

PIONEER CENTRAL HIGH SCHOOL PROGRAM OF STUDIES



Mr. Breen 716-492-9343

Ms. Supples 716-492-9338

Mrs. Emerling 716-492-9341

Mr. Krumpek 716-492-9339

2022-2023

FOREWARD

This handbook has been prepared with the hope that it may be a useful source of reference to students and parents in planning future educational goals. This booklet is by no means a substitute for a student-counselor relationship that is essential for sound academic and career planning. It is designed to supplement the work of the guidance counselor and be a ready source of reference for the student and the parent.

One of the outstanding features of Pioneer Central High School is its academic program—the number, diversity, and quality of its course offerings. With the assistance of the counseling staff, Pioneer students select from among the more than 125 distinct courses to develop a completely individualized program of studies designed to address personal, educational, and vocational needs and goals. Not only students, but parents also are encouraged to take advantage of the scheduled opportunities for meeting with Pioneer counselors to discuss academic options and to plan appropriate educational experiences for their sons and daughters.

With the added graduation requirements mandated by New York's increasingly higher standards, the course selection process has become an even more complex experience. Students and parents are advised to read the Program of Studies booklet carefully to become familiar with the designated prerequisites, credits, levels, and content of the courses under consideration. Students are encouraged to confer closely with parents and counselors and to take full advantage of the many excellent educational opportunities available within the Pioneer High School academic program.

AGRICULTURE DEPARTMENT



Mrs. Clayson

Mr. Clayson

Miss O'Hare

AGRICULTURE A

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	14 yrs old by Dec 1st	None

Agriculture A is a required course for animal, welding and Agriculture majors, and consists of units in Animal Science & plant science. Some topics of discussion include dairy cattle, beef cattle, horses, sheep, swine, poultry, small animals, soils, basic plant science, and propagation. Careers in the animal industry will be explored. (Limit 18 students per section)

*Students must be 14 years old by Dec 1st

AGRICULTURE B

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	14 yrs old by Dec 1st	None

Agriculture B is a required course for animal, welding, and Agriculture majors. Units taught will be surveying, laser leveling, measurement, safe tractor and operation, welding, basic electrical wiring, and basic project planning skills. A project from one of the units described above will be required for the completion of this course. (Limit 18 students per section)

*Students must be 14 years old by Dec 1st

LANDSCAPE ART

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Recommended for all students' beginning Agriculture majors

Landscaping Art provides an introduction to the principals of landscape architecture. Units of study include: using drawing instruments, lettering, landscaping symbols, and principles of design (simplicity, balance, proportion, focalization, and rhythm and line). Limit 18 students per section.

WILDLIFE MANAGEMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Wildlife Management provides students with the information and experience necessary to develop basic skills and knowledge in the management of wildlife populations. The characteristics and habits of individual wildlife species will be discussed together with the study of animal habitat maintenance and enhancement. There will be emphasis on environmental regulations and current issues relating to this field of study. (Limit 20 students per section)

WELDING 1

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Students enrolled Welding 1 will be exposed to a welding shop setting and expected to create projects on an individual basis. Welding 1 covers the basics of agricultural welding. Students will learn a variety of welding processes including SMAW, as well as Oxy-Acetylene cutting, shearing, grinding and drilling. Students will complete proper safety tests and will demonstrate safe procedures prior to using any item in the shop setting. Focus will be placed on weld quality, strength of weld and appearance. Attendance is critical for this class, as all projects and assignments are completed in class. (Limit 14 students per section)

WELDING 2

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Welding 1	None

Welding 2 is the second course in the Welding Endorsement pathway that will enhance students' skills. Students will review what they learned in Welding 1 and learn the following welding processes: Mig, Flux Core, Oxy-Fuel welding plus metal identification. Students who take this will have a greater understanding of the technical world of welding. There will be guest speakers that will assist with training. (Limit 14 students per section)

WELDING 3

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Welding 1 and Welding 2	None

Welding 3 is the third installment of the Welding Endorsement pathway that will complete students' skills and prepare them for a career in the welding industry. Students will review all the previous welding techniques plus learn Tig welding, CNC plasma and welding tools, welding manufacturing plus review all the technical skills that make a successful welder. Students will complete the 10-hour General Industry OSHA certification course which is required by the welding industry. Students will have opportunities for field trips and employment interviews with local manufacturers. (Limit 14 students per section)

SMALL ENGINES

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Small Engines includes instruction in small engine service and repair, a study of lawn and garden tractors, and hand-operated and push-type power equipment. Shop safety and management are also included. Each student will participate in his/her own engine project for the year. Limit 16 students per section.

CHAINSAW & WOODLOT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Chainsaws and Woodlot is a course in farm woodlot management and includes experiences in chainsaw operation, timber cruising and log scaling. This course will also instruct students on the production of trees for timber, pulp, and Christmas trees. Limit 14 students per section.

VETERINARY SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	3 credits SUNY Alfred

Veterinary Science students will have the opportunity to study animal health care, disease prevention, and treatment. The course focuses on small and large animals. Some topics of instruction include veterinary terminology, anatomy & physiology, zoonotic diseases, pet emergency care, and veterinary office practices. Exploration of careers in veterinary medicine will be included. Limit—12 students per section. Students who successfully complete this course (min. 85) may be granted 3 college credits if they pursue a Veterinary Technology major at SUNY Alfred.

FOOD SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Food Science is a course designed to include many hands on activities to learn about food safety, processing, preparation, packaging, and consumer education. During laboratory exercise, students will make foods, test foods for bacteria, analyze nutrient contents of food, and develop an understanding of how taste affects food consumption. Limit 16 students.

ADV FOOD SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Advanced Food Science is the study of food chemistry and the human digestive system. Food additives, preservatives, and enzymes will be analyzed to understand their role in food as well as new technologies being developed to ensure food quality and availability. Many hands on laboratory exercises will be utilized to demonstrate their effect on food international cuisines and cultures will be examined to determine how culture and cuisine affects food. Limit 16 students.

INTERNATIONAL AGRICULTURE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

International Agriculture is a course designed to give students a better understanding of major issues in international agricultural development. The course provides an overview of the challenges of world poverty and hunger and approaches being taken to address these issues. Students will study agriculture systems in various countries, focusing on agricultural resources, global marketing, and cultural diversity. Students will examine alternative strategies for improving agricultural systems to reduce poverty and food insecurity issues and class activities will be conducted to address local food issues.

HORSE MANAGEMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Horse Mgmt provides instruction in the management and care of light-weight breeds as well as draft horses. Topics include feeding, housing, health and foot care, reproduction, grooming, and transportation. Students will complete several projects relating to the various topics of study.

EQUIPMENT REPAIR

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Welding 1 or Small Engines or Agriculture B	None

Equipment Repair is designed to train students of the careers and processes that are in the Agriculture Engineering Industry. We will look closely at the Agriculture Engineering industry in our community and identify skills needed to gain employment with them. Students will have the opportunity to learn, operate and work on various Agricultural Equipment. The primary focus will be hay and forage, tillage and planting, material handling, fertilizer, and spray applications. There will be many opportunities for students to work closely with local dealerships from guest speakers to demonstrations at the dealerships. (Limit 14 students per section) Jr. And Sr. preferred.

ENVIRONMENTAL SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	20 weeks	Earth Science and Biology or written permission of instructor	SUNY Morrisville

Environmental Science is a Regents level course designed to introduce students to the environment they live in. Student will participate in a variety of indoor and outdoor activities that emphasize environmental problems and management techniques to prevent and solve those problems. The course will expose students to careers and educational opportunities related to the environment and natural resources. Some of the topics covered include terrestrial and aquatic ecosystems, population dynamics, recycling, pollution, soil conservation, forestry, wildlife and integrated pest management. Students will have the option of taking this course for college credit through SUNY Morrisville. (Limit 14 students per section)

AGRICULTURE BUSINESS MNGMT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Agriculture A & B or permission	optional college credit through SUNY Morrisville

Agricultural Business Management is a required course for all agriculture majors and is designed to give the student the opportunity to study agricultural businesses from the standpoint of organizational skills and successful profit techniques. Topics to be studied include recordkeeping, economic principles, labor efficiency, income taxes, budgeting, and computerized management systems. Students will have the option of taking this course for college credit through SUNY Morrisville. (Limit 18 students per section)

SMALL ANIMALS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks		

Small animals serve many uses in our lives, from pets, to therapy animals, to rescue animals, and even as a food source. In this class, students will explore how to care for these animals and uses. We will explore their domestication and evolution along with humans. Animals covered may include dogs, cats, rabbits, guinea pigs, pocket pets, chinchillas, ferrets, reptiles, birds, and fish. The students will also assist in the care of small animals in our barn.

