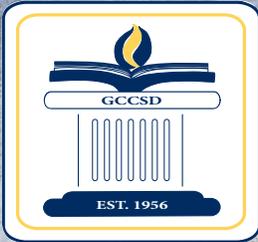


GATES CHILI HIGH SCHOOL



2016-2017



Program of Studies Course Selections

THE SPARTAN WAY ~ Respect : Responsibility : Compassion : Hard Work

Together we teach and inspire excellence for all learners.

Table of Contents

Departments

Art.....	4
Business.....	7
English.....	12
Family & Consumer Sciences.....	15
Health.....	17
Languages Other Than English.....	19
Math.....	23
Music.....	26
Physical Education.....	29
Science.....	30
Social Studies.....	34
Technology.....	38

Art

Art Department Sequences

Students may use a 5-unit sequence in Art to replace the 3 required units of language for the Regents with Advanced Designation Diploma.

Art Department Information

Studio Art I & Studio Art II

Successful completion of Studio Art I and Studio Art II are prerequisites for Drawing, Advanced Drawing, Painting, Sculpture and Advertising and Graphic Design.

**Any 12th grade student who now has room in their schedule for art electives may bypass the prerequisite of Studio Art I & II.

The student's School Counselor and the Art Department must meet to discuss any senior bypassing the prerequisite.

(Those students who select one credit of art but not a three or five credit art sequence may take Studio Art II in any semester after Studio Art I.)

1. Studio Art I
2. Studio Art II+
3. Drawing*
4. Advanced Drawing*
5. Painting*
6. Sculpture*
7. Advertising and Graphic Design*
8. Printmaking
9. Jewelry
10. Digital Media
11. Digital Photography+
12. Ceramics
13. Digital Video Making
14. Portfolio Preparation/Advanced Studies

} Prerequisites of Studio Art I and II are required

*Advanced Drawing

Semester Course **½ Unit**
Grades 10-12

Prerequisites: Studio Art I, Studio Art II, and Drawing

This course is designed for students to develop advanced drawing skills and techniques. Individual artistic expression and exploration is encouraged with a strong focus on composition, presentation and quality. Students will work with a variety of mediums including pencil, charcoal, watercolor, ink, pastel and colored pencil.

*Portfolio Preparation/Advanced Studies

Full Year Course **1 Unit**
Grade 12

Prerequisites: Studio Art I, Studio Art II, Drawing, plus one other art course.

This course is designed specifically for seniors interested in pursuing art as a career. Students will research colleges pertaining to their desired field in order to complete the required portfolio for admission. Students will be working on individual projects according to their field of choice and exploring new mediums. Work will be in-depth and individual. Exposure to museums, galleries and local artists is a focus in Advanced Studies and students are encouraged to attend local artist events. A digital portfolio will be created where the final portfolio will count as the final exam for the course. This course is designed to expand and enhance student's creativity, experiences and skills.

*Advertising and Graphic Design

Semester Courses **½ Unit**
Grades 10-12

Prerequisites: Studio Art I and Studio Art II or Art Teacher recommendation

This course gives the students an opportunity to think like a graphic designer. Logos, menu designs and posters are a few products that students may design. They will utilize the design process for each unit by taking an idea, from a thumbnail to a comprehensive, to a final. Graphic design deals with the creation of computer generated designs while incorporating their understanding of the Elements of Art and the Principles of Design. Students in this course will utilize the computer as a design tool to communicate visual ideas and demonstrate a variety of approaches to artistic creation. Students will have access to WACOM tablets to aide in the drawing process. The featured software is Adobe Illustrator and Adobe Photoshop. Some computer knowledge is helpful.

Ceramics

Semester Course **½ Unit**
Grades 10-12

Prerequisites: None

This course provides an exploration of the history, uses and properties of clay. The student will create using hand-building techniques: pinching, coil, slab, and combinations as used in pottery and sculpture. The use of the wheel is demonstrated and students spend time throwing basic forms that may include cylinders, bowls, plates, and bottles. Students work with surface treatments including paint, textures, colored slips and glazes, and non-firing stains.

Digital Media

Semester Course **½ Unit**
Grades 10-12

Prerequisites: None

Digital Media is a studio course that deals with the creation of computer generated designs while incorporating the Elements of Art and Principles of Design. Students in this course will use the computer and other electronic media as design tools to communicate visual ideas and demonstrate a variety of approaches to artistic creation. The featured software is Adobe Illustrator and Adobe Photoshop. Some computer knowledge is helpful.

Digital Photography+

Semester Course **½ Unit**
Grades 10-12

Prerequisites: None

Studio in Digital Photography is an introduction to the historical, technical, operational and creative aspects of digital photography. The course will focus on the production of digital images and visual sequences that tell a story, communicate an idea, illustrate a theme, or convey a message. Techniques of planning, refining, capturing and manipulating images will be explored in a workshop type atmosphere.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Digital Video Making

Semester Course **½ Unit**
Grades 10-12

Prerequisites: None

Video Arts is an introduction to the historical, technical, operational, and creative aspects of video production. The course will focus on the student as video-maker. Students will work in several genres, including documentary, poetry-video, abstract and personal narrative forms. The course will focus on the production of video images and visual sequences that tell a story, communicate an idea, illustrate a theme, or convey a message. Similarities and differences between film and video will be discussed. The historical aspect will be studied by the screening of a wide variety of works from video art to pieces made for television. Thumbnail sketches, rough drafts, storyboards, written work, and complete projects will be presented in class to help develop analytical and critical skills for this media. The students will participate in a critical analysis of each student's work. The technical subject to be covered will include the basic video camera operations, lighting, sound and editing. All of this including the techniques of planning, refining, capturing, producing, and editing video presentations will be explored in a studio type atmosphere.

***Drawing**

Semester Course **½ Unit**
Grades 10-12

Prerequisites: Studio Art I and Studio Art II

This course is designed to be an introductory course to drawing and drawing mediums. Contour drawing, shading, still life and colored pencil are some of the units of study that will be explored. Various pencil weights as well as mixed medium will be used. Students will refine their drawing skills as well as enhance their individual ability in drawing and in drawing presentation.

Jewelry

Semester Course **½ Unit**
Grades 10-12

Prerequisites: None

This course teaches the techniques, processes and designs of jewelry making. The primary objectives are exploring the development of skills, the use of tools, and refinement of craftsmanship in jewelry. Students will create unique pieces using sterling silver, copper and semi-precious gem stones. Students will also be exposed to enameling, soldering and other metal use. Other alternatives in materials may be purchased; the cost of materials of required projects will vary from \$15.00 to \$20.00.

+ Dual enrollment course

***Painting**

Full Year Course 1 Unit
Grades 10-12

Prerequisites: Studio Art I and Studio Art II

This course presents the beginning techniques of painting. Emphasis is placed on drawing and composition both realistic and abstract. Surfaces, brushes and different kinds of paint are studied and applied. Acrylic paint is used to create landscape, imaginary and still life paintings. Over fifty artists are studied and their techniques applied to individual artwork. The second half of this course explores advanced painting techniques and subject matter. An individualistic approach allows the student to do research and personally express themselves. It is a continuation of the study of art history in painting as well as an in-depth research of artists and periods in art.

Printmaking

(Offered every other year opposite Sculpture – even years starting with 2016)

Semester Course ½ Unit
Grades 10-12

Prerequisites: None

Printmaking is one of the oldest art forms! The printmaking course provides students with the opportunity to learn the four main printmaking processes and execute prints using each technique. The processes used include intaglio, relief, monoprint and stencil (silkscreen). Students will work with graphic images and reproduce multiple copies of their art and learn how to properly mat their prints. Printmaking is unique in that the students are able to reproduce multiple copies of their artwork and learn ways in which professional artists and designers have their work reproduced.

***Sculpture**

(Offered every other year opposite Printmaking – odd years starting with 2017)

Semester Course ½ Unit
Grades 10-12

Prerequisites: Studio Art I and Studio Art II or Art Teacher recommendation

In this course the students will learn to see and portray man-made and organic objects as well as the human figures sculpture. They will learn to utilize a variety of materials and processes such as clay modeling, woodcarving, assemblage, additive and direct plasterwork. Students will select appropriate methods to pursue the realization of their creative concepts. Historical and theoretical issues addressed through lectures and digital slide presentations. This class will introduce the use of sculptural form as a vehicle for the creative expression of personal ideas and contemporary concepts. Emphasis will be placed on an awareness of the qualities of materials and how they can be employed to support aesthetic and conceptual objectives. Areas of study include realistic and abstract sculpture in wire, wood, paper, plaster, plastics, papier-mâché and found object.

