on reading comprehension. Students continue the *Ecce Romani* series, with a continued stress on Roman culture and middle to late Republican history. An emphasis of the application of Latin on English is continued.

5210 **LATIN 3**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of Latin
2

Students put vocabulary and grammar to use to complete the saga of the *Ecce Romani* series, and will continue to work on vocabulary, derivatives, and reading comprehension. An emphasis on Roman culture, mythology, and history from the late Republic to early Empire remains. Students will successfully complete the course by taking the New York State Regents Comprehensive Examination, which encompasses all three years of study and assesses the skills of speaking, listening, reading, and writing. Successful completion for the course satisfies the second language requirement for receiving an Advanced Regents Diploma.

5310 **LATIN 4**

40 Weeks Credit: 1 Unit **Prerequisite:** Successful completion of
Regents Latin 3

Students who have successfully completed the Regents course may take this class. Participants will read many pieces of original Latin from a wide variety of authors throughout the history of Latin Literature. Selections from Cicero, Caesar, Vergil, and Horace, (to name just a few), will be studied using a multi-media approach. We will continue to investigate the connections between the selection being read, the time period and history in which it was written, and the application of this information to our lives today.

VISUAL ARTS

Course #	Course Title	Length	Credit
6010	STUDIO IN VISUAL AND MEDIA ARTS *	40 Weeks	1
6020	STUDIO IN SCULPTURE	20 Weeks	1/2
6030	STUDIO IN CERAMICS	20 Weeks	1/2
6050	JEWELRY AND METAL DESIGN	20 Weeks	1/2
6060	DRAWING	20 Weeks	1/2
6070	PAINTING	20 Weeks	1/2
6090	FASHION DESIGN	40 Weeks	1
6130	ILLUSTRATION AND GRAPHIC DESIGN	40 Weeks	1
6140	PHOTOGRAPHY	40 Weeks	1
6170	ADVANCED PLACEMENT ART HISTORY	40 Weeks	1
6180	ADVANCED PLACEMENT STUDIO ART	40 Weeks	1

COMMENCEMENT LEVEL COURSE OFFERING:

* This course is available for students to take in order to satisfy the 1 unit graduation requirement. Students taking this course will be required to meet NYSED Standards for the Visual Arts. Course work portfolios are required.

6010 STUDIO IN VISUAL AND MEDIA ARTS

40 Weeks Credit: 1 Unit **Prerequisite:** None

A bit of everything!! This is a foundation course aimed to explore a variety of art mediums: Sculpture, Drawing, Painting, Printmaking, and Computer Art. The goal of this course is to expose the student to multiple art experiences in fine art, design, and media. This is a great course to develop art skills that will create an excellent foundation for future art courses and to enhance the basic visual skills needed in everyday life.

6020 STUDIO IN SCULPTURE

20 Weeks Credit: 1/2 Unit **Prerequisite:** 6010

If you like working 3-dimensionally and prefer to have your works recognizable, this may be the course for you. We will explore a variety of mediums—clay, wire, wood, recycled items. Etc.. You will be designing completely original while learning about different artists and movements throughout history. Join us to enhance your sculpting skills and stretch your imagination.

6030 CERAMIC ART

20 Weeks Credit: 1/2 Unit **Prerequisite:** 6010

Explore art through one of the world's oldest art materials: clay. Methods such as coil, pinch, and slab as well as new techniques including the potter's wheel, you will sketch, plan, and produce original ceramic pieces that have been used by ceramic craftsmen throughout history from the Orient to the American southwest. You will experience these hand building techniques as well as additive/subtractive sculptural methods.

6050 JEWELRY AND METAL DESIGN

20 Weeks Credit: 1/2 Unit **Prerequisite:** 6010

Have you ever used a jeweler's saw, propane torch, or metal to make a ring or belt buckle? If you want to experiment with materials that you have never used before in an art room, this class is for you. Learn how to use the same tools and techniques that jewelry designers use to make your own designs on fabric in metal.

6060 DRAWING

20 Weeks Credit: 1/2 Unit **Prerequisites:** 6010

If you are interested in learning how to draw and paint, this course will further enhance your skills and techniques. You will have the opportunity to use pencil, pastel, conte crayon, acrylic paint, oil paint, stretch your own canvas, and more. You will learn how to transfer a three dimensional to two dimensional, with still life, figure drawings and landscapes, while exploring and developing your own personal style. Your portfolio at the end of the course could be the beginning of a college entrance portfolio. Students who wish to earn college credit through Genesee Community College for this course may do so.

6070 PAINTING

20 Weeks Credit: 1/2 Unit **Prerequisite:** 6010, Drawing

In this course you will continue to refine your skills while beginning to concentrate your individual style. You will have the opportunity to choose your media and style for assigned projects. Your portfolio at the end of the course could be the beginning of a college entrance portfolio. Students who wish to earn college credit through Genesee Community College for this course may do so.

6090 FASHION DESIGN

40 Weeks Credit: 1 Unit **Prerequisite:** 6010

Have you ever wondered what it takes to be a fashion designer? In this course you will get an introduction to the world of fashion design and illustration. You will use art & design concepts to create your own fashion designs and produce garments and accessories using various materials. In addition to the studio experience, students will also work with software, such as Adobe Illustrator to assist in the creation of the designs.

6135 ILLUSTRATION AND GRAPHIC DESIGN

40 Weeks Credit: 1 Unit **Prerequisites:** 6010

What is illustration? What is Graphic Design? What does it mean to communicate information visually? This course will introduce the students to techniques and styles of illustration and graphic design that do just that. Students will apply design principles to the creation of a variety of different works. Throughout the course different art media will be used including both tradition media and an introduction to digital imaging. Concepts may include: Portrait, Animal, Architectural and Product Illustration, Character design, Logo Design, Poster Design, Package design.

6145 PHOTOGRAPHY

40 Weeks Credit: 1 Unit **Prerequisites:** 6010

Students will learn the fundamentals of both traditional 35mm film cameras and digital cameras. Emphasis will be on darkroom procedures, film processing, and selective printing techniques. Additionally, students will learn the functions of digital hardware such as computers and printers, and learning how to manipulate the images using digital imaging software. In addition to the technical aspects of photography, photographic composition and the expression of ideas through photography will serve as the foundation for all photographs created. Emphasis will also be on photography careers and the historical relevance of photography.

6170 ADVANCED PLACEMENT ART HISTORY

40 Weeks Credit: 1 Unit **Prerequisites:** 6010, Junior or Senior

This course is designed to provide the same benefits to secondary students as those provided by an introductory college course in art history: an understanding and knowledge of architecture, sculpture, painting, and other art forms within diverse historical and cultural contexts. In this course, students examine major forms of artistic expression from the past and the present from a variety of cultures. They learn to look at works critically, with intelligence and sensitivity, and to analyze what they see. Many colleges and universities offer advanced placement or credit to students who have performed successfully on the AP Art History Examination. *See page 5 for additional information on AP courses.*

6180 ADVANCED PLACEMENT STUDIO ART

40 Weeks Credit: 1 Unit **Prerequisites:** 6010, permission from instructor

The AP Studio Art program makes it possible for highly motivated high school students to do college-level work. There are three different approaches students can take: drawing portfolio, 2-D portfolio or 3-D portfolio.

Drawing Portfolio:

The drawing portfolio is designed to address a broad interpretation of drawing issues. For example: painting, printmaking, studies for sculpture, some forms of design, and abstract and observational works would qualify as addressing drawing issues.

2-D Design Portfolio:

The 2-D Portfolio involves purposeful decision-making about how to use the elements and principles of art in an integrative way. This portfolio is intended to address a very broad interpretation of design issues. You are asked to demonstrate proficiency in 2-D design using a variety of forms. These could include, but are not limited to, graphic design, typography, digital imaging, photography, collage, fabric design, weaving, illustration, painting, printmaking, etc.

3-D Design Portfolio:

The 3-D Portfolio is intended to address a broad interpretation of sculptural issues in depth and space. These may include mass, volume, form, plane, light, and texture. Such elements and concepts may be articulated through additive, subtractive, and/or fabrication processes. Examples of approaches include traditional sculpture, architectural models, ceramics, and three-dimensional fiber arts or metal work.

NOTES:

** Students pursuing the 1 unit graduation requirement in the Visual Arts are required to have a comprehensive collection/portfolio of work at the completion of the 1 unit credit.

** Students pursuing a 3 or 5 unit sequence in the Visual Arts are required to prepare a portfolio that meets the admission requirements of a select institution.

** Students enrolled in Visual Arts courses will learn effective ways to respond to and analyze works of art, which may include reading and writing assignments. Electronic media may also be used to help students explore design options. All courses include assessments, group critiques, and discussions. **Students may also be required to purchase a few basic art supplies.** See page 5 for additional information on AP courses.