ADV VETERINARY SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Veterinary Science or teacher approval	3 College Credits from SUNY Alfred

Advanced Veterinary Science is a course designed for students interested in pursuing a career in Veterinary Medicine or another animal science career. The course will focus on small animals, large animals and wildlife. Topics of discussion will include animal rights vs. animal welfare, animal nutrition, animal reproduction, parasitology, animal restraint, and animal behavior. Case studies of animal diseases will be included. Limit—12 students per section. Students who successfully complete this course (min. 85) may be granted 3 college credits if they pursue a Veterinary Technology major at SUNY Alfred.

ART

Mrs. Lechevet

Mr. Losi

Mrs. Wrotniak

Art Alive-Students physically mimic, or recreate a masterpiece at Albright-Knox Art Gallery. Each student plays a different role in this production, depending on his/her interests. The competition is in June, with a team forming in early April.

Yearbook –Design, organize, and layout each page of the high school yearbook. Students use their creativity, technology skills, editing abilities, and organizational skills to work as a team to meet each deadline September-March.



STUDIO IN ART

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

All ninth grade Art students. Required for Art Majors.

Studio in Art is an introduction to the world of art. This course is designed to introduce the student to art appreciation, history, evaluation, and production in such areas as drawing, painting, and 3-dimensional design. Students will be expected to write about and discuss their own art, as well as the art of their peers. This course is required for the student majoring in art. Students may select this course as their mandated arts study.

CERAMICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Through ceramics, students will explore various world cultures and the works of art that identifies them as a people. Students will be able to identify and interpret how works of art have captured the practices and beliefs of a particular culture and the ideas of that time. Throughout the course, they will become familiar with the properties of clay, beginning techniques in hand building, and surface design (glazing, painting, pit firing).

DIGITAL PHOTO

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

An introduction to using digital cameras and video, with an emphasis on taking better photos. Students will use cameras and scanners to make their own digital artwork, as well as the studio space in the photo room to learn about lighting, composition, creativity, and technical aspects of image making. Adobe Photo Shop will be introduced to manipulate and/or enhance their work. Although it is ideal for students to have their own camera, it is not necessary. Open to all students 9-12.

CREATIVE CRAFTS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Course type: full year general elective to fulfill art requirement

This course emphasizes exploration of the fundamentals of art and history of various crafts. Students will be exposed to various cultural connections through a variety of craft techniques (Traditional hand crafts: sewing folk art, jewelry making, basket weaving, ceramics, etc.), application of the principals of design through utilization of a variety of media, and gaining an understanding of the various tools and vocabulary necessary to complete crafts assignments as they fulfill their art credit mandatory for graduation

DRAWING

<u>Units of Credit</u> 1.0	<u>Duration</u> 40 weeks	<u>Prerequisite</u> None	<u>College Credit</u> None
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This course follows the Introduction to Drawing syllabus designed by Genesee Community College with an emphasis on drawing skills and portfolio development. Students will be responsible for creating an in depth portfolio which will include an artists statement. Students must take both Drawing 1 & 2 to qualify for college credit. There is a student fee.

PAINTING

<u>Units of Credit</u> 1.0	<u>Duration</u> 40 weeks	<u>Prerequisite</u> None	<u>College Credit</u> None
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Students will be exposed to a variety of historical, contemporary, and local artists using painting as primary form of expression. Students will experiment with a variety of media which can be used to create works that are expressive and aesthetically interesting. Students will explore painting as a medium which has stood the test of time and has evolved to remain in the forefront of personal expression.

SCULPTURE

<u>Units of Credit</u> 1.0	<u>Duration</u> 40 weeks	<u>Prerequisite</u> None	<u>College Credit</u> None
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Students will be exposed to a variety of historical, contemporary, and local artists using sculpture as primary form of expression. Students will experiment with a variety of media which can be used to create works that are current and relevant in topic, as well as functional objects d'art.

PRINTMAKING

<u>Units of Credit</u> 1.0	<u>Duration</u> 40 weeks	<u>Prerequisite</u> None	<u>College Credit</u> None
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Students will be exposed to a variety of historical print making examples and discover why it became an essential tool for mass communication. Students will discover how contemporary, and local artists using printmaking as primary form of expression, and how it has evolved to stay fresh and current. Students will experiment with a variety of media which can be used to create works that are current and relevant in topic, as well as functional objects d'art. From posters, to street art, t-shirts, to book covers- printmaking has something for everyone.

ART HISTORY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Art history is the study of objects of art in their historical development and stylistic contexts (genre, design, format, and style). The study includes painting, sculpture, architecture, ceramics, furniture, and other decorative objects. Each historical art period will be taught with art activities, projects, cultural foods, and interactive lessons that introduce artwork to students through engaging activities, stories, and experiences.

ADVANCED CERAMICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

This course is designed for those who seriously want to explore and further their ceramics skills and knowledge. During the first twenty weeks, students will receive lessons that focus on craftsmanship, aesthetic decisions, and developing more conceptually based artworks. The last twenty weeks will involve creating a body of work under their own individual direction. At the end of the year, students will be required to create a portfolio documenting their growth and success in the two year ceramics sequence.

ADVANCED PHOTOGRAPHY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

A continuation of Digital Photo I and II, with more sophisticated use of equipment and Adobe Photo Shop. Emphasis will be placed on the students' development of an understanding of the evolution of photography and electronic imaging as well as art history in a way which will help them to produce expressive and thoughtful works of art. Open to any student who successfully completed I & II.

AP STUDIO ART 2D

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Digital 1 and 2	None

AP Digital Photo is designed to build on technical skill and aesthetic judgment while adhering to the guidelines of the Advanced Placement Program (AP) based on a theme, or what AP calls a Concentration. Students will submit a digital portfolio of their photography for AP credit. Currently, there is no charges/fees for AP credit.

AP CERAMICS/3-D PORTFOLIO

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Currently enrolled in Adv Ceramics and/or sculpture	None

Students will be creating college-level work intended to address a broad interpretation of sculptural issues, both aesthetically and conceptually. Each student will be responsible for the purchasing and preparation of their portfolio, which will be submitted in early May. A student's portfolio may include work that they have done over a single year or longer, in class or on their own.

Each portfolio will demonstrate quality, concentration, and breadth. Students will need 6-12 pieces for the concentration and an additional 8 pieces for breadth. In order to fulfill the breadth section, students will explore sculpture issues using other mediums as well, in addition to clay.

BUSINESS

Mr. Flasz

Ms. Schiener

Mrs. Brush



9th GRADE BUSINESS CMPTRS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Computer skills are NOT a bonus anymore! They are an EXPECTATION in the workforce and college! This course is a necessity for **all** students. You will learn touch keyboarding skills with your fingers and without looking. Course emphasis is on word processing, proofreading, and learning how to format basic business documents such as memos and business letters. We'll take the guesswork out of preparing reports that many of your teachers will expect throughout high school.

INTRO TO BUSINESS OWNERSHIP

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	open to grades 10-12	None

This course examines the scope of owning a business as it relates to our national economic system. Curriculum includes types of business ownership, mgmt principles, human resource mgmt., marketing, finance and risk mgmt. Students will develop products to sell at the school store, manage the school store website, review financial records and cost analysis of items sold and make recommendations for the product lines in the store based on their findings.

CAREER & FINANCIAL MANAGEMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	open to grades 10-12	None

“Your place in the world of work will influence every aspect of your lifestyle. Your job will be the main activity in your life for over 40 years.” What do you want to do to earn a living? Come and explore your options! You will identify your interests, aptitudes, and work values and research a career and college based on your results. You will examine job leads, prepare resumes and cover letters, learn job interview techniques and partake in a mock interview. Once your occupational goal has been identified, discussion will be focused on becoming an independent adult. Learn how to handle your finances including banking, budgeting, insurance, and credit. Plan your future now!

COMPUTER APPLICATIONS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Computer Applications provides the student with hands-on experience in business applications using the computer. These applications include word processing, database, spreadsheets, graphics, and presentation software. Students will utilize Microsoft applications including Word, Excel, PowerPoint, Access, and Publisher.