Studio Art I

Semester Course ½ Unit
Grades 9-12

Prerequisite: None

Studio Art I is the prerequisite for several art courses and is one half of the foundation course of the Art Department.

Studio Art I presents the concepts of two point perspective, graphic design, lettering styles, color harmonies and color mixing with paint. Emphasis is placed on applying the Elements of Art and the Principles of Design in art work as well as developing drawing skills. A variety of medium are covered, including colored pencil, paint, cut paper, mixed media and digital imagery. Art History will be discussed and analyzed as appropriate for each unit.

***Studio Art II+**

Semester Course ½ Unit
Grades 9-12

Prerequisite: Successful completion of Studio Art I (all students)

Studio Art II is the companion course to Studio Art I. A student who selects art to meet the Fine Arts graduation requirement of one credit must successfully complete Studio I and Studio II. Each is a half-year course. Studio Art II presents the study of form and shape in two-dimensional as well as three-dimensional design. Introductions to drawing, painting, printmaking, sculpting, advertising and computer graphics are studied. With each unit there is an analysis of art history as well as trends in art.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

Business

Business Offerings at a Glance

Full Year Course Offerings

Accounting+	9	10	11	12
College Accounting+	9	10	11	12
Business and Personal Law+	9	10	11	12
Business Management & Marketing+	9	10	11	12
Diversified Cooperative Work Based Learning			11	12
Career Exploration Internship Program (CEIP)			11	12
Mathematics with Business Applications	9	10	11	12

Half Year Course Offerings

Microsoft Applications+	9	10	11	12
Careers and Financial Management+	9	10	11	12
Wall Street 101+	9	10	11	12
Keyboarding/Web Communications+	9	10	11	12
Entrepreneurship/E-Commerce+	9	10	11	12
Sports and Entertainment Marketing+	9	10	11	12
Career Exploration Internship Program			11	12
School Store Operations Internship		10	11	12
Business Cinema+	9	10	11	12
Online Personal Finance+			11	12

Business/Marketing Education Sequences

Business/Marketing – 5 Unit Sequence

Students may use a 5-unit sequence in business to replace the 3 required units of language for the Regents with Advanced Designation Diploma.

A combination of any of the following courses:

Accounting+	(1)
College Accounting+	(1)
Business and Personal Law+	(1)
Business Management & Marketing+	(1)
Careers and Financial Management +	(.5)
Microsoft Applications+	(.5)
Diversified Co-Op	(1)
Mathematics with Business Application	(1)
Wall Street 101+	(.5)
Sports and Entertainment Marketing+	(.5)
Keyboarding/Web Communications+	(.5)
Entrepreneurship and E-Commerce+	(.5)
Business Cinema+	(.5)
Online Personal Finance+	(.5)

Career & Technical Education Endorsement

Academy of Business & Finance - 5 credits

Mandatory 1 Credit

Careers and Financial Management+	(.5)
Wall Street 101+ or Online Personal Finance+	(.5)

Choose 3 Credits

Accounting+	(1)
Business Management & Marketing+	(1)
College Accounting+	(1)

Choose 2- 3 Credits if needed

Mathematics with Business Applications	(1)
Microsoft Applications+	(.5)
Keyboarding/Web Communications+	(.5)
Sports and Entertainment Marketing+	(.5)
Junior Achievement Economics+	(.5)
Business Cinema+	(.5)

Mandatory 1 Credit

Work Based Learning (Co-op, 3 Job Shadows, or Internship)	(1)
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Assessments - NOCTI – Business Financial Management

Final Project and Presentation (Employability Profile)

Business students will be eligible for the NYS Business and Marketing Honor Society by completing Financial Management CTE.

Diversified Cooperative Work Based Learning Program

Prerequisite: Teacher-Coordinator Permission

CO-OP

200 hours = ½ unit, 400 hours = 1 Unit

Internship

60 hours= ½ unit 120 hours = 1 Unit

Diversified Cooperative Work Experience is a New York State approved Work Experience Program geared towards juniors and seniors and affords participants with a chance to experience “first hand,” a career specific employment opportunity. With this, students are able to utilize many of the concepts, procedures, and skills that they have developed throughout their educational and personal experiences. The CO-OP opportunity offers the student school credit using their current job, whereas the Internship is school credit related to a career pathway. In addition to classroom instruction, the teacher-coordinator will provide on-site supervision.

School Store Operations Internship

The New School Store Operations Internship is for students who want to learn basic retail operations by running a school-based store. Students will learn many business functions including accounting, research, marketing, planning, managing and selling. Students will also learn service skills and attitudes required for successful store operations. In addition to working in the store, students will be required to complete various class learning tasks related to store operations. Students will be placed in positions of trust and responsibility and allowed to manage their time in this program. Students must be willing to meet with their supervisor for planning and training as needed (The general guidelines for internship credit will follow the CEIP program). This will be part of the Diversified Co-Op work experience.

Career Exploration Internship Program

The Career Exploration Internship Program (CEIP) is a non-paid internship experience that provides individualized career pathway placements for our students. The students may earn either ½ unit or 1 full unit of credit during their junior or senior year. This program provides students with the opportunity to gain insight and experience in occupations and careers based on their own individual interests. In addition to classroom instruction, the teacher-coordinator will provide on-site supervision.

NYS Dept. of Education Credit	Internship Hours	Seminar Hours with Coordinator
½ unit	60	27 hours (1 period per week plus independent work)
1 unit	120	54 hours (1 period per week plus independent work)

Note: Transportation required if placement is during school hours.

Accounting +

**Full Year Course 1 Unit
Grades 9-12**

Prerequisite: None

Upon completion of this course the student should be able to keep a simple set of books. Academic students planning on majoring in Accounting or Business Administration in college, and students planning on owning his/her own business, will find this course extremely beneficial. This course gives an overview of accounting systems and processes with particular emphasis on the principles and procedures of the complete accounting cycle. It also provides opportunities for computer utilization in Microsoft Excel and Peachtree accounting software. Sub-systems for handling cash receipts, cash payments, purchases and sales of merchandising business are also presented.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Business and Personal Law +

**Full Year Course 1 Unit
Grades 9-12**

Prerequisite: None

This course is designed to give students a practical knowledge of their rights and obligations in ordinary business transactions. Realistic examples are used to teach a wide range of legal concepts. A variety of videos, speakers, and activities are planned to reinforce classroom discussion. Business and Personal Law serves as an excellent background for those contemplating business courses in college and is recommended to both business and academic students. Credit for this course may be used to meet sequence requirements of Business/Marketing education and/or the fifth unit of Social Studies in a 5-unit Social Studies sequence only for students pursuing an occupational sequence.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Business Cinema+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Using a cinematic approach, this course addresses the concepts and challenges businesses face in studying business topics using current digital media and instruction (movies, online videos, podcasts, websites, web 2.0 tools...). The unique media and cinematic instructional format allows students the additional learning experiences from a variety of current digital media resources to develop a real world foundation and expand their knowledge and resources of all of the areas of business. Themes include the digital age of business and consumers, management, finance, small business, globalization, social responsibility, online presence and many more topics. Students will increase their awareness of the overall environment and function of business as well as observe role in the digital society.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Business Management & Marketing +

Full Year Course **1 Unit**
Grades 9-12

Prerequisite: None

This is an excellent course for students who are thinking of majoring in business in college or for those who want to gain essential business knowledge to create better opportunities for future success in any career pathway. Business Management/Marketing emphasizes a hands-on approach to introduce students to the fundamental functions of business management and marketing concepts within all types of organizations. Students will develop and run their own virtual company using specialized business simulation software to understand the interrelationships of the basic business functions of management and marketing. Students will learn and demonstrate skills in word processing, spreadsheets, databases, internet research, and presentations that are common in business and industry today. Students may have the option to receive college credit hours. The college credit option DOES require a fee.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Careers and Financial Management +

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

This course is designed to develop transferable skills, which can be used at work or at home. Its purpose is to explore occupational interests and abilities prior to taking more specialized occupational courses in high school or college. The first objective of this course is to provide students with the opportunity to learn about the features of our economy, explore a variety of careers, and learn the skills and competencies including personal selling and customer service skills needed for success in the respective career pathway. The second objective of this course is to teach students the fundamentals of personal financial literacy so they can make informed choices related to smart consumerism, budgeting and banking, using credit, investing, insurance, retirement planning, and understanding taxes.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee..

Required course for CTE endorsement on the diploma.