TECHNOLOGY /COMPUTER SCIENCE

Course #	Course Title	Length	Credit
6310	CODING	20 Weeks	1/2
6320	CYBER SECURITY	20 Weeks	1/2
6330	INTRO TO PYTHON	20 Weeks	1/2
6335	SNAP PROGRAMMING	20 Weeks	1/2
6360	TECHNICAL DRAWING	20 Weeks	1/2
6370	ANIMATION	20 Weeks	1/2
6380	PRE-ENGINEERING	20 Weeks	1/2
4900	AP COMPUTER SCIENCE PRINCIPLES	40 Weeks	1
4910	AP COMPUTER SCIENCE A	40 Weeks	1

6310 CODING

20 Weeks Credit: 1/2 Unit **Prerequisite:**

This course teaches students applicable computer science skills with a focus on helping students develop problem solving and computational thinking skills. Students come away both with a knowledge of professional programming languages and the conceptual understanding needed to learn new languages.

6320 CYBER SECURITY

20 Weeks Credit: 1/2 Unit **Prerequisite:** Keyboarding recommended

Using computers. The course teaches basic cyber security learning tools and procedures used by companies, individuals, and law enforcement to combat the ever evolving Computer security problems in today's On-line world.

6330 INTRO TO PYTHON

20 Weeks Credit: 1/2 Unit

This course teaches the fundamentals of computer programming as well as some advanced features of the Python language. Students will develop an appreciation for how computers store and manipulate information by building simple console-based games. This course does not assume any prior programming experience. Learn the basics of programming, and then gradually harness the power of some of Python's more advanced features to make games and solve real-world problems.

6335 SNAP PROGRAMMING

20 Weeks Credit: 1/2 Unit

Introduction to programming using Snap! Snap! is a visual drag-and-drop programming language that is an extended version of Scratch that allows you to build your own blocks to complete activities and design programs & games. This is a great introduction to programming if you have never programmed before, but also great for experienced programmers to learn another language.

6360 GAME DESIGN

20 Weeks Credit: 1/2 Unit

6360 ROBOTICS

20 Weeks Credit: 1/2 Unit

6360 TECHNICAL DRAWING

20 Weeks Credit: 1/2 Unit

Students will learn basic principles and skills of drafting as a graphic language. These include technical sketching and shape description emphasized, geometric construction, multi-view projection, sectional views, auxiliary views and revolutions, dimensioning tolerance, oblique projection, isometric projection, and American National Standards Institute (ANSI) drawing standards. This course serves as a foundation for all other technical drafting courses.

6370 COMPUTER ANIMATION

20 Weeks Credit: 1/2 Unit **Prerequisite:**

This course features the newest software applications available in computer animation. Students will learn two-dimensional and three-dimensional rendering using Flash, Poser, and 3-D Studio Max. The software is industry-standard and is used by movie makers, web designers, and game developers. This course is beneficial for students looking for a career in computer animation.

6380 PRE ENGINEERING

20 Weeks Credit: 1/2 Unit **Prerequisite:** Regents Algebra 2 & Trigonometry
or Advanced Algebra 2 & Trigonometry

Pre-Engineering is a 20 week interdisciplinary program that combines higher math, science, and technology. Students are introduced to engineering concepts using computer software and hands-on instruction to complete introductory engineering projects such as bridge construction, green technology using instruments, and computer-assisted drawing. This course is a great gateway program for College engineering courses (Second Semester Only).

4900 AP COMPUTER SCIENCE PRINCIPLES

40 Weeks Credit: 1 Unit **Prerequisites:**

AP Computer Science Principles introduces students to the central ideas of computer science, inviting students to develop the computational thinking vital for success across multiple disciplines. The course is unique in its focus on fostering students to be creative and encouraging students to apply creative processes when developing computational artifacts. Students design and implement innovative solutions using an iterative process similar to what artists, writers, computer scientists, and engineers use to bring ideas to life.

4910 AP COMPUTER SCIENCE A

40 Weeks Credit: 1 Unit **Prerequisites:**

This is a year long programming course that uses the Java programming language. This course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design. Some previous programming experience is highly recommend for this class.

MUSIC

Course #	Course Title	Length	Credit
6525	CHORALE	40 Weeks	1/2
6550	CONCERT CHORALE	40 Weeks	1
6620	CONCERT BAND	40 weeks	1
6660	SYMPHONIC BAND	40 Weeks	1
6680	WIND ENSEMBLE	40 Weeks	1
6640	SYMPHONY ORCHESTRA	40 Weeks	1
6650	STRING ORCHESTRA	40 Weeks	1
6700	MUSIC THEORY	40 Weeks	1
6720	BEGINNING PIANO	20 Weeks	1/2

6550 Concert Chorale

40 Weeks Credit: 1 Unit **Prerequisite:** Permission of instructor/audition

Membership in the Hamburg High School Choral program is by audition. Students who enjoy singing and are interested in improving their vocal and musicianship skills is welcome to audition for the choral music program.

The Hamburg HS Choral program offers many exciting opportunities for its members. The Concert Chorale has performed throughout the Northeast, including several performances at Carnegie Hall, with the Buffalo Philharmonic Orchestra, Lincoln Center and virtually every major concert hall in Western New York.

Students demonstrating *advanced* high school vocal and musicianship skills at the audition are placed in the *Concert Chorale (1 credit)*. All students demonstrating *basic* high school vocal and musicianship skills at the audition are placed in the *Chorale (.5 credit)*, including those students selected for *Concert Chorale*. Students **MUST** be able to match pitch for placement in ANY choral ensemble. Basic high school skills are demonstrated at an audition where a student will sing, without the use of the piano, 1. a scale and 2. My Country Tis of Thee (America) or a similar song. Students who do not pass the audition will be recommended for Beginning Piano or Music Theory in lieu of a choral ensemble.

Students in the advanced ensemble(s) will perform several concerts, with many required performances throughout the school year. Students in the basic ensemble(s) will perform 2-3 times per year at school concerts. Lessons on a rotating basis are required for all students in the advanced and basic ensembles.

Middle School students currently in chorus will schedule an audition with Mr. Zogaib through their current choral director. *Students not currently enrolled in chorus in either the MS or the HS MUST contact Mr. Zogaib (nzogaib@hamburgschools.org) to schedule an audition.*

6525 CHORALE

40 Weeks Credit: 1/2 Unit **Prerequisite:** Audition

This chorus is open to all students through audition. It meets every other day. Weekly lessons are given through a rotating schedule and is a course requirement.

6620 CONCERT BAND

40 Weeks Credit: 1 Unit **Prerequisite:** Audition

Concert Band is open to all students who have had previous instrumental music experience. This is the entry-level band for the high school band program. Students will be auditioned prior to ensemble placement, and will be assigned to **Concert Band, Symphonic Band** or **Wind Ensemble**. A weekly lesson, on a rotating schedule, is a course requirement. On occasion, there will be rehearsals and performances after school hours, which are also a part of the course requirements. **All students in Concert Band, Symphonic Band, and/or Wind Ensemble will be members of the Marching Band.**

6660 SYMPHONIC BAND

40 Weeks Credit: 1 Unit **Prerequisite:** Audition

See Concert Band Description.

6680 WIND ENSEMBLE

40 Weeks Credit: 1 Unit **Prerequisite:** Audition

See Concert Band Description.

6640 SYMPHONY ORCHESTRA

40 Weeks Credit: 1 Unit **Prerequisite:** Audition

Orchestra is an applied music ensemble in which a wide range of advanced musical and technical skills are developed. Previous lessons on an orchestral string instrument – violin, viola, cello or bass, are a prerequisite. A weekly lesson, on a rotating schedule, is a course requirement. Through regularly scheduled rehearsals, the orchestra presents a number of concerts and assemblies throughout the school year. On occasion, there will be rehearsals and performances after school hours which are also part of the course requirements.

6650 STRING ORCHESTRA

40 Weeks Credit: 1 Unit **Prerequisite:** Audition

String Orchestra is open to all students who have had previous string instrumental music experience. This is the entry-level orchestra for the high school orchestra program. Students will be auditioned prior to ensemble placement, and will be assigned to either the Symphony or String Orchestra. A weekly lesson, on a rotating schedule, is a course requirement.

6720 Beginning Piano/Keyboard Class

20 Weeks Credit: 1/2 Unit **Prerequisite:** None. *For students who have not studied piano privately.* Any questions regarding eligibility should be directed to Mr. Zogaib.