INVESTMENTS/PERSONAL FINANCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Open to students in grades 10-12	JCC

Investments/Personal Finance introduces students to the basics of investments and personal finance. Topics include strategies for saving money, avoiding/getting out of debt, common credit mistakes, obtaining your credit report, purchasing versus leasing a car, purchasing a home, and saving for retirement. Additionally, various saving options and investments will be explored such as CDs, U.S. Government Saving Bonds, Stocks, Mutual Funds, Annuities, IRAs, and 401(k) s. The use of the Internet will be used frequently to obtain current financial information and to develop a financial portfolio.

ENTERTAINMENT & SPORTS MARKETING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Open to students in grades 11-12 Computer Applications	None

Marketing is one of the fastest growing areas in the business world. Entertainment and Sports marketing introduces students to the areas of marketing used in the Entertainment and Sports industries. Topics include: Entertainment Marketing, Recreation Marketing, Travel and Tourism, organizational planning and Sports Marketing. The students will research marketing concepts using the Internet and other multimedia applications. Students are required to complete marketing reports, make presentations to the class and prepare creative promotional materials throughout the year.

CAREER MARKETING PLAN-BEEP

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Open to students in grades 11-12 Career and Financial Management	None

This course highlights employability “soft” skills vital to a successful career. The Business Education Employability Portfolios will be completed highlighting a student’s exemplary work and extracurricular activities during high school. The student’s career exploration and personal profile will be included in the portfolio. This portfolio can be used for college applications and interviews, for scholarship applications, and for work force interviews.

MICROSOFT OFFICE CERTIFICATION

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Open to students in grades 11-12 Computer Applications highly recommended	None

Students will become capable users of the Microsoft Office software package including Word, Excel, PowerPoint, and Access. By the end of each section, students will have learned the material to take the Microsoft Office Specialist certification, a globally recognized standard for demonstrating desktop skills with the Microsoft Office suite of business productivity applications. The Microsoft Office Specialist program is the ONLY Microsoft approved certification program designed to measure and validate users’ skills with the Microsoft Office suite of desktop productivity applications.

ACCOUNTING 1

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

“Accounting is the language of business”

Prerequisite: Open to students in Grades 10-12 (This course can be used as a 3rd year math credit) Students who are enrolled or have completed Alg 2 may take this course for college credit.

This course is recommended for students considering majoring in business in college, as well as those with an interest in accounting as a career. The first year accounting course provides a thorough background in the basic accounting procedures used to operate a business. Students will have a basic understanding of accounting procedures-payroll records, basic debits and credits, cash and special journals, worksheets, adjusting and closing entries, financial statements and checking accounts. Students will complete an accounting simulation to process accounts receivable, payroll, and transactions specific to a service business.

PERSONAL AND BUSINESS LAW

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	open to grades 11-12	None

Understanding the legal principles of society will be useful throughout your entire life. This course is open to students in grades 11 and 12. You will examine our legal system and the many ways in which it affects your personal and occupational life. Various topics for discussion include the basics of law including criminal, civil, contract, employment, and property law and other legal issues that will affect students as they make the transition into adulthood. A variety of techniques are used to enhance course curriculum including computer projects, movie reviews, debates, mock trial, and a field trip to the Wyoming County Courthouse and Jail.

GLOBAL ECONOMICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Open to students in grade 12	None

The Global Economics/International Business course is a one-credit 40-week course. Upon successful completion of the class the student will also receive a 1/2 credit for Economics. Global Economics/International Business students will learn about the expanding global economy and businesses throughout the world. Students will develop skills that will help them succeed in their careers. These skills include: math, communication, problem solving and critical thinking skills. Each student will research a country and learn about the historical view, cultural, political, legal and economic environment. The students also study the social and business environment within various countries. The students will learn about international stock markets and prepare and manage a personal budget.

ACCOUNTING 2

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Accounting 1	None

“Research has proven that students who have successfully completed two years of high school accounting are more successful in their first year of college accounting than students without that background.” The advanced course in accounting expands on topics learned in the first-year course while adding new topics about management accounting, cost accounting, corporate accounting, and financial analysis. Advanced accounting is an excellent background and preparation for pursuing college degrees in Business Administration and Accounting.

BUSINESS ACADEMY COURSES

COMPUTER APPLICATIONS - ACADEMY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Academy of Finance Participant-Grade 10	None

Computer Applications provides the academy student with hands-on experience in computer applications that most businesses use on a daily basis, including word processing, databases, spreadsheets, desktop publishing, and presentation software. The Microsoft Office Suite will be used to provide students with the vital computer skills needed for success in both the Academy program and the business world. Students are highly encouraged to participate in the Accelerated College Experience program through Genesee Community College which offers three college credits for the successful completion of this course.

CAREER & FINANCIAL MGMT-ACADEMY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Academy of Finance Participant-Grade 10	None

“Your place in the world of work will influence every aspect of your lifestyle. Your job will be the main activity in your life for over 40 years.” What do you want to do to earn a living? Come and explore your options! You will identify your interests, aptitudes, and work values and research a career and college based on your results. You will examine job leads, prepare resumes and cover letters, learn job interview techniques and partake in a mock interview. Once your occupational goal has been identified, discussion will be focused on becoming an independent adult. Learn how to handle your finances including banking, budgeting, insurance, and credit. Plan your future now!

INVEST/PERSONAL FINANCE-ACADEMY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Academy of Finance Participant-Grade 11	JCC-3 credits

Investments/Personal Finance introduces students to the basics of investments and personal finance. Topics include strategies for saving money, avoiding/getting out of debt, common credit mistakes, obtaining your credit report, purchasing verses leasing a car, purchasing a home, and saving for retirement. Additionally, various saving options and investments will be explored such as CDs, U.S. Government Saving Bonds, Stocks, Mutual Funds, Annuities, IRAs, and 401(k) s. The use of the Internet will be used frequently to obtain current financial information and to develop a financial portfolio.

ACCOUNTING 1 – ACADEMY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Academy of Finance Participant-Grade 11	Pending

The first year accounting course provides a thorough background in the basic accounting procedures used to operate a business. Students will have a basic understanding of accounting procedures-payroll records, basic debits and credits, cash and special journals, worksheets, adjusting and closing entries, financial statements and checking accounts. Students will complete an accounting simulation to process accounts receivable, payroll, and transactions specific to a service business. College credit through Jamestown Community College is available.

ACCOUNTING 2 – ACADEMY

“Research has proven that students who have successfully completed two years of high school accounting are more successful in their first year of college accounting than students without that background.” The advanced course in accounting expands on topics learned in the first-year course while adding new topics about management accounting, cost accounting, corporate accounting, and financial analysis. Advanced accounting is an excellent background and preparation for pursuing college degrees in Business Administration and Accounting.

CAREER MKTG PLAN-BEEP-ACADEMY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1/2	20	Academy of Finance or Project Lead the Way participant Career & Financial Management	None

Competition is fierce for acceptance into college, scholarships, and the ultimate goal, a great job. Many students have the skills they need, but don't know how to market them. Utilizing both an electronic and hard copy portfolio process, this course will give students the tools and abilities they need to successfully win scholarships and ace college and job interviews. Interviewing and presentation skills will be heavily practiced so students can be confident walking into any setting where they need to strongly market their abilities. Sponsored by the Niagara Frontier Industry Education Council, completion of the Business & Education Employability Portfolio process provides students insights into what traits and skills businesses look for in employees. When successfully completed, this portfolio will tap students into a large network of area businesses who are potential career starters.

GLOBAL ECONOMICS/INTERNATIONAL BUSINESS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1 1/2 (Economics credit)	40 weeks	open to students in Grade 12	

The Global Economics/International Business course is a one-credit 40-week course. Upon successful completion of the class the student will also receive a 1/2 credit for Economics. Global Economics/International Business students will learn about the expanding global economy and businesses throughout the world. Students will develop skills that will help them succeed in their careers. These skills include: math, communication, problem solving and critical thinking skills. Each student will research a country and learn about the historical view, cultural, political, legal and economic environment. The students also study the social and business environment within various countries. The students will learn about international stock markets and prepare and manage a personal budget.

ENGLISH

Mr. Riley

Mrs. Smith

Mr. Wienclawski

Mrs. Zuniga

Mrs. Zupo

Ms. Ziemba

Mr. Herron

Mrs. Neamon



ENGLISH 9 HONORS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

English 9 Honors is an accelerated class for 9th grade English students. Students in this class are expected to read and write above and beyond what is expected in regular English 9. Writing assignments vary, but an emphasis is placed on parallel assessments for the ELA Regents Exam (Common Core). Communication skills are addressed through presentations of major projects related to literary works covered. A major component of this course is to begin to prepare students for the ELA Regents Exam (Common Core).