College Accounting +

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: None

College Accounting uses an integrated approach to teach accounting. Students first learn how businesses plan for and evaluate their operating, financing and investing decisions and then how accounting systems gather and provide data to internal and external decisions makers. This year-long course covers all the learning objectives of a traditional college level financial accounting course, plus those from a managerial accounting course. Topics include an introduction to accounting, accounting information systems, time value of money, and accounting for merchandising firms, sales and receivables, fixed assets, debt and equity. Other topics include statement of cash flows, financial ratios, cost-volume profit analysis and variance analysis. (May be used as an elective credit for business or 3rd year mathematics elective requirement)

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Entrepreneurship/E-Commerce+

(Start Your Own Business)

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Entrepreneurship/E-Commerce focuses on recognizing a business opportunity, starting a business based on the recognized opportunity, and operating and maintaining that business. This course includes planning and strategy concepts, financial and organizational considerations, personal selling and customer service skills, accounting and financial controls, time management, materials management, human resources management, facilities management, teamwork, decision making, problem solving, work ethics, and creative thinking. Students will have the opportunity to gain skills in emerging technologies that become the standard for conducting global business (E-Commerce). Students can participate in the SUNY Geneseo Young Entrepreneurs Academy (YEA) program which is an optional program that will allow students to start their own business.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Keyboarding/Web Communications+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

This exciting **hands-on** one-semester course focuses on two objectives- the application of creating professional keyboarding skills and written business documents for school and work, while integrating the variety of rich and interactive forms of online communication and collaboration tools that are becoming standard for success in college and the professional workplace. Successful students will improve their individual touch-keyboarding skills by drilling on speed and accuracy, while developing a high level of skill in typing situations using advance features in Microsoft Word, including mail merging, referencing and reviewing options. Students will understand and apply various content and management tools available online to facilitate competencies for the 21st century learner and worker. Including Web 2.0 tools – Google Documents, Google Blogger, news feeds(RSS, XML), wikis, and other productive and collaborative tools. Students will also be able to manage a popular email system (Microsoft Outlook) to electronically communicate professionally. Other topics will include examining ethical issues and digital citizenship by discussing, thinking, and sharing the process of using technology in today's personal and professional life.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Mathematics with Business Applications

Full Year Course **1 Unit**
Grades 9-12

Prerequisite: None

This full year course covers fundamental mathematical operations and their application to business problems. Basic concepts and processes of mathematics are applied to various business situations including statistical analysis, merchandising, taxation, personal finance, payroll, financial statements, inventory, investments and other pertinent uses of mathematics in the field of business. Upon completion, students should be able to apply mathematical concepts for business and personal use. (May be used as an elective credit for business or 3rd year mathematics elective requirement)

Microsoft Applications+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

This college level hands-on computer application course is designed to provide students an in-depth understanding of the most popular software applications used today. Students will become proficient in the many features of Microsoft XP Office Suite and other popular software programs. Upon successful completion students will be able to walk into a professional office and perform many of the same tasks that are being done in business today. Such tasks as preparing professional word processing documents, creating formula based spreadsheets with graphs, constructing and manipulating databases, preparing images using Adobe Photoshop Elements, composing multimedia presentations, creating brochures using desktop publishing, Internet applications and basic movie/video production will be covered. Students will integrate a variety of software applications and the Internet for research into a culminating project. If available, students may choose the option to receive 4 college credit hours for this course. The college credit option DOES require a fee.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

Online Personal Finance+

Semester Course **½ Unit**
Grades 11-12

Prerequisite: None

This is an Online Financial Literacy course for any student in the 11-12 grade levels. The need for Business and Marketing Education and specifically financial literacy is reinforced by the increasing demand in the workforce for financial managers, accountants, and other "office" occupations. Finance plays a vital role in the day-to-day activities of everyday life. Today's youth will be required to take more personal responsibility for actively managing their finances. All students, regardless of the career they choose, can benefit from Finance instruction in their own personal affairs.

In this course, students will learn how choices influence occupational options and future earning potential. The course content is designed to help the learner make wise spending, saving, and credit decisions and to make effective use of income to achieve personal financial success.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Sports and Entertainment Marketing+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Marketing is a tool that has allowed the United States economy to be one of the most successful in the world. Sports and Entertainment play an important role in marketing and are important parts of this modern economy. Sports and entertainment marketing is one of the largest exports from the United States to the rest of the world. This course will teach students about basic elements of marketing and how these elements are applied to organizations involved in sports and entertainment industries. Computer technology will be used daily to support and enrich the curriculum. Over two hundred American universities today offer major concentrations in sports and entertainment marketing.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Wall Street 101+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None (Business Unit)

The intention of this course is to expand student knowledge of their personal finances now and in the future. This course gives in-depth understanding into how students can manage their finances and why financial management is critical to personal success. Topics covered include: consumer purchasing strategies, consumer credit, fundamentals of investing (i.e. stocks, bonds, and mutual funds), real estate, insurance, financial management for businesses, accounting, and tax strategies. Computer applications will be coordinated for each unit. Guest speakers will be coordinated with each unit. The course focuses on the student's role as a citizen, student, family member, consumer, and active participant in the work and business world. The intent is to inform students of their various economic and financial responsibilities and to provide opportunities for self-awareness, expression, and advancement in a progressive and highly competitive society. Students will become knowledgeable of exciting career opportunities relating to the financial world.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

English

Advanced Writing

Semester Course **½ Unit**

Prerequisite: Successful completion of Creative Writing

This course is designed as an elective for sophomore, junior and senior students who want to continue their in-depth writing experiences. Students develop ideas and create a writing portfolio based on their area of interest. Rewriting to achieve mastery is particularly emphasized. Students continue to compose and construct effective pieces that engage readers in the literary genres. This course is particularly helpful for those interested in college and professional writing. Also, through the course, there are guest writers and artists who share their experiences and knowledge of writing.

Communication, Theatre, and Media Arts

Full Year Course **1 Unit**

Grades 10-12

This half-year, elective course offers students who are interested in communication as well as theatrical and media arts the opportunity to experience their history and progress. Then, ultimately the students will apply their learned knowledge in all areas of film, television, and theatre. The course is designed to allow students the opportunity to learn about the history, writing, staging, directing, as well as technological and business aspects of film, television, and theatre. Students will analyze texts and write and listen extensively. Throughout the semester, students will work on a variety of projects where they will apply their knowledge. Students interested in any area of the growing field of communication and entertainment will benefit from the rigorous curriculum offered in this course.

Creative Writing

Semester Course **½ Unit**

Grades 10 -12

Prerequisite: Successful completion of English 9/9 H or teacher recommendation

This course is designed as an elective for sophomore, junior and senior students interested in the development of their creative writing skills. It is not a remedial writing course; rather, it is designed to give all students the opportunity to write in the areas of fiction, nonfiction, poetry and lyrics.

Public Speaking

Semester Course **½ Unit**
Grades 10-12

Prerequisites: Successful completion of English 9/9 H or teacher recommendation

This semester course is an elective designed for sophomore, junior and senior students interested in the development of their public speaking skills. This course will be highly participatory in nature. Students will learn and develop skills in writing effective speeches and delivering them to various audiences. Students will gain practice in the different types of speeches (formal, informal, persuasive, informative, etc.). Students will learn the components, styles, and techniques involved in public speaking. There will be student and teacher evaluations with the goal that students will learn and gain confidence in the area of public speaking.

English 9

Full Year Course **1 Unit**

Prerequisite: English 8

This course is designed to build upon the fundamental skills in reading, writing and communication as well as to foster the skills necessary for becoming college and career ready. The Common Core Standards are the foundation of this course with specific emphasis on reading both literature and informational text. Through the writing process, students are exposed to all styles of writing including persuasive, informational, explanatory, and narrative writing while instruction is given on preliminary grade level research skills and language proficiencies. Students are expected to complete grade level reading and writing assignments outside of class, and they will be challenged to comprehend and analyze multiple complex texts throughout the year. Organization and a growing independence are necessary skills for the successful completion of this course. This course prepares students for the Common Core Regents Assessment to be given in 11th grade and culminates in a district final exam in June.

English 9 H

Full Year Course **1 Unit**

Prerequisite: English 8

This course emphasizes higher levels of reading, writing, and critical thinking. Literature is intensely studied through classroom discussion and analysis. Independent research projects and outside reading activities are an integral part of the course. Common Core Standards in English will be stressed with a central focus on creating college and career ready students. This course prepares students for the Common Core Regents Assessment to be given in 11th grade and culminates in a district final exam in June.

English 10

Full Year Course 1 Unit

Prerequisite: Successful completion of English 9/9 H

This course is designed to reinforce the developed skills in reading, writing, and communication taught in English 9 or 9 H. It continues to build upon the necessary skills for becoming college and career ready. The Common Core Standards continue to be the foundation of this course with further emphasis on reading classic literature, as well as more challenging and complex informational texts. Through the writing process, students will further develop skills in all types of writing, while instruction is given to reinforce previous grade level research skills and language proficiencies. Students are continually expected to complete grade-level reading and writing assignments outside of class, as they are challenged to comprehend and analyze multiple complex texts throughout the year. Organization, independence, and analytical thinking are expected skills for the successful completion of this course. This course prepares students for the New York State Common Core Regents Exam given in the 11th grade and culminates with a district final exam in June.