This one semester course will cover all the basics of piano playing in a group setting. Students will learn scales, chords, broken chords (arpeggios), sight-reading and songs in a variety of styles from classical through popular music and jazz. Students will also learn how to read treble and bass clefs, along with rhythmic patterns. Students will learn how to harmonize melodies from a lead sheet (fake book) and also improvise simple piano compositions. Students will also be given a brief introduction to music recording/notation software. A final playing assessment will be required to complete the course.

This course partially satisfies the graduation requirement in music or art.

6700 MUSIC THEORY

40 Weeks Credit: 1 Unit **Prerequisite:** None

This Regents level course satisfies the needs of students who want to learn to read music, as well as those who plan to pursue a music sequence. The basic content of this course includes elements of musical structure (meter, rhythm, melody, harmony, tempo, dynamics, form, and orchestration) studied through aural and written work. Basic keyboard, conducting, sight singing, melody writing, dictation, harmonizing, and arranging are a few of the activities utilized to develop a better understanding of the basic rules and principles involved in using the language of music. *This course qualifies as a Regents level musical knowledge course in a high school sequence in music or fine arts, and it may also be used to satisfy the graduation requirement in music or art.*

HEALTH

Course #	Course Title	Length	Credit
7500	HEALTH EDUCATION	20 Weeks	1/2
7520	COLLEGE HEALTH	20 Weeks	1/2
7530	NUTRITION	20 Weeks	1/2
7560	STRESS MANAGEMENT/ AWARENESS	20 Weeks	1/2

7500 HEALTH EDUCATION

20 Weeks Credit: 1/2 Unit

This course is based upon the concept of a high level of wellness which is a lifestyle approach to realizing the best potential for your well-being. The focus is on acquiring knowledge and practical skills to strengthen their current and future health. Topics include mental health, drug abuse prevention, and family life education. Health education is a required course for graduation.

7520 COLLEGE HEALTH

20 Weeks Credit: 1/2
Unit

Prerequisite: Health Education , Junior/Senior only

College health is a reality-oriented, skills-based course with a post high school emphasis. By analyzing topics including healthy relationships, personal safety, communication and conflict resolution, marriage, and parenting, students will develop skills for improved decision making and promote growth as healthy individuals. Successful completion of this course will result in American Heart Association Heartsaver AED Certification. Students may also complete 3 college credits from ECC through this Advanced Studies Course.

7530 NUTRITION

20 Weeks Credit: 1/2 Unit **Prerequisite:** Health Education

Are sports drinks really good for you? This class will answer that question, as well as many others regarding daily nutritional choices. Utilizing an overview of nutrients and how they affect the human body students will interpret food labels, compare alternative diets, and analyze fast food choices. Through guest speakers and the use of technology, students will analyze their own diet, as well as learn about topics such as sports nutrition, food allergies, organics, processed foods, and eating disorders. The focus is always on positive eating choices –snacking in class is encouraged!

7560 STRESS MANAGEMENT/AWARENESS

20 Weeks Credit: 1/2 Unit **Prerequisite:** Health Education

Are you pressed by stress? Short term stress can be helpful, but over time it can turn destructive. Research shows how chronic stress breaks down the body and makes way for disease. In this course you will learn how to manage stress and create an overall well-being for your high school experience, as well as develop life long strategies for coping with stress. Topics include stress symptoms, diseases related to stress, and suggestions for reducing stress. An in-depth look at various techniques will be experienced. Students will produce an individual plan for stress reduction.

Career Technical Education: EMT

Course #	Course Title	Length	Credit
7570	EMERGENCY MEDICAL TECHNICIAN	40 Weeks	1

7570 EMERGENCY MEDICAL TECHNICIAN

40 Weeks Credit: 1 Unit **Prerequisite:** Seniors Only

This program is designed to prepare seniors to become certified New York State Emergency Medical Technicians. The program offers field trips, observations, guest speakers and instructors dealing in allied medical professions. After successfully completing the course, students who are 18 may sit for the State E.M.T. Certification Exam. Students under 18 years of age may sit for the State First Responder certification examination. Five hours each of observation on an ambulance and in an emergency medical facility are required. Certification in First Aid and CPR is helpful, but not required. Students have the opportunity to earn seven hours of college elective credit if they complete all course requirements.

HEALTH SCIENCE ACADEMY

The Hamburg High School Health Science Academy is a school-within-a-school program designed to expose students to a rigorous interdisciplinary academic program that provides relevant preparation for diverse career opportunities in the health and medical fields. During their freshman year, students apply to the academy. Upon acceptance, tenth grade students will begin their coursework by enrolling in the Introduction to Health Careers Class, exploring expanding career opportunities, as well as practical skills, professionalism, employment skills, and CPR certification. As Juniors in the Medical Terminology and Ethics Class, students will become familiar with the language of medicine. Terminology of body systems and common disorders will be discussed. Students will also study the legal and ethical issues in health care by investigating landmark medical cases and current events. Senior year will find the Academy students preparing for college and career opportunities. Anatomy and Physiology will provide basic knowledge of the structure and function of the human body. Through the EMT class, students will have the opportunity to earn New York State Certification in Emergency Medical Technology. Students may also participate in work-based field observations, networking with medical professionals.

During the three year curriculum, academy students will be challenged not only academically, but also to become empathic health care providers through volunteer opportunities and community service. Students will work to promote health and wellness throughout our school and community, visit health care facilities, host various medical professional speakers, and possibly attend a senior class trip to Baltimore to tour the R Adams Cowley Shock Trauma Center and Johns Hopkins Cancer Research Hospital.

Students who wish to apply for the Health Science Academy must complete a Health Science Academy Application during their Freshman year. See your guidance counselor for more information.

Course #	Course Title	Year	Length	Credit
7610	INTRODUCTION TO HEALTH CAREERS-HSA	SOPHOMORE	20 WEEKS	1/2
7620	MEDICAL TERMINOLOGY & ETHICS—HSA	JUNIOR	40 WEEKS	1
7630	ANATOMY & PHYSIOLOGY—HSA	SENIOR	40 WEEKS	1
7640	EMT—HSA	SENIOR	40 WEEKS	1
7650	PROFESSIONAL DEVELOPMENT IN MEDICINE—HSA	SENIOR	20-40 WEEKS	1/2—1

7610 INTRODUCTION TO HEALTH CAREERS-HSA

20 Weeks Credit: ½ – Sophomore Year **Prerequisites:** HCA Member

As the foundation of the Health Careers academy, students will explore a variety of health and medical careers with an emphasis on emerging health fields. Utilizing online research, class activities, guest speakers, and field experiences, students will develop a broader understanding of health careers and the education and preparation necessary for success. This class is designed to instill a sense of professionalism in our Academy students while also strengthening employment skills such as resume writing and interview skills. Students will also acquire practical skills such as blood pressure monitoring and the opportunity for certification in American Health Associate Basic First Aid and CPR for the Health Care Professional. *This course is offered through the Health Department.*

7620 MEDICAL TERMINOLOGY & ETHICS-HSA

40 Weeks Credit: 1 – Junior Year **Prerequisites:** HCA Member, Intro to Health Careers

Learn to speak the language of medicine! Through studies of body systems, students are introduced to the terminology related to each system, common disorders, and the newest treatment options available. Students will study the legal and ethical issues in health care by exploring current events and landmark cases in medicine. Online research, class debates, field trips and expert guests in medicine and law will help students better understand the intricacies of the health care field today. *This course is offered through the Health Department.*

7630 ANATOMY & PHYSIOLOGY-HSA

40 Weeks Credit: 1 – Senior Year **Prerequisites:** HCA Member, Biology, Medical Terminology

Anatomy and Physiology is an advanced science course that is a discussion and lab-based study of the human body. The course will focus on the structure and physiology of human cells, tissues and organs. Through classroom, laboratory, and field experiences, students will be able to identify body structures and their function. This course requires an extensive amount of time and effort and requires substantial reading and memorization. *This course is offered through the Science Department.*

7640 EMERGENCY MEDIAL TECHNOLOGY—HSA

40 Weeks Credit: 1 – Senior Year **Prerequisites:** HCA Member

This program is designed to prepare seniors to become certified New York State Emergency Medical Technicians and give them the opportunity to enter the workforce as an EMT after graduation. The program offers field trips, observations, guest speakers and instructors dealing in allied medial professions. During the course, students are required to complete American Heart Associate CPR for the Healthcare Provider in addition to two Federal Emergency Management Agency courses; Introduction to Incident Command System (ISC—100) and National Incident Management System Introduction (IS-700). After successfully completing the course, students who are 18 may be eligible to sit for the state E.M.T. Certification Exam. Five hours each of observation on an ambulance and in an emergency medical facility are required. Students have the opportunity to earn 8 hours of college elective credit if they complete all course requirements. *This course is offered through the CTE-EMT Department.*

7650 PROFESSIONAL DEVELOPMENT IN MEDICINE—HSA

20-40 Weeks Credit: 1/2 - 1 **Prerequisites:** HSA Member

Members of the Health Science Academy will learn college success skills (time management, learning styles, study skills, etc.) and professional skills (resume writing, interview skills, portfolio building) to strengthen their abilities and knowledge in a health care setting. Additionally, students will complete an unpaid career shadowing experience in the medical or health care field of their choice. Students will demonstrate the skills and knowledge learned throughout their academy experience while observing in a professional setting. *This course is offered through the Health Department.*

PHYSICAL EDUCATION

Course #	Course Title	Length	Credit
7600	PHYSICAL EDUCATION 9/10	40 weeks	1/2
7700	PHYSICAL EDUCATION 11/12	40 weeks	1/2
7750	ADVANCED COMPETITIVE PE	40 weeks	1/2

7600 PHYSICAL EDUCATION - LEVELS 9-10

40 Weeks Credit: 1/2 Unit **Prerequisite:** None

Each student will apply skills and knowledge to meet standards in required units, including team games, personal fitness activities, and aquatics.