ENGLISH 9

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

English 9 is a full-year course of study which includes an in-depth study of literature, vocabulary, grammar, and composition. Emphasis is placed on listening, reading comprehension, critical thinking, application, and writing. This course is designed to begin to prepare students for the ELA Regents Exam (Common Core) that is taken at the end of English 11. Students who score 1 and 2 on the New York State 8th Grade English Assessment are assigned to academic advisement (Den) sessions targeted for 9th grade students.

ENGLISH 10 HONORS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Eng 9 Hon and/or tchr recommendation	None

English 10 Honors is a full-year course that includes the study of American Literature from the Colonial Period to the 21st Century. Heavy emphasis is placed on research, close reading of nonfiction, and argument writing to prepare students for all parts of the ELA Regents Exam (Common Core) that is taken at the end of the year. Students who are recommended to take English 10 Honors but opt not to will not be permitted to take English 11 Honors the following year.

ENGLISH 10

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Eng 9	None

English 10 is a full-year course of study which focuses on classic and modern literature and includes a study of vocabulary, grammar, and composition. Reading, writing, listening, speaking, and library skills are incorporated into all activities; special emphasis is placed on research, close reading of nonfiction, and argument writing to prepare students for the ELA Regents Exam (Common Core) that is taken at the end of English 11

ENGLISH CC 11 HONORS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Eng 10 Hon and successful completion of summer English assignments	None

English 11 Honor students will complete a rigorous program where they will study grammar and writing techniques to develop a personal style. Heavy emphasis is placed on literary analysis, composition skills, poetry analysis, and research. Literature circles and personal choice are used to give students choices about the books they read and a chance to share their opinions with other students in the class who may be reading the same selection. All assessments are designed to parallel the AP Literature and Composition Exams to achieve maximum results.

ENGLISH CC 11

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Eng 10	None

English 11 is a full-year program that includes the study of American Literature as a backdrop for the development of ELA skills: reading, writing, listening, speaking, research, and critical thinking. Emphasis will be placed on all sections of the ELA Regents Exam (Common Core), which all students will take at the completion of English 11.

MOVIE AND AMERICAN CULTURE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1/2	20 weeks	None	None

This class seeks to educate students in the eleventh and twelfth grade on the history of the film industry, film technology, and the broad genres of film. It is a semester long course with writing, research, and class discussion components.

CREATIVE WRITING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1/2	20 weeks	None	None

This 20 week course is designed to foster creativity in students by exposing them to and allowing them to compose genres of writing that, because of our culture's standardized test hysteria, have been de-emphasized by educators. More specifically, students will explore poetry, collage composition, short fiction writing, Flash Fiction, and journal writing in a workshop environment. The final project, a multi-genre research paper, incorporates skills learned throughout the course. In short, the course goal is to show students that writing is not only culturally important, but a wonderful form of therapeutic personal expression.

AP ENGLISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Eng 11 Hon, mastery on ELA Regents, tchr recommendation completion of summer reading assignment	None

AP English is a full-year program which prepares motivated high school students to do college level work and rewards them for their achievement with credit and/or placement in higher-level college English courses through the Advanced Placement Exam in Literature and Composition administered in May. This course will focus on developing advanced reading and writing skills through the study of literature. In addition to in-class assignments, students will read works outside of class. A trip to Butler Library on the Buffalo State College Campus will acquaint students with research at the college level.

ENGLISH 12

This course seeks to focus on communication in its various forms, with a large focus on public speaking and 21st century

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Eng 11, passed ELA Exam	None

skills utilizing mass media and technology. This course will involve research, speeches, multimedia projects, and writing. For each unit of study, students will prepare a topic to pursue. This will include brainstorming from previous experiences and memories, conducting research surrounding controversial and multi-sided arguments, and taking a close look at current events. Students will also look through the lens of multiple perspectives and analyze how those perspectives alter our understanding of situations and events. There will be an emphasis on both individual and group endeavors, which will further prep students for the demands they face post-graduation. All speeches, research projects, and portfolio will be requirements for the course. This course is required for graduation except for students in AP English.

ENG 12/REGENTS WRITING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

Regents Writing is a required course for seniors who must pass the ELA Regents (Common Core) Exam. **In addition to the requirements of regular English 12**, this course will also focus on the ELA skills: reading, writing, and critical thinking needed for success on the ELA Regents (Common Core) Exam. Students will analyze their previous effort on the Regents Exam with their teacher to understand their strengths and weaknesses. A program of instruction will then be tailored to meet each individual's needs.

FOREIGN LANGUAGE DEPARTMENT

Ms. Zollinger

Ms. Smith

Ms. Antonio



LEVEL I FRENCH AND SPANISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

Level I emphasizes meaning and communication on an introductory level. A functional approach is utilized which aligns each grammar point to its role in communication. The main goal is communication and proficiency of the four skills: listening, speaking, reading, and writing. Global awareness is explored through study of cultural units. Students will take a local exam at the end of the course.

LEVEL II FRENCH AND SPANISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Level I	None

Level II emphasizes meaning and communication on an intermediate level. A functional approach is utilized which aligns each grammar point to its role in communication. The main goal is communication and mastery of the four skills: listening, speaking, reading, and writing. Global awareness is again explored through study of cultural units. Students will take a local exam covering levels I and II at the end of the course.

LEVEL III FRENCH AND SPANISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Level II	None

Prerequisite: Level II. Level III emphasizes meaning and communication on a higher level. A functional approach is utilized which aligns each grammar point to its role in communication. The main goal is communication and mastery of the four skills: listening, speaking, reading, and writing. Global awareness is more thoroughly explored through study of cultural units. Students will take a comprehensive local exam covering levels I, II, and III for Regents credit at the end of the course.

LEVEL IV FRENCH AND SPANISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Level III	3 credits - Hilbert College

In level IV students are introduced to literature, cultural readings, authentic materials, and current events through a variety of media. The class allows participants to pursue their personal interests through the four skills: listening, speaking, reading, and writing. The course continues its emphasis on culture and new grammar is introduced. Students will have researched based projects and may also opt to take this course for three college credits through a community college for a fee.

LEVEL V FRENCH AND SPANISH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Level IV	3 credits – Hilbert College

The main objective for this course is to give students further communicative skills. Emphasis in this course will be on speaking and listening with support given in reading and writing. Stressing the communicative skills, the role of grammar would be addressed as a tool of reinforcement, driven by student need. Instructional content will reflect interests shared by you and your teacher (the arts, current events, literature, sports, and so forth). In addition to textbooks, materials might include websites, podcasts, films, newspapers, magazines, and literature. In this course, special emphasis is placed on the use of authentic source materials and the integration of language skills. Classes will be conducted in French or Spanish.

MATHEMATICS DEPARTMENT

Mrs. Herrick

Mr. Connelly

Mrs. Duprey

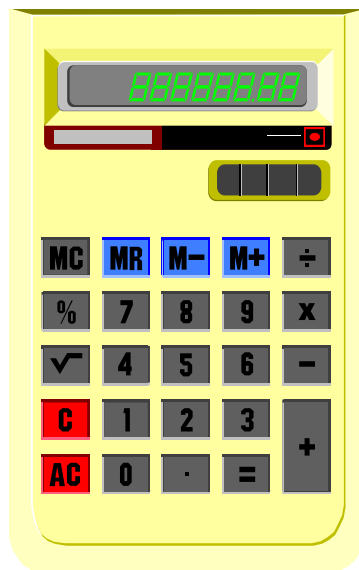
Mrs. Treichler

Mr. Ryan

Mr. Drake

Mrs. Yansick

Mrs. Smith



ALGEBRA FOUNDATIONS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

This course is designed to address the foundations of Common Core Algebra. The topics include key math vocabulary, operations with integers and fractions, multiples and factors (divisibility rules), number systems, number properties, exponent rules, operations with polynomials, factoring, solving equations and inequalities, graphing linear equations and inequalities, solving systems of equations and inequalities, and function notation. Appropriate calculator skills and problem solving strategies will be imbedded throughout the course. Students will take a local final exam at the end of the Algebra Foundations course.