English 10 H

Full Year Course 1 Unit

Prerequisite: Successful completion of English 9/9 H or teacher recommendation

This course is designed to further develop the critical reading, writing and thinking skills taught in grade 9. Poems, novels, plays, short stories and essays are analyzed critically. Vocabulary study, listening, speaking and outside reading assignments are an important part of the course. Research and presentation are also required in this course. Common Core Standards in English will be stressed with the central focus on creating college and career ready students. This course prepares students for the New York State Common Core Regents exam given in the 11th grade and culminates with a district final exam in June.

English 11 R

Full Year Course 1 Unit

Prerequisite: Successful completion of English 10/10 H

This course is designed to refine the skills previously developed in reading, writing and communication taught in English 9/9 H and 10/10 H. It continues to focus on preparing students to become college and career ready. The Common Core Standards for 11th grade are the basis of this course and further emphasis is on reading classic literature as well as challenging informational texts and complex non-fiction texts. The higher-level writing in this course further expands upon their maturing skills in persuasive, argumentative, informational, explanatory, and narrative writing while further practice is expected in grade level research skills and language proficiencies. Students are expected to complete grade level reading and writing assignments outside of class, and they will continue to be challenged to comprehend and analyze multiple complex texts throughout the year. Serious synthesis of text and mature writing are skills necessary for the successful completion of this course. This course culminates with the New York State Common Core Regents Exam in June.

English 11 H

Full Year Course 1 Unit

Prerequisite: Successful completion of English 10/10 H or teacher recommendation

This course is designed to refine critical reading, writing and thinking skills. It involves in-depth critical analysis of various genres of literature. Students are expected to respond critically to poetry, novels, plays, short stories, and essay through written assignments and class discussion. Substantial outside reading and vocabulary development are involved as well. Common Core Standards in English will be stressed with the central focus on creating college and career ready students. This course culminates with the New York State Common Core Regents Exam in June.

AP English Language and Composition

Full Year Course 1 Unit
Grades 11-12

Prerequisites: Successful Completion of English 10 H or 11 H or teacher recommendation

This specialized class offers students the opportunity to become highly efficient readers and writers. One half of this course will focus on the reading of prose and studying it for writer's purpose, craft and development of rhetoric. The other half of this course will concentrate on developing compositional and argumentative writing based on research. Students will examine what good writers do and try to emulate those skills in their work. This full year course culminates in the Advanced Placement exam of the same title. Juniors involved in this class will have the additional New York State Regents Assessment to take in June.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

AP English Literature

Full Year Course 1 Unit
Grade 12

Prerequisite: Successful completion of English 11 H or teacher recommendation

The course is designed for students who have exhibited advanced skills in all facets of English and/or have been strongly recommended by their previous English teacher. The course's primary focus is literature based. Numerous written papers are required. The seminar approach is used to study literature ranging from the classical to the modern. Outside reading and one research project are required. The course will prepare students to take the AP examination in English.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

English 12

Full Year Course 1 Unit

Prerequisite: Successful completion of English 11/11 H

This course is designed to polish skills in reading, writing and communication for strengthened college and career readiness. The Common Core Standards are the foundation of this course with greater stress on independent analysis and synthesis of complex texts. With a continued focus on the writing process, students are expected to display their knowledge of all types of writing with a strong emphasis on the senior research project. Focus, independence and appropriate use of language proficiencies are necessary skills for the successful completion of this course. English 12 culminates in a district final exam in June.

Exploring Humanities +

Full Year Course 1 Unit
Grade 12

Prerequisite: successful completion of English 11/11 H and/or teacher recommendation

This exciting alternative to English 12 is filled with hands-on opportunities such as field trips to museums, theaters and guest speakers. Students will be developing an appreciation for art, music, photography and all branches of human culture while learning research skills, literary analysis and the craft of writing effectively. If the student is looking for something different in an English course this is the one for him/her.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

Family & Consumer Sciences

Family and Consumer Sciences programs are caring, hands-on, relevant and diverse. They prepare non-college bound and college bound individuals to be competent, confident and caring in managing their personal, family and work lives. They provide education and training for related careers. Students who choose to be Family and Consumer Sciences majors may waive the foreign language graduation requirement with a 5 unit sequence of Family and Consumer Sciences for the Regents with Advanced Designation Diploma.

Half Year – ½ Unit Courses:

- American Regional and Foreign Foods
- Career and Financial Management
- The Developing Child I
- The Developing Child II+
- Intro to Culinary Arts I
- Intro to Culinary Arts II
- Fashion I
- Fashion II
- Housing and Design CORE

Full Year – 1 Unit Courses

- Food Science
- Diversified Cooperative Work Experience

NOTE: The following courses may be used to satisfy the art/music requirements for declared occupational majors (Business, Family and Consumer Sciences, Technology and WEMOCO).

- Fashion I (½ Unit)
- Housing & Design CORE (½ Unit)

Food Science: The Biochemistry Of Food and Nutrition*

Full Year Course 1 Unit
Grades 11-12

Prerequisite: None

What turns cucumbers into pickles? Is it the mayonnaise or the tuna that makes tuna salad spoil in the sun? Using the scientific method, students will understand the science behind the foods they eat. Students need to complete 1200 minutes of lab time (30 labs). Covered topics include: laboratory experience, chemistry fundamentals, science of nutrition, chemistry of food, and microbiology of food processing.

**This course can be used as a third unit of science.*

American Regional and Foreign Foods

Semester Course ½ Unit
Grades 9-12

Prerequisite: None

The Regional and Foreign Foods course introduces students to the ways in which the culture and traditions of regions and countries influence food choices. Students will identify and prepare foods from various regions and countries to compare cuisines, ingredients used, and preferred cooking methods. Students will also examine the issues and conditions which affect the availability and quality of food in the global market. Current issues related to global nutrition from production through consumption will be explored. Through this investigation students will understand and appreciate diverse cultures. Students will have the opportunity to examine the wide variety of career paths in the regional and foreign foods fields and identify the knowledge and skills necessary for success within these fields.

Intro to Culinary Arts I

Semester Course ½ Unit
Grades 9-12

Prerequisite: None

Love to watch the Food Network, and test out the recipes in the kitchen? Then this is the course for you. Student cooking labs and teacher demonstration provide practical experience in helping students apply nutrition knowledge, food safety and sanitation to everyday living; develop skills in menu planning, food purchasing, preparation and service. Some of the foods prepared and concepts taught include; quick breads, cookies, fruits, vegetables, milk products and meats. Students will also explore careers and employment opportunities in the field of Hospitality Management.

Intro to Culinary Arts II

Semester Course ½ Unit
Grades 10-12

Prerequisite: Intro to Culinary Arts I

Cooking takes on a creative flair in this advanced course which focuses on preparation techniques, appearance and presentation of foods. The cooking labs and teacher demonstration explore foods such as soups and salads, breads, pizza, pies, cake decorating and appetizers. Student lab experience is a major portion of this course.

Fashion I

Semester Course ½ Unit
Grades 9-12

Do you have aspirations to work on the Fashion Runway, or do you just like clothes and shopping? Is it difficult to find clothes that fit, or that you like? Then create your own! This course gives you the opportunity to learn about the clothes you wear or would like to wear and learn about the social, historical, and cultural background of clothing. Learn about the elements of fashion and how to make them work for your body type and coloring. Students will also learn the basics of sewing and operating a sewing machine. This is a hands on project based course.

Note: All students may use this course when taken in combination with Housing & Design Core to satisfy the required one unit of Art/Music credit for graduation.

Fashion II

Semester Course ½ Unit
Grades 9-12

Prerequisite: Fashion I

This advanced course is designed for students to further explore the fashion industry. The course will explore fashion designers and the details of garment construction. Fashion drawing will be practiced and developed. The course will emphasize intermediate sewing techniques through hands on construction of projects.

Housing & Design Core

Semester Course ½ Unit
Grades 9-12

In this course students will investigate how lifestyle, social factors, economic factors, and stages in the life cycle influences housing decisions. Students will identify and explore how culture and the environment influences housing design in relation to past, present, and future perspectives. Through hands-on experiences students will cover design elements and principles as they relate to architecture and interior design. Students will evaluate household appliances and equipment, learn about caring for the home, and investigate energy conservation techniques. Careers related to housing and interior design will be explored.

Note: All students may use this course when taken in combination with Fashion I to satisfy the required one unit of Art/Music credit for graduation.