7700 PHYSICAL EDUCATION - LEVELS 11-12

40 Weeks Credit: 1/2 Unit **Prerequisite:** Juniors and Seniors Only

This course is an extension of Physical Education- Level 9/10. The course includes similar units of instruction, along with introducing student to new activities.

7750 ADVANCED COMPETITIVE PHYSICAL EDUCATION

40 Weeks Credit: 1/2 Unit **Prerequisite:** Juniors and Seniors Only

This class is open to juniors and seniors who want to participate and compete at a higher level. Intensity is required both during game play as well as during exercise sessions. This course requires teacher recommendation.

BUSINESS

Course #	Course Title	Length	Credit
7000	COLLEGE SUCCESS SKILLS/BEEP: BUSINESS EDUCATION EMPLOYA- BILITY PORTFOLIO *	20 Weeks	1/2
7010	CAREER AND FINANCIAL MANAGE-	20 Weeks	1/2
7025	PERSONAL FINANCE	20 Weeks	1/2
7030	MS OFFICE/KEYBOARDING	20 Weeks	1/2
7050	MOBILE APP DEVELOPMENT	20 Weeks	1/2
7060	WEB PAGE DESIGN*	20 Weeks	1/2
7120	ACCOUNTING	40 Weeks	1
7130	ADVANCED ACCOUNTING	40 Weeks	1
7140	MS OFFICE 2	20 Weeks	1/2
7170	PRINCIPLES OF BUSINESS	20 Weeks	1/2
7175	SPORTS AND ENTERTAINMENT MARKETING	20 Weeks	1/2

** The Advanced Studies Program is an opportunity for high school students to enroll in a college course and receive college credit through Erie Community College. The program is open to high school junior or seniors of average or better academic ability. (Sophomore students may be recommended by their teacher or school counselor.)*

7000 COLLEGE SUCCESS SKILLS/BEEP: BUSINESS & EDUCATION EMPLOYABILITY

20 Weeks Credit: 1/2 Unit **Prerequisite:** Juniors and Seniors Only

Put yourself miles ahead of other students seeking employment and/or admission to college with the business and education employability portfolio (BEEP). This electronic professional portfolio allows students to highlight achievements, gain experience in the interviewing process, and establish contacts in the business community. Students can also utilize class-time to solicit college recommendation letters, prepare brag sheets and work on college applications. Successful completion of the portfolio will result in a Certificate of Employability, which human resource directors throughout WNY are accepting as proof of a student's knowledge and ability to meet workplace standards.

7010 CAREER & FINANCIAL MANAGEMENT

20 Weeks Credit: 1/2 Unit **Prerequisite:** Recommended Level 9-10

Do you know what you would like to do for the rest of your life? This important career decision should not be taken lightly! This course will give you the opportunity to explore various careers and guide you through the process of career development which will include career research, the job application process, resume building, interviewing tips, and an overall understanding of the workplace. We will spend additional time learning about business basics, analyzing a paycheck, budgeting and workplace skills.

7025 PERSONAL FINANCE

20 Weeks Credit: 1/2 Unit **Prerequisite:** Junior and Seniors Only

Throughout this course students learn how to set goals to prepare for their financial future. Real world topics covered will include effective money management, the importance of saving and investing, and how to use credit responsibly. Students will design personal and household budgets utilizing checking and savings accounts, gain knowledge in insurance, taxes, debt management, and increase their overall financial literacy skills.

7030 KEYBOARDING/MS OFFICE 1

20 Weeks Credit: 1/2 Unit

Computer skills are NOT a bonus anymore; they are an EXPECTATION in the workplace and college! Students will first build accuracy and speed enhancing their typing proficiency with Edutyping software. Students will then be introduced to office applications where they will create business documents, develop Excel spreadsheets and charts, and create flyers and posters. Students will gain confidence in their keyboarding and computer skills to benefit them in school and beyond!

7040 MOBILE APP DEVELOPMENT

20 Weeks Credit: 1/2 Unit **Prerequisite:** Web Design recommended

This class will meet the needs of students interested in learning how to create mobile apps for modern business needs. Students will combine app coding with real world business, trends, and theories of modern design, brand usage and marketability.

7060 WEB PAGE DESIGN

20 Weeks Credit: 1/2 Unit **Prerequisite:**

Learn how to create a website using Microsoft Dreamweaver. This course is designed to teach students how to create simple, informative, and fun websites in no time at all. Learn the basics of website creation, interactive features, hyper-links, and more. A basic understanding of Microsoft Word would be helpful, but is not necessary. No computer programming knowledge is necessary. Dreamweaver is a beginner's program that gives a great introduction to website design.

7120 ACCOUNTING

40 Weeks Credit: 1 Unit **Prerequisite:** Recommended Levels: 10-12

This is an excellent course for any student thinking about majoring in business in college or for those planning on entering the job market. Students will act as junior accountants for several companies as they make their way through the entire accounting cycle. Learn the importance of GAAP, payroll procedures, the stock market and much more! Automated Accounting software will be used, as well as, a real-world accounting simulation.

7130 ADVANCED ACCOUNTING

40 Weeks Credit: 1 Unit **Prerequisite:** Accounting

This course expands on the topics learned in the first-year course, while adding new topics about management accounting, cost accounting, not-for-profit accounting and financial analysis. Strong emphasis is placed on using computerized accounting packages. The second year of accounting helps to qualify students for jobs and careers at higher levels than one year of study would allow. It also provides excellence background and preparation for college accounting courses and for business majors.

7140 **MS OFFICE 2**

20 Weeks Credit: 1/2 Unit **Prerequisite:** Keyboarding/MS Office 1

MS OFFICE 2 is a half-year, hands on course open to any student who has successfully completed Keyboarding/MS OFFICE 1 and who would like to further develop his/her skills using Microsoft Office. Students will earn intermediate to advanced skills include word processing, databases, spreadsheets, and the development and delivery of presentations using the Microsoft Office Suite - Word, Excel, PowerPoint, and Access. Students will also be introduced to the desktop publishing using Microsoft Publisher. At the conclusion of the course students will have the computer skills to help succeed at the college level and in the workplace.

7170 **PRINCIPLES OF BUSINESS**

20 Weeks Credit: 1/2 Unit

This course is designed to introduce students to the world of small business ownership and management. Through hands-on activities students will explore the basic business concepts of marketing, management, finance and law, as well as entrepreneurship.

7175 **SPORTS AND ENTERTAINMENT MARKETING**

20 Weeks Credit: 1/2 Unit

Sports and Entertainment Marketing is a unique and innovative course designed for students with an interest in the sports and entertainment industry. This course stresses the utilization of fundamental marketing concepts and will include an orientation to the sports and entertainment industry. Marketing strategies along with topics in sponsorship, pricing, marketing research, endorsements, and promotions will be part of this course.

7230 **HAMBURG CEIP INTERNSHIPS (Semester 1)**

7240 **HAMBURG CEIP INTERNSHIPS (Semester 2)**

20 Weeks Credit: .5 or 1 Credit **Prerequisite:** See Text

(Not available to Freshmen)

Would you like to get out into the workplace and experience what a specific career is like? Students can earn a business credit by completing a Hamburg CEIP Internship. A CEIP Internship is a non-paid experience that helps students explore a particular career, gain knowledge of the industry, and enhance employability skills. Although educational internships can be done right here with a teacher in Hamburg High School, students can also complete internships throughout the Hamburg community at local businesses. For the internship, students must complete 27 hours of pre-internship classroom training and at least 54 hours at the internship placement. The program is open to sophomores, juniors, and seniors and applications are available outside the Dog Pound or in the counseling office. This is an excellent resume builder for college applications!