ALGEBRA 1 CC

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Passing of 8 th grade math or passing of Algebra Foundations required	None

This course is designed to prepare students for the Algebra 1 Common Core Regents exam. The topics include expressions, solving equations and inequalities, graphing linear equations and inequalities, solving systems of equations and inequalities, data plots, regressions, residuals, correlations, sequences, exponential growth and decay, transformations, factoring, completing the square, and graphing, analyzing and modeling with functions.

GEOMETRY CC

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra 1	None

The Geometry course includes the following topics: foundations for geometry, congruence, proofs, and constructions, similarity, trigonometry, extending to three dimensions, connecting Algebra and Geometry through coordinates, circles with and without coordinates. This course will prepare students to take the Common Core Geometry Regents Exam in June.

GEOMETRY TECH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra 1, teacher recommendation	None

The Geometry Tech course includes the following topics: foundations for geometry, parallel and perpendicular lines, triangle congruence, properties and attributes of triangles, polygons and quadrilaterals, similarity, perimeter, circumference, and area, spatial reasoning, circles, transformational geometry, and constructions. This course focuses on the practical application of geometric principles through the use of technology and real-world problem solving. Geometry Tech is designed as an alternative to the Geometry course. In Geometry Tech, students do not take a regents exam.

COMPUTER SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

ALGEBRA 2 CC

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Geometry or teacher recommendation	None

Algebra 2 consists of 4 modules.

Module 1: Polynomial, Rational and Radical Relationships. Module 1 includes the following topics: Perform arithmetic operations, polynomial identities and equations with complex numbers, Interpret the structure of expressions, understand the relationship between zeros and the factors of polynomials, Use polynomial identities to solve problems, Rewrite rational expressions, Solve equations and inequalities in one variable. Solve systems of equations, analyze functions using different representation, Translate between the geometric description and the equation for a conic section

Module 2: Trigonometric Functions: Module 2 includes the following topics: Extend the domain of trigonometric functions using the unit circle, Model periodic phenomena with trigonometric functions, Prove and apply trigonometric identities, Summarize, represent and interpret data on two categorical and quantitative variables.

Module 3: Functions: Module 3 includes the following topics: Extend the properties of exponents to rational exponents, Reason quantitatively and use units to solve problems, Write expressions in equivalent forms to solve problems, Create equations that describe numbers or relationships. Represent and solve equations and inequalities graphically, Interpret functions that arise in applications in terms of the context, Analyze functions using different representations, Build a function that models a relationship between two quantities, Build new functions from existing functions, Construct and compare linear, quadratic, and exponential models and solve problems, Interpret expressions for functions in terms of the situation they model.

Module 4: Inferences and conclusions from data: Module 4 includes the following topics: Summarize represent and interpret data on a single count or measurable variable, Understand and evaluate random processes underlying statistical experiments, make inferences and justify conclusions from sample surveys, experiments and observational studies, understand independence and conditional probability and use them to interpret data, use the rules of probability to compute probabilities of compound events in a uniform model.

ALGEBRA 3/TRIGONOMETRY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Geometry or teacher recommendation	JCC College Connections -3 credits

Textbook: Intermediate Algebra, 6th edition, by Aufmann/Barker; Catalog Description: Topics include: absolute value equations and inequalities; solving systems of linear equations using determinants; review of rational exponents, radical expressions and complex numbers; quadratic equations and inequalities; solving equations reducible to quadratic form; quadratic, exponential, and logarithmic functions and applications; graphs of functions; algebra of functions; inverse functions; conic sections; nonlinear systems of equations and inequalities; right triangle trigonometry; trigonometric functions and the unit circle.

AP STATISTICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra 2	Hilbert/JCC College Connections Program-3 credits

Advanced Placement Statistics allows a student to earn 3 hours of college credit upon successful completion of the Advanced Placement Examination. Topics in the syllabus include planning a study, data collection, univariate & bivariate data displays and summaries, pattern anticipation, and statistical inference. Graphing calculators and computers will be used extensively in the course. Students of “Advanced Placement Mathematics” will be required to take the AP Statistics Examination in May.

PRECALCULUS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra 2	Hilbert/JCC College Connections Program-3 credits

Precalculus I is a study of the development of the real number line and related field properties, the rectangular coordinate plane (linear functions and properties), review and extension of functions, review and extension of graphing techniques, review and extension of circular functions and trig functions, vectors in the plane, applications, coordinates in three dimensions, conic section curves and quadric surfaces, polynomial functions and their graphs and solutions sets, transcendental functions and applications, series and sequences, limits of functions, and polar coordinates.

MANUFACTURING MATH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Department approval	None

This course is designed to reinforce students’ math skills and allow students to apply these skills in the solution of practical manufacturing problems. Students will make connections between many mathematics concepts and related manufacturing industry practices. This course will help students learn to read measurements and perform calculations using decimals and fractions, calculate tolerances on manufacturing drawings, determine dimensions and placement of parts on manufacturing drawings using the Pythagorean Theorem and trigonometric relations, utilize descriptive statistics to perform calculations for statistical process control, determine relationships between quantities and reason with equations, and write, simplify and solve expressions and equations. Students will take a local final exam.

AP CALCULUS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	Hilbert/JCC College Connect – 4 credits

Advanced Placement Mathematics is a full-year program intended to provide the students with college level calculus and to reward them with credit and placement in higher level college mathematics courses. Calculus topics include introduction to rate of change of a function, limits reviewed and extended, the derivative, formal differentiation, applications of the derivative, integration (formal and approximate), and applications of the definite integral. Students of “Advanced Placement Mathematics” will be required to take the AP Calculus Examination in May.

MUSIC

Mrs. Woolley

Miss Tomasulo

Mr. Chatterton



FILM SCORING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Film scoring is a class in which students will be working to add sounds and music to film and or pictures. By using computer programs and sound banks students will study how music and sound is used during film making. Students will then create their own sounds scores to various moving pictures and videos.

MUSIC THEATRE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

Musical Theatre is a full-year course in which students are exposed to the history of musical theatre and careers available in the field today. Students are expected to take an active role in the production process of the district's musical through the study of basic skill from set construction, make-up, lighting, costuming and publicity. Students will develop a set, logo, lighting, stage make-up and costume design for a specific piece of musical theatre. Students will also perform scenes to develop an understanding for character analysis and portrayal.

CONCERT BAND

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	8 th grade band	None

The Concert Band is open to all students who have successfully completed at least one year of middle school band. Students who do not meet this criterion should contact the band director to arrange lessons before they can join. Concepts emphasized include intonation, harmonic blend, rhythm, tempo, dynamics and technical competence. Attitudes emphasized include positive team effort, respect for others and student leadership, acceptance of constructive criticism, and pride of the organization. It is expected that participants are enrolled in the course for the entire year, that they are serious about music, and that they will practice as needed outside of class in order to perform successfully. The Concert Band meets every day one period and performs several concerts throughout the year.

ORCHESTRA

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Admission by audition	None

Chamber Orchestra rehearses every day for the entire year. For certain concerts, selected woodwinds, brass and percussion are added to the Chamber Strings to form the Symphonic Orchestra. Chamber and symphonic literature of composers from the 16th through 20th centuries is rehearsed and performed. In addition to rehearsals, each student is required to attend 1 individual/group lesson each week. Attendance at all concerts is mandatory.

CHAMBER CHOIR

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

This is made up of mixed voices. Chamber Choir is designed to teach students of all levels of singing ability. Members will study and perform a variety of choral styles and difficulty levels. Members will learn the necessary steps leading to improved sight music reading as an ensemble. Students are required to attend all choral performances. Students will take part in rotating vocal labs through out each quarter. All vocal labs, performances and rehearsals will be used in the grading process. Together students and the instructor will assess performances in lieu of an exam on a quarterly basis.

MUSIC THEORY 1

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

Covers the rudiments of music and composition through the study of chords, key, notation, note value, time signatures, rhythm. Students will learn basic keyboard skills and work with various music technology. This course is open to all students.

COLLEGE MUSIC THEORY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Music Theory 1	JCC

College Music Theory is a JCC accredited course that follows the JCC Music Theory Syllabus. Students learn about more advanced theory techniques like part-writing, chord structures, internal harmonies, and analysis of various forms of music. Students must take Music Theory 1 first before taking this course.

PHYSICAL EDUCATION DEPARTMENT

Mrs. Doud

Mr. Edwards

Mrs. Shephard

Mr. DeJohn

Mr. Souder



PHYSICAL EDUCATION

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	40 weeks	None	None

All students with medical limitations, temporary or chronic, will participate in classes with physician's guidelines for activity.