The Developing Child I

Semester Course ½ Unit
Grades 10-12

Prerequisite: None

"TLC - touching, loving, caring." These are just a few of the elements essential in rearing children, a life-long responsibility, taking a great deal of time and energy. This course helps students, male and female, to understand the role of parents and the development of children and their care—prenatal to preschool.

The Developing Child II+

Semester Course ½ Unit
Grades 11-12

Prerequisite: The Developing Child I

The course begins with a brief summary of child development stages and typical behaviors from the preschool through school age. The course is designed specifically to meet the needs of those working or planning to work with children in groups, but also may be of general interest to individuals concerned with young children at home. An emphasis will be placed on observation techniques, organization of the classroom and the establishment of a safe and healthy learning environment.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Diversified Cooperative Work Experience

Full Year Course
Grade 12

Prerequisite: Teacher-Coordinator Permission

175 hours = ½ unit 350 hours = 1 unit

Diversified Cooperative Work Experience is a New York State approved Work Experience Program geared towards seniors and affords participants with a chance to experience "first hand," a career specific employment opportunity. With this, students are able to utilize many of the concepts, procedures, and skills that they have developed throughout their educational and personal experiences. This opportunity offers the student a paid position with experiential learning. The process is designed to allow students to explore and analyze their future aspirations while making connections to their educational experiences and personal interests. In addition to classroom instruction, the teacher-coordinator will provide on-site supervision.

Career & Technical Education Courses

Academy of Early Childhood Education - 5 credits

Mandatory .5 Credit

Careers and Financial Management+	(.5)
The Developing Child I	(.5)
The Developing Child II+	(.5)
Entrepreneurship	(.5)
Advanced Health	(.5)
Psychology	(.5)

Mandatory 1 Credit Courses

Business Management & Marketing+	(1)
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Mandatory 1 Credit

Work Based Learning (Co-op, 3 Job Shadows, or Internship)	(1)
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Assessments

NOCTI Business Financial Management Final Project and Presentation	
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Why take a CTE in Early Childhood?

Upon completion of the HS program, students will easily be able to complete the requirements for a Child Development Associate (CDA) License through a college program or the Child Care Council of Rochester. The license is required for people desiring to own an in home day care. The CTE in Early Childhood is also advantageous for careers in medicine, psychology, and teaching. The program will prepare students to be future parents.

+ Dual enrollment course

Health

Advanced Topics in Health

Semester Course **½ Unit**
Grades 11-12

Prerequisite: Health Education

The student who elects to enroll in Advanced Topics in Health is one who has a continued interest in health studies. If you enjoy the adventure of exploring and discussing health related topics, this is the course for you. There are many new topics that are explored, as well as a further investigation into the basics of Health class topics. Topics will include: Healthy meal planning, life-long exercising, personal health issues, and drug prevention.

Students taking this class can expect to learn through activities. Be prepared to teach a lesson, design a bulletin board, debate a controversial issue and plan health week among many other activities. Students can also expect a field experience promoting health and wellness.

Plan on increasing your knowledge of health, gaining a new level of wellness and developing intrapersonal skills by working with various members!

First Aid

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

Are you interested in the medical field? Would you know how to give rescue breathing, CPR, or control severe bleeding? Would you know the symptoms and dangers of heat exhaustion or hypothermia? Would you know what to do for a person who is having a seizure, a stroke, or a heart attack? This course teaches first aid skills a person needs to know to act as the first link in the emergency medical system. The focus of this course is to prepare the individual to respond correctly to everyday emergencies.

Students will learn First Aid, and CPR skills. Those who successfully complete the course may receive several American Red Cross certifications (Responding to Emergency and/or Community First Aid; and/or CPR/AED for the Professional Rescuer).

A field trip to a local ambulance & fire department may be included. Students will talk with professionals, tour the facilities, participate in hands-on activities as well as explore potential career opportunities.

Health Education

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

This course is a graduation requirement, and deals with the topics of Mental Health (personality development, self-esteem, communication skills and self-evaluation, grief, stress, conflict resolution and anger control, values - goals - and decision making skills, and health advocacy); CPR where all students are given the opportunity to become CPR certified by the American Red Cross; Drug Education (terminology, tobacco, alcohol, marijuana, cocaine, hallucinogens, dependence and its effect on the family); Family Life Science (physiological, psychological, and social growth and concerns in self and others). Other units include nutrition, parenting, safety and disaster survival.

Participation, reading assignments and a Service learning project is required.

Life and Death

Semester Course **½ Unit**
Grades 11-12

Prerequisite: Health Education

This course is designed to help the individual learn to cope with life's experiences. Topics include: understanding self and others (minimizing stress, assertiveness skills, time management, relationships, and life goals). One of the main topics explored is death - something everyone must face throughout a lifetime. In this unit we will cover: attitudes about death, talking to children about death - the do's and don'ts; medical ethics; terminal illness - some guidelines for coping; suicide - the symptoms and do's and don'ts; funerals - what to say and do, and the grief process - what to expect in self and others.

Field trip to local funeral home and cemeteries may be included. The individual must be willing to become **actively involved** in class activities and projects.

Peer Leadership I+

Semester Course **½ Unit**
Grades 11-12

Prerequisite: Health Education

Peer Leadership is a program designed to help students build leadership skills for personal and professional growth. Students will learn how to take an idea, put it into a proposal, and implement it into reality. They will learn how to be Peer Helpers in assisting others with difficult situations. This activity-oriented course will train students in topics such as self-esteem, communication skills, and group dynamics. The course will also address specific adolescent concerns such as drug awareness, divorce, relationships, anger management and conflict resolution. Activities these students may become involved in include school enhancement projects, elementary school volunteer work, group presentations to elementary school classes, or other community enhancement projects.

Students will be required to complete 75 hours of services (i.e. 9th grade orientation, weekly individual placement and group service projects). Students are expected to be role models and follow an ethics contract. To be accepted in to the volunteer component, a teacher recommendation is needed.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Peer Leadership II+

Semester Course **½ Unit**
Grades 11-12

Prerequisite: Peer Leadership

This course is designed to meet the needs of the student interested in pursuing a career in helping professions such as teaching, nursing, psychology, physical therapy, or other human service fields. The student will be required to spend a minimum of 90 hours in a Service Learning placement and one hour a week in class time. (135 hours to fulfill dual enrollment requirements). Content will include lesson planning, professionalism, career research, conflict management, time management, as well as other topics and “on-the-job” training.

Students are expected to be responsible, mature, and committed and must be able to work independently. Students must follow an ethics three-strike contract and be positive role models.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Languages Other Than English

FRENCH II

Full Year Course 1 Unit
Grades 9-12

Prerequisite: French I or French IB

Emphasis will continue on the communicative approach. Students will learn how to deal with experiences such as: Traveling, excursions, shopping, visits to the doctor or hospital, movies, entertainment, weekend activities, social events. The cultural themes are authentically presented and they are visually attractive. Students participate in all classroom activities from short dialogues to pattern and vocabulary rehearsals. Basic sentences and reading passages are useful in establishing written language structures.

FRENCH III

Full Year Course 1 Unit
Grades 10-12

Prerequisite: French II R

Emphasis is given on conversation for everyday life experiences. The communicative approach will continue to be used. The students will study and learn various language structures, involving further study of topics discussed in levels I and II on a more sophisticated level of self-expression. The students will prepare to take the French Comprehensive Regents Equivalency Examination at the end of the school year. Mastery of grammar and syntax is a key element in this level.

FRENCH IV H+

Full Year Course 1 Unit
Grades 11-12

Prerequisite: French III R

Students will complete a broad range of activities including poetry, drama, philosophy, art and music in order to expand their overall knowledge and understanding of French speaking cultures throughout the world. The reading will include a classic novel and contemporary selections. They will study complex grammar structures and concepts. Students will also have the opportunity to experience French cuisine and debate current issues of interest to the students.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

FRENCH V H+

Full Year Course 1 Unit
Grade 12

Prerequisite: French IV H+

Students who enroll in French V H should already have a good command of French grammar and vocabulary and have competence in listening, reading, speaking, and writing. The course will emphasize the use of language for active communications and help students develop the ability to understand spoken French in various contexts; a French vocabulary sufficiently ample for reading newspaper and magazine articles, literary texts, and other non-technical writings without dependence on a dictionary; and the ability to express themselves coherently, resourcefully, and with reasonable fluency and accuracy in both written and spoken French. The course content will reflect intellectual interests shared by the students and teacher (the arts, current events, literature, sports, etc.). Materials might well include audio and video recordings, films, newspapers, and magazines. The course seeks to develop language skills (reading, writing, listening, and speaking) that can be used in various activities and disciplines rather than to cover any specific body of subject matter. Extensive training in the organization and writing of compositions will also be emphasized.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

ITALIAN II

Full Year Course 1 Unit
Grades 9-12

Prerequisite: Italian I or IB

The basic communication skills will continue to be developed. Major topics of discussion are: Daily routines, recreation, planning a trip, the educational system, sports, music, relationships, family, friends, technology, environmental concerns, help wanted ads, newspaper articles. The repetitiveness of basic expression associated with cultural content is the performance base of language learning, with emphasis being placed on effective communication.