7250 WORK EXPERIENCE

40 Weeks Credit: .5 to 1 Unit **Prerequisite:**

Must be at least 16 years of age

Did you know that you can earn Business credit through your current job? This experience is designed to enhance employability skills that are demanded in today's workplace. Students must provide proof of working at least 150 hours in order to earn ½ credit and 300 hours to earn one credit. In addition to working, students participating in the work experience program must attend an internship class one period per week. Confirmation from the student's employer will be required at the start of the course in addition to weekly assignments.

CTE BUSINESS & FINANCE PATHWAY

The Hamburg High School Business Department offers the following NYSED approved CTE Program where students have the opportunity to earn an official NYSED Career & Technical Education Endorsement on their high school diploma. This rigorous program also meets the criteria for NYSED's Multiple Pathways to graduation. Approved CTE programs lead to an industry-recognized credentials and offer:

- an opportunity to apply academic concepts to real-world situations;
- preparation for industry-based assessments or certifications; and the opportunity to earn college credit or advanced standing while still in high school; and
- work-based learning opportunities where students demonstrate mastery of skills essential in the workplace

CTE Business & Finance Pathway	
Career & Financial Management	½ credit
Keyboarding / MS Office	½ credit
Personal Finance	½ credit
Accounting 1	1 credit
Sports & Entertainment Marketing	½ credit
BEEP / College Success Skills	½ credit
CEIP Internship or Work Experience	½ - 1 credit
Business Elective(s) of Choice	½ - 1 credit
	*Students must earn 5 credits in Business



HAMBURG HIGH SCHOOL

**BE FUTURE
READY**

ACADEMY OF FINANCE

The Academy of Finance connects high school students with the world of financial services and personal finance, offering a curriculum that covers banking and credit, financial planning, global finance, securities, insurance, accounting, and economics. This three-year “school within a school” program allows students to learn universal business skills and knowledge with a focus on the financial industry.

In addition to the coursework, Academy of Finance members will have a vast array of hands-on, industry-sponsored opportunities to learn 21st century skills and become college and career ready. Field experiences throughout the program include leadership/teamwork building, industry tours, a stock market challenge, and the Senior year trip to the Chicago Board of Trades. In addition to these experiences, guest speakers, shadow days, compensated internships, networking with Hamburg Finance Academy Advisory Board members, and the chance to work as a teller in the school student-run credit union all combine to create a unique opportunity for Hamburg High School students.

Students interested in the academy need to fill out the Academy of Finance Application their Freshman year and turn it in by the due date. See your counselor for more information.

Course #	Course Title	Year	Length	Credit
7410	PRINCIPLES OF FINANCE-AOF	SOPHOMORE	20 WEEKS	1/2
7415	COMPUTER APPLICATIONS-AOF	SOPHOMORE	20 WEEKS	1/2
7420	PRINCIPLES OF ACCOUNTING-AOF	JUNIOR	40 WEEKS	1
7440	COLLEGE SUCCESS SKILLS/ B.E.E.P. - AOF*	JUNIOR	20 WEEKS	1/2
7430	FINANCIAL PLANNING*-AOF	SENIOR	20 WEEKS	1/2
7450	HAMBURG INTERNSHIP - AOF	JUNIOR OR SENIOR		1/2
7455	STUDENT TELLER - AOF	JUNIOR OR SENIOR	20-40 WEEKS	
7460	BUSINESS ECONOMICS-AOF	SENIOR	20 WEEKS	1/2

All Academy of Finance students will have the opportunity to attain the following:

- An official NYSED Career & Technical Education Endorsement affixed to student’s high school diploma.
- NAFTrack Certification and NAFTrack Certified Hiring.

7410 PRINCIPLES OF FINANCE—AOF

20 Weeks Credit: ½ – Fall Sophomore Year **Prerequisites:** Academy of Finance Member

This is the first course students take in the Academy of Finance and introduces students to the financial world. Students develop financial literacy as they learn about the function of finance in society. They study income and wealth; examine financial institutions; learn how businesses raise capital; and study key investment-related terms and concepts. They also research how innovations have changed the financial services field. Finally, students explore careers that exist in finance today

7415 COMPUTER APPLICATIONS- AOF

20 Weeks Credit: ½ – Spring Sophomore Year **Prerequisites:** Academy of Finance Member

Knowledge of computer applications like Word, Excel, PowerPoint, Access and Publisher are a requirement, not an option, in the Business World. This course will teach students how to create professional documents that not only increase communication effectiveness, but IMPRESS the reader as well. Academy of Finance students will have the opportunity to earn three college credits upon successful completion of the Advance Studies Course.

7420 PRINCIPLES OF ACCOUNTING- AOF

40 Weeks Credit:1—Junior Year **Prerequisite:** Academy of Finance Member

This course will have students acting as staff accountants as they make their way through the entire accounting cycle. Learn the importance of GAAP, payroll procedures, taxes and automated accounting systems. Automated accounting software will be used to complete a real-world accounting simulation. Accounting students will have opportunities to meet with a variety of accounting professionals through guest speakers and field experiences including visits to corporate headquarter and participation in Junior Achievement events.

7440 COLLEGE SUCCESS SKILLS/B.E.E.P. – AOF

20 Weeks Credit:1/2 - Fall Jr. Year **Prerequisite:** Academy of Finance Member

B.E.E.P. is a portfolio development course where students will highlight their achievements, gain experience in the interviewing process, and establish contacts with the business community. Successful completion of the portfolio will result in a Certificate of Employability, which proves students meet college and workplace 21st century skills. Academy of Finance students will have the opportunity to earn three college credits upon successful completion of the Advance Studies Course.

7460 BUSINESS ECONOMICS—AOF

20 Weeks Credit: 1/2 - Fall Sr. Year **Prerequisite:** Academy of Finance Member

Business Economics introduces students to the key concepts of economics as they pertain to business. This course discusses the American economy and the factors that influence the success of businesses and products. It describes forms of business ownership, discusses the relationship of labor and business, and provides a broad overview of the global economy. Students also examine careers in business, both as employees and as business owners. This course will count as Academy members' required Economics Course.

7430 FINANCIAL PLANNING – AOF

20 Weeks Credit:1/2 Spring Sr. **Prerequisite:** Academy of Finance Member

This capstone Academy course will provide the opportunity for students to apply their knowledge of the financial industry as they develop a comprehensive financial plan for their future. Advanced topics studied in this course will include the securities market, risk management, retirement and estate planning. Academy of Finance students will have the opportunity to earn three college credits upon successful completion of the Advance Studies Course.

7445 HAMBURG INTERNSHIP– AOF

20 Weeks Credit:1/2 Spring Sr. **Prerequisite:** Academy of Finance Member

An internship is a vital part of NAF experience. Internships allow students to apply work-readiness and academic skills and learn specific occupational skills in a workplace setting. Internships are paid or offer some form of compensation to students in order to provide an authentic work experience. Internships occur during 11th or 12th grade years, most typically during the summer between the 11th and 12th grade. Academy students **MUST** complete an internship in order to graduate from the Academy of Finance program.

7445 STUDENT TELLER– AOF

20—40 Weeks Credit: 1/2—1 **Prerequisite:** Academy of Finance Member

Through a unique partnership agreement with Meridia Community Credit Union, Academy of Finance students operate a student-run branch. This opportunity will help students put their financial knowledge to the test, explore the field, and gain additional knowledge and skills, all while working in a professional setting. This experience *may* fulfill the Academy internship requirement.