NINTH THROUGH TWELFTH GRADES CURRICULUM

The 9-12th grade physical education curriculum focuses on lifetime activities, personal wellness, and the development of lifelong fitness plans which will be altered with age, environment, interests, and economics. Skill development will be aimed at proficiency in choice activities that will continue to develop throughout adulthood. They will develop competence in leading and participating in group and individual activities, accepting the differences in people, and knowledge of a variety of services and activities available to them in their communities.

Ninth through twelfth graders will be scheduled, coeducationally and as a group, for alternating days of physical education with forty minute classes. A variety of these activities will be offered:

Aerobics	Line dance
Aquatic games	Orienteering
Angling	Racquetball
Badminton	Resource management
Basketball	Ropes/challenge course
Circuit training	Self defense
Cross country skiing	Soccer
Gatorball	Softball
Fitness swim	Speedaway
Fitness training	Table tennis
Fitness walk/jog	Team handball
Fitness testing	Tennis
Floor hockey	Track and Field
Football	Lacrosse
Frisbee games	Video production
Golf	Volleyball
Water Volleyball	Water aerobics
Weight training	Wrestling

HEALTH

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks every day or 40 weeks alternative days	None	None

Prerequisite: None. The units of study in health education have been developed to include the factual basis necessary for students to make informed decisions about the opinions they hold and the behaviors that they will engage in, both now and in the future. Activities and assessments will include study in the following units:

Emotional Health

Diseases and Disorders

Human Growth and Development

Consumer Health

LIFEGUARDING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks every day or	None	None

The purpose of the American Red Cross Lifeguarding course is to teach participants the knowledge and skills needed to prevent and respond to aquatic emergencies. The course will prepare participants to recognize and respond quickly to emergencies and prevent drownings and injuries.

Prerequisite:

Swim 300 yards continuously

Tread water for 2 minutes using only the legs.

Swim 20 yards, surface dive to a depth of 10 feet and retrieve a 10-pound object. Return to the surface and swim 20 yards on the back and return to starting point with both hands holding the object.

Exit the pool without using a ladder or steps.

EMT CERT COURSE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

The purpose of the American Red Cross First Aid-Responding to Emergencies course is to provide the citizen responder with the knowledge and skills necessary in an emergency to help sustain life and minimize pain and the consequences of injury or sudden illness until medical help arrives.

The course content and activities will prepare participants to recognize emergencies and make appropriate decision for first aid care. The course teaches the first aid skills the citizen responder will need in order to act as the first link in the Emergency Medical Services (EMS) system.

This course also emphasizes prevention of injuries and illness, with a focus on personal safety and health. Using a healthy lifestyles-awareness inventory, participants will assess their environment and personal habits to reduce their risk of injury and illness.

COURSE OBJECTIVES

At the conclusion of this course, participants should be able to: Explain how the EMS system works and the citizen responder's role in the EMS system, including how and when to call EMS personnel.

COURSE OBJECTIVES

At the conclusion of this course, participants should be able to: ■ Explain how the EMS system works and the citizen responder's role in the EMS system, including how and when to call EMS personnel.

- Identify the signs and symptoms of breathing emergencies, including choking, and demonstrate how to provide rescue breathing and first aid for choking.
- Identify the major risk factors for cardiovascular disease, and describe how to minimize them.
- Recognize the signs and symptoms of a possible heart attack, and describe how to care for someone who is experiencing persistent chest pain.
- Identify the signs of cardiac arrest, and demonstrate how to provide cardiopulmonary resuscitation (CPR) until emergency medical personnel arrive.
- Identify life-threatening bleeding, and demonstrate how to control it.
- Identify the signs and symptoms of various soft tissue and musculoskeletal injuries, and demonstrate how to care for them.
- Identify the signs and symptoms of sudden illness, including poisoning, bites and stings, and heat and cold emergencies, and describe how to care for them.
- Describe when and how to move a victim in an emergency situation.

Authorized American Red Cross instructors may award course completion certificates to participants who meet the course completion requirements.

SCIENCE DEPARTMENT

Mr. Clouse

Mr. Dziob

Mr. Miga

Mrs. Miles

Mr. Mucha

Mrs. Ritz

Mrs. Saeli

Mr. Winters



LIVING ENVIRONMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Living Environment is a Regents level course designed to provide students with a background in the biological sciences. The course will allow students to acquire a clear understanding and mastery of key biological concepts. The concepts include, the study of animal and plant maintenance, reproduction and development, genetics, evolution, diversity of living things, and ecology. This course will prepare students to take the Living Environment Regents in June.

Regular laboratory periods are required and provide hands-on experience to use laboratory equipment and techniques to carry out experiments. Students will learn how to follow proper procedures for safe handling and use of laboratory equipment. Proficiency in performing these laboratory skills may also be evaluated by items found on certain parts of the State's Living Environment assessment. All labs must be satisfactorily completed before a student may take the Living Environment Regents Examination.

BIOLOGY HONORS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	passed Earth Science in grade 8 or teacher recommendation	None

Biology Honors is a Regents level course that will prepare students for the Living Environment exam and allow students to acquire a clear understanding and mastery of key biological concepts. The course will be more rigorous than the general Living Environment curriculum. A different testing program is used; and two to three labs per week will be required. Students in Biology Honors go into more detail and cover more topics than the typical Living Environment course. One of the goals is to place more emphasis on critical thinking skills, problem solving skills, and inquiry-based learning. Current research and advances within the science and medical fields will be discussed as well. The labs involve hands-on activities with a writing component in the form of a lab report that emphasizes scientific inquiry, learning from experience and observation, and reinforcement of the topics covered in class. This course will prepare students to take the Living Environment Regents in June.

Regular laboratory periods are required and provide hands-on experience to use laboratory equipment and techniques to carry out experiments. Students will learn how to follow proper procedures for safe handling and use of laboratory equipment. Proficiency in performing these laboratory skills may also be evaluated by items found on certain parts of the State's Living Environment assessment. All labs must be satisfactorily completed before a student may take the Living Environment Regents Examination.

PHYSICAL SETTING/EARTH SCIENCE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Earth Science is a Regents level course designed to provide students with a background concerning all aspects of the study of the earth. Topics are covered in three main parts:

- 1) Astronomy-covering earth's motions, seasons, solar system, and deep space.
- 2) Meteorology and weather-covering weather variables, the atmosphere, weather systems, weather forecasting and weather hazards
- 3) Geology- covering weathering, erosion, deposition, landscapes and topographic maps, minerals and rocks, plate tectonics and earth history.

This course will prepare students to take the Earth Science Regents in June.

Regular laboratory periods are required and provide hands-on experience to supplement the class work. All labs must be satisfactorily completed before a student may take the Earth Science Regents Examination. There is also a lab practical that will test the student's ability to perform lab procedures. This counts as a part of the Earth Science Regents Examination.

PHYSICAL SETTING/CHEMISTRY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra and Geometry and Algebra II is recommended Living Environment and Earth Science	None

Chemistry is a Regents level course designed as a 3rd year science for college bound students who plan on a major in any science, pre-vet, vet tech, pre-med, nursing, medical records, or engineering.

Chemistry is rigorous course and students need to be motivated to succeed in chemistry. Learning Chemistry offers students opportunities to problem solve in unique and creative ways. The qualitative and quantitative aspects of chemistry require students to process and synthesize information from multiple perspectives. Learning chemistry asks students to expand their thinking. Although understanding these concepts is not essential for survival, these insights enhance daily experiences. Scientific literacy has become essential in society. Pollution, global warming, energy consumption, health, nutrition, etc., are all chemistry based. Reading nutrition and product labels as well as medication information all require some knowledge of chemistry. There are very few politically charged issues that don't have a foundation in chemistry. Everyday news reports on some event that can be related to chemistry, whether it is a chemical spill, toxic odor, or catastrophic fire. Learning Chemistry can be essential to your health and safety. This course will prepare students to take the Chemistry Regents in June.

Regular laboratory periods are required and provide hands-on experience to use laboratory equipment and techniques to carry out experiments. Students will learn how to follow proper procedures for safe handling, use, and disposal of chemicals. The laboratory period will supplement the class work. All labs must be satisfactorily completed before a student may take the Chemistry Regents Examination.

ALTERNATIVE ENERGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Living Environment and Earth Science	None

Alternative Energy is designed as a 3rd year science elective for non-science major students who do not have a strong background in mathematics. The Alternative Energy course will present an analysis and comparison of various alternative energy resources and how they are related to the currently predominant fossil fuels. This analysis will include the scientific, historical, cultural, and economic aspects of the most common alternative energies as well as an investigation of some less well-known energy resources. In Alternative Energy, students do not have a separate lab period or take a Regents Exam.

METEOROLOGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Living Environment and Earth Science	None

Meteorology is designed as a 3rd year science elective course offered to students that have successfully completed their Physical Setting/Earth Science requirement. This course offers an opportunity to learn about the different aspects of meteorology and develops the skills needed to analyze, interpret, and forecast the weather. Besides gaining deeper understanding of the different atmospheric variables, students will tackle the issues related to global climate change. Important critical thinking skills such as scientific inquiry and the scientific method process will be implemented and fostered throughout the year. In Meteorology, students do not have a separate lab period or take a Regents Exam.

CHEMISTRY FOR LIFE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra Earth Science and Living Environment	None

Chemistry for Life is designed as a 3rd year science elective course for non-science major students who do not have a strong background in mathematics. Chemistry for Life presents an approach to the study of chemistry, which offers an alternative to the Regents Chemistry course. However, it is not a substitute for a Regents Science requirement. This course is designed for the average student who is interested in many of the problems and benefits which confront him every day and are connected to Chemistry. The course will be taught using a thematic approach to help capture students' interest, to help make connections, and improve the retention of topics. A modified 5E model (engage, explore, explain, elaborate, and evaluate) of teaching and learning will be used in this course. In Chemistry for Life, students do not have a separate lab period or take a Regents Exam.

DIET AND DISEASE

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Living Environment and Earth Science	None

Diet and Disease is designed as a 3rd year science elective for non-science major students who do not have a strong background in mathematics.

Diet and Disease will present an overview of basic concepts of nutrition and our diet's role in disease prevention. Students will learn about anatomy and physiology of the digestive system, introductory food chemistry, weight control, and the role of diet in health. The importance of food choices in achieving and maintaining good physical, mental, and social well-being will also be discussed. Furthermore, the effects of cultural and environmental factors on food choices and nutrition habits to overall health will be analyzed, including the rolls of all essential nutrients in the maintenance of good health. The roles of diet and disease will be determined as well as improving understanding the role of nutrition in the treatment of diabetes, cardiovascular diseases, obesity, and cancer. Finally, students will become familiar with nutritional labels and misinformation. In Diet and Disease, students do not have a separate lab period or take a Regents Exam.

HUMAN BIOLOGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Living Environment	3 Hilbert credits

Human Biology is designed as a science elective for non-science major students who do not have a strong background in mathematics.

This is a full year advanced course that surveys basic concepts of human anatomy and physiology, including the structure of cells, tissues, and organs and their normal physiological interactions. Laboratory experiences, including dissection, reinforce important concepts. In Human Biology, students do not have a separate lab period or take a Regents Exam. Students can apply and receive 3 college credits through Hilbert college. There is a fee associated with this.

ADVANCED PLACEMENT CHEMISTRY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Earth Science, Living Environment, Chemistry, Algebra, Geometry and Algebra II	None

AP Chemistry provides students with college level foundation to support future advanced work in Chemistry. Students cultivate their understanding of Chemistry through inquiry—based investigations, as they explore topics such as atomic structure, periodic trends, intermolecular forces, bonding, molecular geometry, chemical reactions, kinetics, thermodynamics, and equilibrium.

Twenty five percent of instructional time is devoted to inquiry-based laboratory investigations, students ask questions, make observations and predictions, design experiments, analyze data, and construct arguments in a collaborative setting, where they direct and monitor their progress. Students enrolled in AP Chemistry will be required to take the AP Chemistry Examination in May.

PHYSICAL SETTING/PHYSICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Algebra, Chemistry Geometry, Earth Science, Living Environment and Algebra II/Trig (concurrently enrolled)	3 JCC credits or 4 Hilbert College credits

Physics is a Regents Level Class designed as a 3rd year science for college bound students who plan on a science major for pre-vet, vet tech, pre- med, nursing, computer science or engineering.

Regents Physics presents a modern view of physics with a major emphasis placed on the fundamental concepts underlying this basic science. The course is designed to encourage the utilization of such basic concepts as the conservation of energy, the conservation of momentum, and how they relate to other physical phenomena.

Regular laboratory periods are required and provide hands-on experiences to supplement the class work. The laboratory requirements must be completed before a student may take the Regents Examination.

This course will prepare students to take the Physics Regents in June. Students can apply and receive 3 college credits through Jamestown Community College for free but, it requires students have taken Regents Chemistry and have your previous years social studies grade of 80 or higher. Hilbert college has no prerequisites but charges a fee.

ADVANCED PLACEMENT BIOLOGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Living Environment, Regents Chemistry, Algebra and Geometry	None

AP Biology is a college level course for competent and well-motivated students. The course content follows the recommended outline for a typical college introductory biology course, taken by biology majors during their freshman year. This class is structured to increase your theoretical understanding of biology by studying the themes, topics and concepts found in biology. Themes are overarching features of biology that apply throughout the curriculum. Topics are subject areas in biology and concepts are the most important ideas that form our current understanding of a particular topic. In addition to integrating the topics, the major themes are shaped throughout the course to reinforce relationships of themes and concepts to topics such as biochemistry, cell structure and function, metabolism, genetics molecular basis of inheritance, DNA technology, evolution, microbiology, classification, plants, animals, animal physiology, and ecology. These topics are not simply taught as standalone units but are incorporated throughout the course. More than 25% of the course is compiled of hands-on laboratory work to apply and reinforce the biology concepts. Students enrolled in AP Biology will be required to take the AP Biology Examination in May.

SOCIAL STUDIES DEPARTMENT

Mr. Shanahan

Mrs. Brown

Mr. Carucci

Mr. Duprey

Mrs. Lina

Mr. Woolley

Mr. Ronan

Mrs. Monnat



GLOBAL HISTORY I

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

Global History and Geography 9 is the first year of a two-year study of the world's history and geography. It begins with a look at the world's earliest peoples and ends with an examination of evolving political, economic, and social ideas and systems. Students will explore the first agricultural evolution, the rise and fall of great empires, the world's great religions, major cultural movements, and the rise of Europe during the Age of discovery, up to the Enlightenment. The course will challenge students to rediscover life before the advent of the Industrial Revolution. Students will continue to build reading, writing, and analytical skills. Given a historical text, students will practice identifying bias, points of view, central themes, and correlating it to other regions and era's.

GLOBAL HISTORY II

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

The Regents examination given at the end of the 10th grade encompasses the history from 1750 to present. It will require all students to have mastery over the social studies standards, common themes that recur across time and place, and historical comprehension of events.

Students will also have a general knowledge of the similarities and differences of the people and events across political boundaries and time. Upon completion of the course, the student will be able to demonstrate knowledge of :

1. The major historical, geographical, societal, political and economic forces and events that have shaped the global community and individual nations.
2. The causes and effects of cultural diversity and cultural diffusion.
3. The political and economic interdependence of major nations and cultures in relation to other nations and cultures.
4. The means used by various nations and cultures to deal with human needs and human rights.
5. The economic significance of various nations and cultures studied.
6. The development of Western civilization in its intellectual, artistic, political and economic aspects.
7. The development of religious beliefs and value systems in the cultures and nations studied.
8. The influence of technology at various stages in history and in the various nations and cultures studied.
9. The influence of decisions and conditions in the past upon present international issues and problems.

AP WORLD HISTORY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	Global 9 and a recommendation from your ninth grade global teacher It is also an expectation that you sit for the AP World History exam in May	None

AP World History focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the present and apply historical thinking skills as they learn about the past. Five themes of equal importance—focusing on environment, cultures, state building, economic systems, and social structures—provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with special focus on historical development and processes that cross multiple regions.

US HISTORY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1.0	40 weeks	None	None

United States History and Government students will explore the major historical events from the colonial period to the present day. Topics will include the cultural heritage of the United States and the principles on which it was founded. One emphasis will be upon the circumstances surrounding the development of the American government and its structure and functions. At the conclusion of this course students will take the state Regents Examination in United States History and Government. Students must pass this course and the state exam to receive a high school diploma.

PSYCHOLOGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Global I and II	None

Psychology is a survey course of the fundamentals of psychology, including basic psychological concepts, principles and problems. The question of how behavior develops will be studied, with emphasis on human behavior through various stages of life and the roles played by heredity, environment, and socialization. Other topics will include physical and emotional development from conception to old age; sensation and perception; learning motivation and emotion; personality theories; mental and behavioral disorders; therapies for disorders; and elements of social psychology.