ITALIAN III

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Italian II R

Students will continue to increase communication skills to prepare for the Comprehensive Regents Equivalency Examination. Major topics to be covered include physical environment, daily routines, health and welfare, geography, music, cultural events, family relationships, public services, government, and many of the previously studied topics with more complex and detailed information.

ITALIAN IV H+

Full Year Course 1 Unit
Grades 11-12

Prerequisite: Italian III R

The communicative skills will continue to be expanded. Students will refine these skills by studying complex grammar structures. Contemporary and classic literary selections will be read, analyzed and discussed. Students will complete a broad range of activities, including poetry, drama, art and music. Current issues will be discussed in Italian, and students will have the opportunity to experience Italian dishes.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

ITALIAN V H+

Full Year Course 1 Unit
Grade 12

Prerequisite: Italian IV H+

The course will be based on developing reading, writing, listening and speaking skills within a cultural frame of reference reflective of the richness of Italian language and culture. The study of the Italian language system will focus on the structural aspects of the language while at the same time interweaving cultural knowledge throughout the course. The Italian V H language and culture course will help to prepare students to demonstrate their level of Italian proficiency across the three communicative modes (interpersonal, interpretive, and presentational), and throughout the five goals of the Standards (communication, cultures, connections, comparisons & communities).

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

LATIN II

Full Year Course 1 Unit
Grades 9-12

Prerequisite: Latin I or IB

This course is designed for those students who have successfully completed Latin I or IB. The student will be enriched by an infusion of the Latin curriculum into such diverse subjects as English, history, science, etc. Latin literature will be translated and compared to English literature. Therefore, a more rigorous approach to grammar and syntax will be emphasized. A continued study of Roman daily life will bring the student on an exciting journey into the world of gladiators, charioteers, and mythological heroes. Art and architecture will be brought to life, as they will be introduced throughout the course to augment the student's vision of both the past and present human condition.

LATIN III

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Latin II

Emphasis will be on the Latin syntax as presented in readings about Roman heroes, both legendary and historical, while the student further delves into the ancient world. A review of previously studied aspects of Latin culture, mythology, government, as well as an introduction to new concepts, will be studied.

LATIN IV H - SUPA +

Full Year Course 1 Unit
Grades 11-12

Prerequisite: Latin III

This course is designed to give students the opportunity to earn dual enrollment through Syracuse University. According to Syracuse University Project Advance, 90% of students have successfully transferred credit to the college of their choosing. As long as the student saves the syllabus and the work completed during the course, most academic institutions will accept the credit. This course will earn 4 credit hours at the 201 level. Transfer of credit will occur only when a transcript from Syracuse University is requested by the student.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

SPANISH I

Full Year Course 1 Unit
Grades 9-12

This course is for students just beginning the study of Spanish or for those students who have not yet earned one high school credit in LOTE to fulfill the New York State graduation requirement. In this course students will communicate on everyday topics and occurrences by listening, speaking, writing and reading in Spanish, as well as learn about the various Hispanic cultures.

SPANISH II

Full year course 1 Unit
Grades 9-12

Prerequisite: Spanish I or IB

This course is for students who have successfully completed courses Ia and Ib, or Spanish I R. Students will continue to develop and expand upon the topics and language skills covered in level I. Students will increase their knowledge of the language by covering such topics as personal identification, daily routine, family and friends, community, cities and towns, physical well being, daily activities, memories of childhood, and meal taking.

SPANISH III

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Spanish II R

Emphasis will be on the functional use of the language for communicative proficiency in everyday real life situations and on preparation for the Comprehensive Regents Equivalency Examination. Major topics include: summer and free time activities, relationships among family and friends, art and music, current events, community, professions, and shopping. Along with additional new topics, students expand their knowledge on topics previously studied and they will increase their knowledge of Spain and Latin America.

+ Dual enrollment course

Spanish IV +

Full Year Course 1 Unit
Grades 11-12

Prerequisite: Spanish III R

In this course students will expand on the vocabulary topics studied in previous years. There is also an intense focus on increasing and refining the use of the various structural topics of the Spanish language at a level comparable to that of a beginning/intermediate college course. Additional cultural aspects of the Hispanic world will be explored. There will be an emphasis on listening, speaking, reading, and writing in the Spanish language at an increased level of proficiency and fluency.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

SPANISH IV H +

Full Year Course 1 Unit
Grades 11-12

Prerequisite: Spanish III R

This course will be an expanded and enriched Honors Spanish IV course with a faster pace geared for a higher ability group than Spanish IV. It is designed to prepare students who may be planning to continue studying Spanish the following year in AP Spanish V. In this course students will expand on the vocabulary topics studied in previous years. There is also an intense focus on increasing and refining the use of the various structural topics of the Spanish language at a level comparable to that of a beginning/intermediate college course. Additional cultural aspects of the Hispanic world will be explored. There will be an emphasis on listening, speaking, reading, and writing in the Spanish language at an increased level of proficiency and fluency.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

AP Spanish V+

Full Year Course 1 Unit
Grade 12

Prerequisite: Spanish IV+ or Spanish IV H+

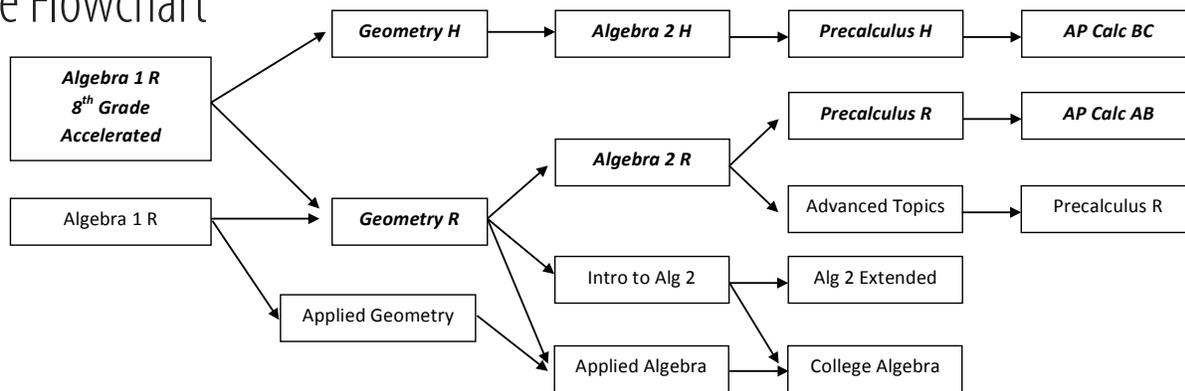
This course will emphasize the use of language for active communication and help students develop the ability to understand spoken Spanish in various contexts. Students will acquire a Spanish vocabulary sufficient for reading newspapers and magazine articles, literary texts and other non-technical writings without dependence on a dictionary, and the ability to express themselves coherently, resourcefully and with reasonable fluency and accuracy in both written and spoken Spanish.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Math

Course Flowchart



All courses in mathematics enable a student to pursue a background in STEM (Science, Technology, Engineering, & Mathematics).

In general, the higher the level of mathematics achieved, the more opportunities available within STEM majors and careers.

The current measure of “College & Career Ready” in mathematics references at least an 80% on the Algebra 1 Regents.

An Advanced Designation Diploma requires passing all 3 NYS Regents Exams in Math (Algebra 1, Geometry, & Algebra 2).

Additional Electives:

Intro to Computer Science may be taken after completing Algebra 1. Java may be taken after completing Geometry.

Intro to Stats (1/2 year) may be taken at any time since it has no prerequisite.

AP Statistics may be taken any time after completing Algebra 2.

Algebra 1 R

Full Year Course 1 Unit

Prerequisite: None

This is the first in a sequence of three Regents level courses designed to meet the New York State Common Core Learning Standards in Mathematics. Students will prepare for the Algebra 1 Assessment, which is required for graduation and will be taken in June of their freshman year. Topics in this course include: set and function notation, algebra, systems of linear equations and inequalities, Coordinate geometry, polynomial operations, factoring, quadratics, conditional probability, statistics, and regression. A graphing calculator is required for the exam and recommended for the course.