2019-2020
Career & Technical Education
Course Offerings

Potter Career Technical Center

Harkness Center

Ormsby Center

Kenton Career and Technical Center

POTTER CAREER TECHNICAL CENTER

Course #	Course Title	Length	Credit
9510	AUTO TECHNICIAN TRAINING 1	40 Weeks	3.75
9515	AUTO TECHNICIAN TRAINING 2	40 Weeks	3.75
9520	BUILDING TRADES 1	40 Weeks	3.75
9525	BUILDING TRADES 2	40 Weeks	3.75
9500	COLLISION REPAIR 1	40 Weeks	3.75
9505	COLLISION REPAIR 2	40 Weeks	3.75
9560	COSMETOLOGY 1	40 Weeks	3.75
9565	COSMETOLOGY 2	40 Weeks	3.75
9570	CRIMINAL JUSTICE 1	40 Weeks	3.75
9575	CRIMINAL JUSTICE 2	40 Weeks	3.75
9580	CULINARY ARTS 1	40 Weeks	3.75
9585	CULINARY ARTS 2	40 Weeks	3.75
9490	CUSTOM FABRICATION & DESIGN 1	40 Weeks	3.75
9590	EARLY CHILDHOOD EDUCATION 1	40 Weeks	3.75
9595	EARLY CHILDHOOD EDUCATION 2	40 Weeks	3.75
9600	ELECTRICAL SYSTEMS 1	40 Weeks	3.75
9605	ELECTRICAL SYSTEMS 2	40 Weeks	3.75
9620	HEALTH CAREERS 1	40 Weeks	3.75
9640	HEALTH CAREERS 2—INTRODUCTION TO NURSING	40 Weeks	3.75
9650	CAREER EXPLORATION	40 Weeks	3.75
9660	OCCUPATIONAL EDUCATION 1	40 Weeks	3.75
9665	OCCUPATIONAL EDUCATION 2	40 Weeks	3.75
9680	PLUMBING AND HVAC 1	40 Weeks	3.37
9681	PLUMBING AND HVAC 2	40 Weeks	3.37
9668	SPORTS SCIENCE CAREERS 1	40 Weeks	3.75
9669	SPORTS SCIENCE CAREERS 2	40 Weeks	3.75
9630	WEB TECHNOLOGY & GAME PROGRAM1	40 Weeks	3.75
9635	WEB TECHNOLOGY & GAME PROGRAM 2	40 Weeks	3.75
9670	WELDING 1	40 Weeks	3.75
9675	WELDING 2	40 Weeks	3.75

NOTE: *Only students who complete a Potter Road application will be considered.*
Most programs normally begin in the 11th grade. However, seniors who wish to enroll in a one year course may do so. All Potter Road courses carry 3.75 units of credit per year. In some courses students may have to purchase supplies.

9510 AUTO TECHNICIAN TRAINING 1

9515 AUTO TECHNICIAN TRAINING 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Automotive Technology Program is a two year course designed to prepare a student as an entry level technician. This NATEF (National Automotive Technician Education Foundation) Certified Program provides an excellent foundation to enter an automotive college program or the workforce. Students are trained on the latest technical equipment and all instructors are ASE (Automotive Service Excellence) certified. The program has two purposes: first to prepare students for post-secondary education in Automotive Technology. Second, to prepare students for entry level work in the automotive and vehicle repair fields.

9520 BUILDING TRADES 1

9525 BUILDING TRADES 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This program offers instruction in carpentry and associated trade areas. The students will participate in construction modules of introduction to carpentry, foundation and floor framing, wall framing, ceiling and roof framing, interior/exterior finish, cabinet making, and remodeling with an introduction to masonry, plumbing, and electrical systems. Exposure to basic theory, work skills, tools and equipment, materials, and career opportunities in these various fields is provided. Practical experience through a variety of in shop projects plus internship opportunities with regional contractors and businesses are provided to all students.

9500 COLLISION AND REPAIR 1

9505 COLLISION AND REPAIR 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The first 10 weeks of this program will consist of a core introduction to the automotive industry. Students will then specialize in Collision and Repair for the remainder of their two-year program. This program will cover the total process of restoring auto bodies, including metal straightening, glass and panel replacement, fiberglass repair, and all painting preparation and finishing techniques. Students will also perform repairs on donated vehicles and participate in an internship at a local automotive collision repair facility.

9560 COSMETOLOGY 1

9565 COSMETOLOGY 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This program is intended for students that are interested in pursuing a career in the fields of cosmetology. In the senior year, a public clinic allows the students the communication skills and hands-on practice necessary for salon work. Students are also required to complete an internship during their senior year. Post-secondary education is necessary for licensing requirements (total of 1,000 hours).

9570 CRIMINAL JUSTICE 1

9575 CRIMINAL JUSTICE 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Criminal Justice System is intended for students interested in pursuing a career in the fields of Criminal Justice and/or Security. The course covers government, courts, corrections, security, forensic science, as well as related topics. Criminal Justice and security personnel from local agencies and businesses participate in the program. The purpose of the program is two-fold: first, to prepare students for post-secondary education in Criminal Justice or a related discipline. Second, to prepare students for entry level work in the criminal justice and security fields. This course is writing and reading intensive.

9580 CULINARY ARTS 1

9585 CULINARY ARTS 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The major emphasis in this program is on quality of preparation and presentation in both small and large quantity cooking. Both theory and hands-on experience are included in such areas as: menu planning, methods of cookery, table service, food control, sanitation, and food pricing. Advanced instruction includes basic managerial and supervisory techniques. Frequent catering for school activities and internships provide on-the-job experience. Thus, students develop the necessary preparation, service, managerial, and human relations skills for the food service industry.

9490 CUSTOM FABRICATION & DESIGN 1

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Custom Fabrication & Design program focuses on specialized painting and vinyl graphics used in automotive refinishing, sign shops, and the textile industry. Students will learn airbrush techniques and preparation for painting metal, wood, plastics, and textiles. Methods for pin-striping, murals, faux finishing, and graphics are incorporated into the program. Large format printing and cutting will be taught for the design and application of vinyl graphics, signs and vehicle wraps. All students will be placed in internships in related career fields prior to completing the course. Upon successful completion of the program, students will have acquired skills and knowledge necessary for enrollment in post-secondary education or entry level positions in the custom painting and graphics field.

9590 EARLY CHILDHOOD EDUCATION 1

9595 EARLY CHILDHOOD EDUCATION 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Early Childhood Program provides an in-depth study of Early Childhood Care and Education (birth – 8 years), including related managerial skills, curriculum writing, developmental theory and application. Students will observe, participate in, and develop a variety of activities for infants, toddlers, preschoolers, and young children. Job skills will be stressed and practiced in a variety of hands-on situations both on and off site. Students will be ready to enter the job market as teacher aides or may apply to colleges. Qualified students can receive up to 12 college credit hours for the program. Students will create a professional portfolio, and work in an on-site preschool and research a variety of early childhood topics.

9600 ELECTRICAL SYSTEMS 1

9605 ELECTRICAL SYSTEMS 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This course deals with the application of electrical technologies in all phases of the Electrical Industry. It prepares students for the planning, installation, maintenance, and troubleshooting of wiring systems in residential and light industrial settings according to the standards of the National Electrical Code. Instruction in principles of electricity, reading of blueprints and wiring diagrams, and proper use of tools and equipment is provided. Basic principles of solid-state electronics are included to enable students to install, repair, and replace operational systems.

9620 HEALTH CAREERS 1

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This program is designed to aid students in deepening their awareness of health care careers. Students learn the importance of health and wellness promotion as an integral element of any health-related career. Health Careers gives the student an opportunity to examine individual health lifestyle in order to help make an informed decision of career choice in health-related services. The core curriculum provides basic skills, knowledge, and attitudes common to present and emerging health careers. Units of study in the first year of this program form the basic foundation for more specialized study in Allied Health or Introduction to Nursing in the second year. Students must have a complete physical with current immunization on file before clinical labs begin.

9640 **HEALTH CAREERS 2—INTRODUCTION TO NURSING**

40 Weeks Credit: 3.75 Units **Prerequisite:** Open to Seniors Only

This senior course prepares students pursuing a career pathway in nursing. Curriculum includes anatomy and physiology, growth and development, nutrition, microbiology, and medical terminology. Students apply their new skills in supervised clinical experiences.

9650 **CAREER EXPLORATION**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Multi-Occupations program is a one-year 10th grade exploratory program. It has been designed to provide an opportunity for students to experience a variety of course offerings with the purpose of helping students make decisions concerning their future educational program. Placement is in an established class and students follow a set of objectives and complete modified projects designed for them. A student may explore up to four different occupational programs for ten weeks each. This will assist the student in selecting an appropriate occupational course for the junior and senior years. Students are responsible for purchasing some program materials.

9660 **OCCUPATIONAL EDUCATION 1**

9665 **OCCUPATIONAL EDUCATION 2**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Occupation Special Education (OSE) is a program for students pursuing an Individualized Education Program (IEP) diploma, who may have the skill potential for competitive employment. It is designed to give students with particular learning and/or management needs an opportunity to explore various occupational areas and select one in which to develop employable skills. Class size is limited to 12 students, to provide extensive individual attention. An important concept of the OSE program is its community-based internship component in which most students have a chance to practice their skills in a competitive situation while still enrolled in school for back-up and support services. A job coach is available to assist and provide feedback to the instructor. Prior to completing the program, students are provided with an opportunity to determine eligibility with Vocational and Educational Services for Individuals with Disabilities (VESID) so that coordination of post-school programs, if necessary, can begin.