SOCIOLOGY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Global I and II	None

Sociology is the systematic study of how human societies shape the lives of the people who live in them. People make many important decisions in the course of a day, and these are not made by sheer chance. The decisions are made within the context of society: a family, a school, a nation, an entire world. The essential wisdom of sociology is that the social world guides our actions and life choices just as the seasons influence our choices of activities and clothing. This course will enable students to look carefully at the elements and institutions of society and analyze the context in which they and others make decisions about their lives. It is intended to introduce students to knowledge about how society works and techniques for sociological research, as well as the analysis and foundations of human behavior in society.

HISTORY OF NAZI GERMANY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

This course will take the students through the rise of Nazi Germany. It will include a history of some of the most prominent Nazi leaders, understanding the role that WWI played, the use of Anti-Semitism and the Holocaust, WWII, and the fall of Nazi Germany. We will use various forms of learning, such as projects, lecture, media, and research in order to understand how the Nazi's became one of the most controversial groups of people in history.

AP US HISTORY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Department approval	None

This course presents a more detailed and advanced coverage of the history of the United States. A college history textbook is required and college-level reading and writing assignments are given.

Students will take the state Regents Examination in United States History and Government & the AP U.S. History exam. This exam is required.

The College Board charges a fee for the AP exam and there are other fees for review sessions.

PARTICIPATION IN GOVERNMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

This course is designed to increase the students' awareness of how government affects their daily lives. Students will identify and discuss ways to solve various social problems. Throughout the course, students will identify various levels of the government power structure. By engaging in role-playing and simulation activities, students will understand how public policy decisions are made and how they affect the average citizen. An integral part of the course is the Government Scavenger Hunt, and the Community– Based Project. A passing grade in the course is required for graduation.

ECONOMICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

This course is designed to familiarize students with basic economic concepts such as markets, scarcity, and the laws of supply and demand. The components of the American economic system and its operation, comparisons of various world economic systems, and global interdependence are also major themes. By the end of the course, the student will understand his/her role in the economic system as a consumer, worker, investor, and voting citizen. A passing grade in the course is required for graduation.

AP GOVERNMENT

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	US History and Government (Regents or AP)	

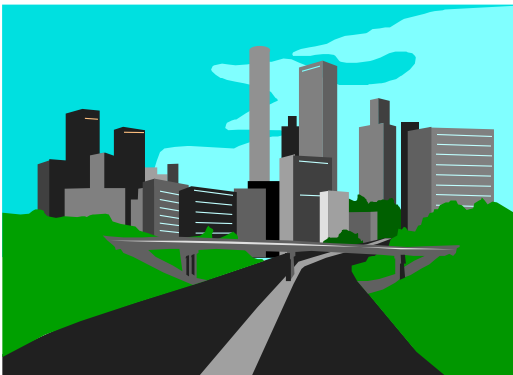
Prerequisite: Successful completion of one full-year of US History and Government (Regents or AP). This course is a two-semester course that covers the Government and Economics requirement to graduate. AP US Government & Politics focuses on the study of how the government functions in the United States. Students will analyze the role of political parties and ideologies on law-making, society, and foreign policy. They will understand the three-branch system of government and how the branches interact with one another. Students will study the role of citizens and media in the political process and in policy making. They will understand how economics influences politics and how all of these factors have evolved throughout the history of the United States. The course will conclude with a final, required project that taps into students' personal interests. All students enrolled in the course are required to take the AP exam in May. Students will have an opportunity to receive college credit with a college-accepted score on the AP exam.

TECHNOLOGY DEPARTMENT

Mr. Cook

Mr. Kress

Computer Club - Our goal is for all members to learn enough about computer hardware and software to enable them to upgrade and repair their own computers.



CONSTRUCTION SYSTEMS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	None

Construction Systems will provide the student with a broad view of the construction industry to include the study of tools, techniques and materials used for construction of buildings, roads, dams and bridges. The course will involve the construction of a residential house module and a study of the processes, systems and safe use of tools involved. Students will learn how to build a saw horse, frame, estimate, drywall, and roof a house.

DESIGN & DRAW FOR PROD (IED/PLTW)

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	None	RIT

Design and Draw will provide students with basic fundamentals of drafting. The six basic areas of Technical Drawing will be included. In addition, the course will cover many areas of designing from sketching, computer drawing, and problem solving to model fabrications and prototype construction. **This course meets the requirements of the New York State Art requirement for all students.**

CONSTRUCTION 2

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Construction Systems 1	None

Class size : 18

This course is a continuation of what was learned in Construction 1. They will learn how to survey, how to construct a concrete block foundation wall, design a shed using Auto cad Revit, calculate and construct stairs, set up a plumbing plan, and solder copper pipe and pexx. They will also learn the responsibilities of the construction manager. If there is time the class will construct a shed. Cooperative learning will be stressed for most of the projects will be group work.

MATERIAL PROCESSING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Material Processing will allow the student to work with a wide variety of materials. Projects using plastics, wood, metal or other materials will be designed and constructed. Basic drawing and sketching techniques will also be explored. Students will use our state of the art laser engraver and CNC wood router.

BASIC ELECTRICITY

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Basic Electricity students learn about the different materials and methods used to wire a residential home. They learn about the electrical code and must wire their projects to code. Switch characteristics of single pole, 3– way, and 4– way switches will be taught. They will also understand the circuit breaker box and all of the circuits in the box.

INTRODUCTION TO OCC TECH B

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	None	None

Introduction to Occupations-Technology B involves setting up a mass production for Adirondack chairs. The students will learn how to draw all of the parts of the chair using Auto Cad Inventor. They will then perform a cost analysis and build the chair in groups of two or three. Upon completion the chair will be marketed to possible manufacturer.

CAD/CAM

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
.5	20 weeks	Design and Draw	None

This is an introductory course that demonstrates the integration of Computer-Aided-Design(CAD) and Computer-Aided-Manufacturing (CAM). It is a study of modern prototyping and machining methods, teaching the use of Autodesk inventor software. Students will learn how to run the CNC Mill, CNC Router, Laser engraver, and the Plasma cutter using many different types of software. Students must take IED before they take CAD/CAM.

MANUFACTURING

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	DDP CAD	None

Manufacturing is a basic machining and manufacturing operations course. This class will include precision measurement and metal working machine operation to include metal lathe and vertical mill. Some of the projects are aluminum plumb bob, tap center, dice, and vice stop.

PRINCIPLES OF ENGINEERING (PLTW)

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Two years of Math or Science	RIT

Principles of Engineering offers the college bound student an opportunity to put his or her knowledge of mathematics and science to work in a hands on, laboratory based course. Students will be introduced to general concepts of engineering. Students will be applying concepts to solve practical problems dealing with “real world” case studies. Computers are used in both data collection and analysis. Programs have to be written to interface the computer with projects being designed.

DIGITAL ELECTRONICS (PLTW)

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Design and Draw for Production, Algebra	RIT

A course in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. **Can receive college credit. (Math Credit)**

COMPUTER INT MANUFACTURING (CIM)

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Design and Draw	RIT

*A Project Lead the Way Course

Manufacturing transforms ideas into products. This course provides the opportunity for students to develop a better understanding of this innovative exciting industry. Students learn about manufacturing processes, product design, robotics and automation. Students develop their knowledge and skills of CAD and manufacturing to produce products using a CNC mill. Students apply the knowledge and skills gained in this course as they collaborate to design, build and program factory system models. **Can receive college credit.**

CREATIVITY & INNOVATION

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Material Processing	None

Creativity and Innovation is an advanced course allowing students to build on the basic foundation, which was established in the "Material Processing" class. Students will design a pedestal table on Autocad and calculate board footage. This class will be using our new CNC router and laser engraver to enhance their table design.

ROBOTICS

<u>Units of Credit</u>	<u>Duration</u>	<u>Prerequisite</u>	<u>College Credit</u>
1	40 weeks	Digital electronics, Computer Integrated Manufacturing, or Instructor permission	None

Students will explore robotics using Technology available including Robo-cell and Llynx-motion. Students will also learn C+ programming on the Vex platform and compete in a variety of robotic events during the year. We will study the functions of radio frequency-controlled servos and the use of speed controllers. These robots will compete in Tech Wars Capture the flag, Sumo bots, and Battle bots' competitions. This knowledge will prepare the students to build and control their own drone type robot and learn FPV drone racing.