Introductory Statistics

Semester Course ½ Unit

Prerequisite: None

This is a one-semester course, the purpose of which is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics studied will include recognizing and analyzing patterns in data, techniques of collecting data, randomness and probability distributions, and statistical inference. This course requires the use of a graphing calculator.

Geometry H

Full Year Course 1 Unit

Prerequisite: Algebra 1 R with Department Approval

This course is designed for the outstanding math student who is capable of learning topics at a much quicker pace. The units of study include: transformational geometry, analytical and Euclidean geometry (including proof), coordinate geometry, quadrilaterals, solid geometry, right triangle trigonometry, and construction. An independent study project in mathematics is required. This course culminates with the June Common Core Geometry Regents examination, the second of three required exams for the Advanced Regents Diploma. Graphing calculators and dynamic geometry software will be utilized in this class.

Geometry R

Full Year Course 1 Unit

Prerequisite: Successful completion of Algebra 1R with a minimum course average of 70% and a passing Regents final exam score.

This is the second in a sequence of three Regents level courses designed to meet the New York State Common Core Learning Standards in Mathematics. The units of study include: transformational geometry, analytical and Euclidean geometry (including proof), coordinate geometry, quadrilaterals, solid geometry, right triangle trigonometry, and construction. This course culminates with the June Common Core Geometry Regents examination, the second of three required exams for the Advanced Regents Diploma. Graphing calculators and dynamic geometry software will be utilized in this class.

Applied Geometry

Full Year Course 1 Unit

Prerequisite: Algebra 1 R with Department Approval

This is an applied mathematics class that uses "hands-on" activities to teach geometry concepts. Topics that students will explore include perimeter, area, volume, similar figures, transformations, constructions, right triangle trigonometry and applications, quadrilaterals, polygons, coordinate geometry, triangle congruence and conic sections.

Introduction to Algebra 2

Full Year Course 1 Unit

Prerequisite: Geometry R

This course allows for extended time for students who experienced difficulty in Algebra 1 or Geometry, and need additional preparation before taking Algebra 2 Extended and the Common Core Algebra 2 Regents examination. Topics in this course include algebra of real numbers, relations and functions, trigonometry, imaginary numbers, and statistics. A graphing calculator is used in class.

Algebra 2 H

Full Year Course 1 Unit

Prerequisite: Geometry H or Department Approval

This course is designed for the outstanding math student who is capable of learning topics at a much quicker pace. The units of study include: algebra of polynomials, rational functions, the complex number system, trigonometric functions and identities, transcendental functions, and inferential statistics. An independent study project in mathematics is required. Students will complete their mathematics requirement for a New York State Advanced Regents Diploma by taking the Common Core Algebra 2 Regents examination in June. Graphing calculators will be used to illustrate concepts and are strongly recommended due to the examination requirements.

Applied Algebra

Full Year Course 1 Unit

Prerequisite: Geometry R with Department Approval

This course maintains mathematical skills and emphasizes problem solving applications of mathematics in the real world. Various STEM modules will be implemented and skills necessary for passing the Accuplacer will be reviewed. Topics include linear and quadratic equations, solving systems of equations, introduction to algebraic fractions (up to add/subtract with like denominators), exponents and radicals, graphing techniques, absolute value equations, and polynomials. A scientific calculator will be required and a graphing calculator is recommended.

College Algebra

Full Year Course 1 Unit

Prerequisite: Intro to Algebra 2 or Applied Algebra

This course extends the mathematical skills and applications of mathematics in the real world. It is intended for seniors who anticipate having to take and pass a math placement exam for college admission. Topics include 1st degree inequalities, functions, linear equations, solving systems of equations and inequalities, introduction to matrices, polynomials, algebraic fractions, variation, rational exponents and radical equations, absolute value inequalities, complex numbers, exponential functions, and quadratic equations. Problem solving and applications are emphasized throughout the course. A graphing calculator will be used to illustrate concepts.

Algebra 2 R

Full Year Course 1 Unit

Prerequisite: Successful completion of Geometry R with a minimum course average of 75% and a passing Regents final exam score.

This is the third in a sequence of three Regents level courses designed to meet the New York State Common Core Learning Standards in Mathematics. Students will prepare for the Algebra 2 Regents examination, which is required for a New York State Advanced Regents Diploma and will be taken in June. The units of study include: algebra of polynomials, rational functions, the complex number system, trigonometric functions and identities, transcendental functions, and inferential statistics. Graphing calculators will be used to illustrate concepts and are strongly recommended due to the examination requirements.

Algebra 2 R Extended

Full Year Course 1 Unit

Prerequisite: Intro to Algebra 2

This course will complete the preparation and coverage of topics required for the Common Core Algebra 2 Regents examination. Topics in this course include polynomials, exponential and logarithmic functions, conditional probability, and the fundamental theorem of algebra. A graphing calculator is used in class.

Precalculus H

Full Year Course 1 Unit

Prerequisite: Trigonometry H or Department Approval

This course is designed for the outstanding math student. The units of study include: proof by induction, polynomial functions; rational and explicit algebraic functions; transcendental functions; analytic geometry; matrices and simultaneous equations; sequences and series; limits; the derivative and applications of the derivative. An independent study project in mathematics is required. Students successfully completing this course are eligible for AP Calculus AB or AP Calculus BC. Graphing calculators will be used to illustrate concepts and are strongly recommended.

Advanced Topics In Mathematics

Full Year Course 1 Unit

Prerequisite: Trigonometry R or Algebra 2 R

This course extends those topics which were first encountered in the NYS Regents curriculum over the past 3 years. Advanced topics are included from the algebra of real and complex numbers, analytic geometry, polynomials, rational and algebraic functions, and transformations. In addition, new topics like systems of equations, matrices, and linear programming, along with various real world applications are introduced. Graphing calculators will be used to illustrate concepts and are recommended.

Precalculus R

Full Year Course 1 Unit

Prerequisite: Successful completion of Algebra 2 R with a minimum course average of 80% and a passing Regents final exam score.

This course is designed for the highly competent math student who intends to pursue Calculus the following year. The units of study include: polynomial functions; rational and explicit algebraic functions; trigonometry; transcendental functions; analytic geometry; limits; and the beginning concepts of differential calculus. Students successfully completing this course are eligible for AP Calculus AB. Graphing calculators will be used to illustrate concepts and are strongly recommended.

AP Calculus AB

Full Year Course 1 Unit

Prerequisite: Precalculus R

Designed to prepare a student for the AB Advanced Placement examination given in May. Includes topics of differential and integral calculus. Requires use of graphing calculator.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

AP Calculus BC

Full Year Course 1 Unit

Prerequisite: Precalculus H or Department Approval

Designed to prepare a student for the BC Advanced Placement examination given in May. Includes all the topics of Calculus AB plus: differential equations, sequences and series, and polar coordinates. Requires use of graphing calculator.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

AP Statistics

Full Year Course 1 Unit

Prerequisite: Algebra 2 R

A full year course, offering the equivalent of an introductory level college statistics course. The purpose of the course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Topics studied will include recognizing and analyzing patterns in data, techniques of collecting data, randomness and probability distributions, and statistical inference. Students may elect to take the advanced placement examination offered in May. This course requires the use of a graphing calculator.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Computer Electives

JAVA

Full Year Course 1 Unit

Prerequisite: Geometry R with Department Approval

This is an introductory course to computer programming that requires no prior use of any programming language. The student enrolled in this course will learn the following concepts: basic computer science concepts, the Java development environment, object oriented design, primitive data types, how to write basic Java applications, using arrays and arraylists for data structures, sorting techniques, abstract data types, inheritance, super classes and subclasses. A group project will be required.

AP Computer Science

Full Year Course 1 Unit

Prerequisite: Java

This course will include a review of all topics from Java and also include these additional topics: exception handling, streams and file input and output, dynamic data structures, recursion, and window interfaces using swing objects. Students may elect to take the advanced placement examination offered in May.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Introduction to Computer Science

Full Year Course 1 Unit

Prerequisite: Algebra 1 R

This is an introductory course in computer programming that assumes no prior use of any programming language. The student enrolled in this course will use Microsoft Visual Basic to learn the following: object oriented design, calculating with user-defined variables, various decision structures, simple animation and sound techniques, creating data files, working with strings and arrays, and basic looping structures. Several projects will be required.

Music

Music has ties to every human endeavor and contributes to our daily well-being throughout our lives. It marks the special events and adds a special dimension to the quality of our lives that cannot be obtained from any other source.

The goal of the high school music program is to provide students with a broad foundation of musical knowledge, coupled with a high level of academic performance skills. The music course offerings are designed to fulfill the needs of all students with an interest in music. The music program in the high school builds sequentially on the music program in the middle school and provides the foundation for lifelong participation in and enjoyment of music. Instructional activities are directed toward achieving the National Standards for the Arts.