9680 PLUMBING and HVAC 1

9681 PLUMBING and HVAC 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Students will learn the fundamentals of residential plumbing and heating/cooling installation. The program is designed for students interested in installing, servicing and repairing domestic sanitation systems, water heaters and home heating/cooling units. Students read blueprints, drawings, and schematics. They learn to fit, assemble and prepare piping for a variety of distributing systems (drain, waste, vent and hot/cold water). While enrolled, students will receive training on the latest trade-related green technologies. Students will also participate in the construction of a modular home in conjunction with the Building Trades and Electrical classes.

9668 SPORTS SCIENCE CAREERS 1

9669 SPORTS SCIENCE CAREERS 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Sports Science careers are becoming the fastest growing occupations in the health and fitness industry. Both theory and hands-on experiences are included in this exciting program. This two-year program will prepare students for an entry level position in the field or in college programs such as physical education, physical therapy, sports medicine, or athletic training. Subject material will include nutrition, human anatomy, and training techniques such as sport performance, weight management and functional training. Upon completion of this two-year course, graduates will be eligible to take the American Council on Exercise Certification Examination (ACE) for Personal Training and get a head start on their career!

9630 WEB TECHNOLOGY AND GAME PROGRAMMING 1

9635 WEB TECHNOLOGY AND GAME PROGRAMMING 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Web Technology and Game Programming is an exciting and dynamic program that will introduce and fine-tune students' skills and abilities to work with Web design and Programming technologies. Students will learn to create Web pages from scratch using source code to developing high-end multi-media interactive sites. This comprehensive program extends into databases, form design, information management, and Multimedia software. Programming languages are also an integral part of the program. In learning basic to advanced programming skills students will have the skills necessary to create executable user applications. This is accomplished through academic learning experiences combined with hands-on practical experience to help students develop the thinking and problem solving skills critical to post-secondary education and career success.

Students will study the Internet, Databases, Java, JavaScript, HTML, Visual Basic, Game Programming, Multi-Media Tools, Web Server Administration, Troubleshooting, and Configuration Problems, as well as, Digital Networking.

9670 **WELDING 1**

9675 **WELDING 2**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Students will acquire knowledge and skills in metal cutting and joining techniques. Instruction is given in methods of measurement, layout, equipment setup, and operation. Students will become familiar with the tools and equipment of the metal fabrication industry including: blue print reading, oxyacetylene and plasma cutting, brazing, shielded metal arc welding, gas metal arc welding, flux core arc welding, and gas tungsten arc welding of ferrous and non ferrous materials. Essential shop mathematics and English are taught throughout the course, which align with the NYS learning standards. Students are taught the skills needed to meet the guidelines of the American Welding Society to qualify as an entry level welder. Students completing the course will have a career portfolio. Students may choose to enter the workforce or continue their education to further develop their knowledge and skills in the welding and fabrication industry.

HARKNESS CENTER

Course #	Course Title	Length	Credit
9335	ANIMAL SCIENCE 1	40 Weeks	3.75
9336	ANIMAL SCIENCE 2	40 Weeks	3.75
9355	AVIATION TECHNOLOGY 1	40 Weeks	3.75
9356	AVIATION TECHNOLOGY 2	40 Weeks	3.75
9326	BAKING & PASTRY ARTS 1	40 Weeks	3.75
9327	BAKING & PASTRY ARTS 2	40 Weeks	3.75
9567	BARBERING (1 Yr)	40 Weeks	3.75
9700	CONNECTIONS: Health Related Careers (1 Yr.)	40 Weeks	3.75
9318	CYBERSECURITY & NETWORKING 1	40 Weeks	3.75
9319	CYBERSECURITY & NETWORKING 2	40 Weeks	3.75
9320	DENTAL LAB TECHNOLOGY 1	40 Weeks	3.75
9325	DENTAL LAB TECHNOLOGY 2	40 Weeks	3.75
9360	DIGITAL MEDIA 1	40 Weeks	3.75
9361	DIGITAL MEDIA 2	40 Weeks	3.75
9550	ELECTRONICS & COMPUTER TECHNOLOGY 1	40 Weeks	3.75
9555	ELECTRONICS & COMPUTER TECHNOLOGY 2	40 Weeks	3.75
9346	ENGINEERING & ROBOTICS 1	40 Weeks	3.75
9347	ENGINEERING & ROBOTICS 2	40 Weeks	3.75
9606	FASHION DESIGN & MERCHANDISING 1	40 Weeks	3.75
9607	FASHION DESIGN & MERCHANDISING 2	40 Weeks	3.75
9353	LEGAL ACADEMY (1 Yr.)	40 Weeks	3.75
9343	MANUFACTURING TECH with ECC	40 Weeks	3.75
9390	TELEVISION AND SOUND PRODUCTION 1	40 Weeks	3.75
9395	TELEVISION AND SOUND PRODUCTION 2	40 Weeks	3.75

9335 **ANIMAL SCIENCE 1**

9336 **ANIMAL SCIENCE 2**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The expanding pet industry offers a variety of career opportunities for animal loving students. This new, two year program teaches basic and advanced skills in areas such as nutrition, health and disease, animal handling and restraint, grooming, pet first aid, and medical terminology. This program provides both classroom instruction and hands-on learning or pursue further education in the fields of veterinary science, biology, business management, pet grooming, and much more.

9355 **AVIATION TECHNOLOGY 1**

9356 **AVIATION TECHNOLOGY 2**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This course will expose students to the world of aviation. Students will develop the skill, attitude, and flight background required by the aviation industry. Federal Aviation Administration regulations, pilot training, airport security, screening procedures, and ground control will be covered in this exciting program! Erie 1 BOCES has partnered with Prior Aviation to provide students with simulated flight training and up to 8 hours of actual flight time!

9326 **BAKING & PASTRY ARTS 1**

9327 **BAKING & PASTRY ARTS 2**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Baking and Pastry Arts offers students an opportunity to understand what goes into creating beautiful finished pastries, breads, and cakes. Students will not only produce baked goods in both large and small quantities, but understanding the science behind them. Baking students have an opportunity to create beautiful show pieces, plated desserts, chocolates, and individual pastries. Students will also have a chance to gain on-the-job experience during their internship program. Students in this program will gain the experience necessary to enter the baking and pastry industry at the entry level or get a jump start on their college career.

9567 **BARBERING (1 Year)**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

At the Erie 1 BOCES School of Barbering students will learn the art of barbering through experienced instructors who will share the latest industry trends. Students will gain the essentials of complete hair and skin services such as steam facials, facial massage, and foam shaves, as well as modern styling, hair styling, hair cutting, coloring, and blow drying.

Barbering is an art form that requires the skill and understanding of the principles behind each cut. Barbering students will practice their art in a live, barbershop setting with clients from the community. As many graduates go on to open their own barbershops, students will also learn about shop ownership and business management.

9700 CONNECTIONS: HEALTH RELATED CAREERS (1 Yr.)

Buffalo General Hospital

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This exciting program gives honors-level high school seniors the opportunity to observe careers in many allied health areas through a mentor relationship with a practicing professional. This 4 credit program includes Anatomy, Physiology and Disease, Health Core/Internship, English 12 and Social Studies: Participation in Government & Economics. Each of these 1 credit courses is integrated into the curriculum. Students spend three hours each day at a designated hospital site taking course work and observing all aspects of health careers.

9318 CYBERSECURITY & NETWORKING 1

9319 CYBERSECURITY & NETWORKING 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Cybersecurity and Networking will examine cybercrime and consider its impact on law enforcement, national security, the corporate world and society. Students will enter the world of designing, building and maintaining networks capable of supporting and protecting national and global organizations in every industry. Students will gain skills needed to design and implement internet connectivity, Wide Area Networks (WANs) and Local Area Networks (LANs). The program is adapted to suit individual need and features hands-on, project-based training in high-demand job skills. The curriculum is aligned with National Science Education Standards, the American Association for the Advancement of Science Project 2061 Benchmark, and Dartmouth Engineering Problem-Solving Methodology..

9320 DENTAL LAB TECHNOLOGY 1

9325 DENTAL LAB TECHNOLOGY 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The Dental Laboratory Technology Program is intended for students interested in pursuing a career in Dental Lab Technician, Dentistry, Dental Hygiene, and Dental Assisting. The course covers five specialties of dental laboratory technology: Complete Denture, Partial Denture, Crown and Bridge Restoration, Porcelain and Ceramics and Orthodontics. A combination of science, art, skill, and craftsmanship along with a complete comprehension of basic techniques, materials, anatomy and terminology will enable the students to fabricate an appliance from beginning to end. This will prepare students for post-secondary education and/or an entry level work in the dental field.

9360 DIGITAL MEDIA 1

9361 DIGITAL MEDIA 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Digital Media is a two-year course designed to prepare students for entry into the professional world of media production for digital distribution. The main focus of this class is learning how to use software and hardware to create graphics, animation, audio and video, in our computer lab and studios. Throughout the course, you will be able to publish your work on the Web and participate in large scale production projects that would encompass the entire digital media needs of a company or client. Seniors will also participate in a three week internship in the digital media industry, gaining valuable experience while connecting with industry professionals. All students will leave the course with a personal portfolio Web site of work they have done throughout the two-year course. Students will be able to publish their portfolio online for use in gaining employment or entry into a college program.

9550 ELECTRONICS & COMPUTER TECHNOLOGY 1

9555 ELECTRONICS & COMPUTER TECHNOLOGY 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Electronics & Computer Technology is a two-year program where students will develop the skills and knowledge needed to pursue a career as an electronics technician or electrical engineer in a wide range of electronics fields including *Consumer* (personal computers, video gaming, radio, and television), *Mobile* (car audio & video, navigation, and security), *Medical* (biomedical, and clinical) *Industrial* (manufacturing), and *Telecommunications* (cellular, telephony, and data).

Students are immersed in a comprehensive technical and hands-on training environment where they learn about electronics by constructing real-world projects including personal computers, amplifiers, speakers, digital clocks, computer networks, and robots. They also learn to use multimeters, oscilloscopes, logic probes and other test equipment to troubleshoot and repair electronic devices. In addition to electronics and computer skills, other “in demand” skills including the development of a good work ethic, time management, punctuality, interpersonal, and communication skills are stressed. The program provides an excellent foundation for students planning post-secondary technical studies in two-years of electronics technology or four-years of electrical engineering programs. Many students go on to successful careers directly upon completion of the program

9346 ENGINEERING & ROBOTICS 1

9347 ENGINEERING & ROBOTICS 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Through hands on learning projects and skill based competitions, Engineering and Robotics students are prepared for industry careers or post secondary education by utilizing state-of-the-art computers, software, modeling, prototyping and robotic building components, and robotic development systems. Students will explore many areas of robotic manufacturing and engineering design technologies in order to help them make sound, career oriented decisions. This program offers students insight into how things work and the opportunity to build real mechanisms and components formulated from their own ideas or to fulfill a need or complete a concept. Our participation in First Robotics, a pumpkin throwing contest, VEX robotic competitions and other technical oriented endeavors bring together class work, your ideas, your concepts, and visions to offer real world solutions to everyday problems.

9606 FASHION DESIGN & MERCHANDISING 1

9607 FASHION DESIGN & MERCHANDISING 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This two-year program focuses on the world of fashion! Students will study the fashion industry discovering the steps necessary for a design to turn into a garment for sale at a retail store. Students will use state-of-the-art computer software, sewing machines and serges to create their own designs. The curriculum includes units of study in: fabric, color, design, sewing, computer applications, and retail management. Adobe Photoshop and Illustrator will be used to enhance fashion photos and create design drawings. The Fashion Design and Merchandising program will provide students with the necessary skills and knowledge to gain entry level employment or further their education in the design, manufacturing and merchandising of garments and accessories.

9353 LEGAL ACADEMY (1 Yr.) at Canisius College

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The New Visions Legal Academy allows highly motivated, academically strong, college-bound seniors the opportunity to work on site with law-related professionals while earning 4 hours of high school credit in government, economics, criminal justice and internship field experience. For 20 out of 40 weeks, students work on-site with law-related career professionals from the courts, law enforcement and legal support services. While in class, students work independently and cooperatively on projects ground in New York State Learning Standards on topics ranging from community service to free enterprise. Additional projects include the development of a public policy action plan, career portfolio, and a written resume.

9343 **MANUFACTURING TECH with ECC (1 Yr.)**

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Erie 1 BOCES has partnered with Erie Community College to offer this new and dynamic one year program. Manufacturing Technology students are co-enrolled at ECC North and spend part of their day on the campus in the college's state-of-the-art machine shops.

Students will use metal cutting machines, such as lathes, vertical and horizontal mills, surface grinders, band saws, and drill presses. Students will experience the technology of CNC (Computer Numeric Control) as precision metal parts designed using CAD (Computer Aided Design) software and produced on the CAM (Computer Aided Manufacturing) mill.

Across the country, there are thousands of companies in need of skilled workers. Upon completion of this one year program, students will walk away with 8 college credits from ECC and an opportunity to seamlessly continue their education or pursue a career.

9390 **TELEVISION AND SOUND PRODUCTION 1**

9395 **TELEVISION AND SOUND PRODUCTION 2**

40 Weeks Credit: 3.75 Units **Prerequisites:** Junior or Senior

The Television and Sound Production program is a hands-on course where students acquire skills in video and audio production through the operation of state of the art digital video and audio studio production equipment. Students will be able to combine their artistic creativity with technological knowledge to produce original video and audio productions such as newscasts, music videos, short films, music recording projects, and audio / video post production projects. New technology has enabled this program to incorporate broadcast quality video editing with Adobe's Premiere Pro and high definition studio cameras (HDTV) for video projects, and individual Digidesign ProTools 7.4 workstations for audio projects. Through independent and group activities, students will gradually build the skills necessary to work in a variety of communication-based industries and to pursue a post-secondary degree in Video or Audio production.

ORMSBY CENTER

Course #	Course Title	Length	Credit
9100	ANIMAL CARE 1	40 Weeks	3.75
9105	ANIMAL CARE 2	40 Weeks	3.75
9110	CONSERVATION/NATURAL RESOURCE MANAGEMENT 1	40 Weeks	3.75
9115	CONSERVATION/NATURAL RESOURCE MANAGEMENT 2	40 Weeks	3.75
9120	SMALL ANIMAL SCIENCE 1	40 Weeks	3.75
9125	SMALL ANIMAL SCIENCE 2	40 Weeks	3.75
9130	DIESEL/HEAVY EQUIPMENT REPAIR 1	40 Weeks	3.75
9135	DIESEL/HEAVY EQUIPMENT REPAIR 2	40 Weeks	3.75

9100 ANIMAL CARE 1

9105 ANIMAL CARE 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Students taking this program develop basic level employable skills in the following areas: dog grooming assistant, kennel assistant, pet shop assistant, and doggie day care. Safety consciousness and patience with animals are required for student and animal safety in this classroom setting.

9110 CONSERVATION/NATURAL RESOURCE MANAGEMENT 1

9115 CONSERVATION/NATURAL RESOURCE MANAGEMENT 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

The two-year Conservation/Natural Resource Management Program at the Ormsby Educational Center prepared students for a wide variety of careers involving the development and protection of Earth's natural resources. Instruction takes place both inside the classroom and in an adjoining shop, but students are able to augment their studies inside the Ormsby Educational Center's 3,000-square-foot greenhouse and in a 50-acre outdoor lab that includes acres of forest and a heavy equipment operation and practicing area. Students are also introduced to the fundamentals of alternative energy with the Ormsby Educational Center's two fully functional wind turbines.

9120 SMALL ANIMAL SCIENCE 1

9125 SMALL ANIMAL SCIENCE 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

This is a technical course that will prepare you to go on to veterinary science technology at the college level. Instruction is provided in basic, advanced, and specialized skills in areas, such as dog grooming, kennel and pet shop management, veterinary assistant, and handling of small animals in the research laboratory.

9130 DIESEL/HEAVY EQUIPMENT REPAIR 1

9135 DIESEL/HEAVY EQUIPMENT REPAIR 2

40 Weeks Credit: 3.75 Units **Prerequisite:** Junior or Senior

Students in this program learn and practice diagnostic procedures, disassembly and assembly of engines, fuel systems, clutches, transmissions, drivelines and differentials, and all aspects of diesel engine operation. Precision measuring and specific use of tools are taught throughout the program. Brake and suspension systems are also incorporated into the program, as well as, electrical systems and component repair. Oxyacetylene and electric arc welding are also taught.

KENTON CAREER AND TECH CENTER

Course #	Course Title	Length	Credit
9710	ZOO WILDLIFE AND CONSERVATION CAREERS	40 Weeks	4.5

9710 ZOO WILDLIFE AND CONSERVATION CAREERS

40 Weeks Credit: 4.5 Units **Prerequisite:** Junior or Senior

The Zoo Wildlife and Conservation Careers program allows highly motivated, college bound seniors the opportunity to explore a career in the many areas related to wildlife conservation and zoo management. This exciting program includes study in Wildlife Research, Animal Care, Veterinary Care and Exhibit Design. Students will also gain experience in conservation education and zoo marketing and development as well as horticulture and grounds and life systems maintenance. Each semester will culminate with a project in which students research and design their own animal exhibit with input from the Buffalo Zoo's animal experts.