Every music course, including performance courses, provides experiences in creating, performing, listening to, and analyzing music, in addition to focusing on its specific subject matter. Also included are learning experiences designed to develop the ability to read music, use the notation and terminology of music, describe music, make informed evaluations concerning music, and understand music and music practices in relation to history and culture and to other disciplines in the high school curriculum.

Full Year Course Offerings

- Band 9-10
- Band 11-12
- Mixed Chorus
- Advanced Women's Choir
- Concert Choir
- Music Theory

Students may enroll in both band and chorus in the same year for ½ credit each.

Half Year Course Offerings

- Music Keyboarding I
- Music Keyboarding II
- Music Technology I
- Music Technology II

Students may use a 5-unit sequence in music to replace the 3 required units of foreign language for the Regents with Advanced Designation Diploma.

The 5-unit sequence in music can only be fulfilled with Music Theory. The typical five unit sequence is four credits of a performing group (Band/Chorus) and one credit of Music Theory.

Advanced Women's Choir

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Successful completion of one unit of Chorus and Teacher Recommendation after audition.

The music to be studied and performed will require advanced singing and music reading skills and will be selected from appropriate treble voice choral literature. Students will have opportunities for small group and individual instruction that will supplement regular Advanced Women's Choir classes. All opportunities listed for Mixed Chorus are available to students registered for Advanced Choir classes. Students in the choral music program are encouraged to participate in solo evaluation festivals, in All-County, and in All-State music groups.

Band

Full Year Course 1 Unit
Grades 9-12

Prerequisite: NYSSMA Level 3 or higher on a band Instrument or Teacher Recommendation after Audition

Students rehearse in an ensemble setting daily and are required to attend a weekly lesson. Students participate in evening concerts, school assembly programs, and perform for the students in our elementary schools. All band members will participate as a marching band at home football games, and other field band performances, and pep rallies. The Marching Band also participates in the Memorial Day parade as well as several other parades. Students may participate in solo festivals, which are prerequisites for selection to All-County, Area All-State and Conference All-State Bands. Students are invited to participate in school co-curricular activities such as Jazz Band, and may be invited to play in the Annual Musical. The High School Band program is divided into two ensembles. The Concert Band (grades 9-10) rehearses separately from the Wind Symphony Grades 11-12. The two ensembles perform together as one group for marching season. They perform separately for Concert season.

In preparation for Marching Band, there is a "Band Camp." All students are required to attend Band Camp, which is run in the high school band room and adjoining practice fields during the week before Labor Day. Personal schedules for work and vacation should be adjusted so that all band students can attend Band Camp. The Band and Chorus directors arrange rehearsal time so those instrumentalists who wish to participate in both activities, are able to participate in both the Band and Chorus.

Concert Choir

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: Successful completion of one unit of Mixed Chorus or Teacher Recommendation after audition

The music to be studied and performed will require advanced singing and music reading skills and will be selected from appropriate mixed voice choral literature. Students will have opportunities for small group and individual instruction that will supplement regular Concert Choir classes. All opportunities listed for Mixed Chorus are available to students registered for Concert Choir. Students in the choral music program are encouraged to participate in solo evaluation festivals, in All-County, and in All-State music groups. Band and Chorus directors arrange rehearsal time so those instrumentalists are able to participate in both Band and Chorus.

Mixed Chorus

Full Year Course **1 Unit**
Grades 9-12

Prerequisite: None

The choral music program involves active participation in the study of music of different styles and from different periods in the history of music. Opportunities are provided throughout the day and after school for individual and small group instruction that supplements the class session. Musical literacy, the reading of and the interpretation of music, is of primary importance in the choral music program. This course is designed for students with little or no choral experience. Students in the choral music program are encouraged to participate in solo evaluation festivals, in All-County, and in All-State music groups. Band and Chorus directors arrange rehearsal times so that instrumentalists are able to participate in both Band and Chorus.

Musical Keyboard

Musical Keyboard is taught in two sequential courses. There are no prerequisites for registration in Musical Keyboard I. Successful completion of Musical Keyboard I or teacher approval is prerequisite for Musical Keyboard II. Students registering for Musical Keyboard I and II bring a wide variety of experiences. Some will have had several years of private piano instruction, while others will come with only the background provided in the Musical Keyboard unit in the middle school general music classes.

Upon successful completion of Musical Keyboard I and II, students will have the necessary skills to pursue music as an avocation. Those students planning a career in music will have acquired skills that will be helpful to them regardless of their area of musical study.

Each day's class begins with large group instruction that focuses on a musical concept. Individual assignments are made to teach and reinforce that concept based on the ability level and prior experience of each student. All students are expected to work on musical examples appropriate to their ability level and prior experience. This individualized approach enables more experienced students to remain challenged in these introductory courses.

Musical Keyboard I

One Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Musical Keyboard II

One Semester Course **½ Unit**
Grades 9-12

Prerequisite: Musical Keyboard I or Teacher Recommendation after Audition

Music Theory

Music Theory

(Offered every other year opposite Music Tech I & II – even years starting with 2016)

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: One year of Band or Chorus or Teacher Recommendation

Music Theory is taught in one sequential course. Prerequisite for registration in Music Theory is successful completion of at least one unit of Band, Chorus, Music Keyboarding, Music Technology, or teacher recommendation. It is assumed that students registering for Music Theory will have basic music reading skills and familiarity with a variety of musical styles before taking this course. Basic keyboard experience, while helpful, is not a prerequisite for Music Theory.

The study of music theory includes ear training as well as written and keyboard exercises. The ear training portion of the class includes harmonic and melodic dictation, sight-singing, rhythmic dictation and other listening exercises. The basics of music are covered, including the principles of notation, staff, clefs, notes, rests, whole and half steps, and music terminology. Rhythm and meter are studied and includes tempo markings, time signatures, dictation, triplets, syncopation, and asymmetric meters. Theory class also includes the study of major and minor scales, keys, modes, intervals, chord progressions, triads with and without inversions, seventh chords with and without inversions, transposition, harmonization, non-harmonic tones, melody, figured bass, 4-part writing, cadences, instrumentation, chord function, and music history as it relates to theory.

Several music compositions are assigned to apply theory concepts, including a rhythmic based composition, a lyric based composition, and an orchestration composition. Computer software is utilized not only for notation of compositions and realization of compositions, but also for drill and practice.

Music Technology I and II

Music Technology is taught in two sequential courses. Prerequisite for registration in Music Technology I is one year of Band, Chorus, or Music Keyboarding, or teacher recommendation. Students will be introduced to the study of music technology and the fundamentals of music through this project oriented class. Areas of instruction will include beginning level music literacy (reading and writing music), application of keyboard skills, exploration of music careers, music technology related history, concepts, and terminology. The main focus of the class will be on students creating original music compositions through the assistance of technology.

Students will gain experience with a variety of applications for basic sequencing of music, digital recording of voices/instruments and MIDI; Audacity for waveform editing; Practica Musica for music literacy; Auralia for music literacy; Safari and Firefox for internet; Logic Express for sequencing; Reason for music technology related history; Digital Performer for advanced sequencing; Microsoft Word for written work; Power Point for presentations; Print Music for notation of music; and Band In A Box for the learning and usage of chords.

Of the many projects completed in Music Technology I and II are a radio commercial; musical scoring of a movie trailer; a blues tune; making of hip-hop and rock grooves to accompany projects; podcasts; a holiday sequence; a completely original sequence, a MIDI arrangement; a soundscape; a presentation of a music career; a waveform editing and arrangement of an existing song; and an arrangement of an existing MIDI file. Opportunities for independent projects also exist.

Music Technology I

(Offered every other year opposite Music Theory – odd years starting with 2017)

**One Semester Course ½ Unit
Grades 9-12**

Prerequisite: One year of band, chorus, music keyboarding or teacher recommendation

Music Technology II

(Offered every other year opposite Music Theory – odd years starting with 2017)

**One Semester Course ½ Unit
Grades 9-12**

Prerequisite: Music Technology I

Physical Education

Physical Education is a mandated course for all students in public school in the State of New York and is a requirement for graduation from Gates Chili High School. Students receive ½ credit per year for the successful completion of Physical Education, for a total of two credits upon graduation.

Physical Education 9-12

Physical Education at Gates Chili High School is based upon the following goals: acquiring the knowledge to develop and maintain an optimal level of personal fitness; developing a higher level of competence in skills and knowledge of movement and sport; developing and maintaining a positive attitude toward fitness, movement and sport. The Physical Education curriculum is based on a selective program whereby students may choose from a number of activities in order to meet our program goals. Each student must take the FITNESSGRAM and participate in dance and aquatics.

All students will participate in the FITNESSGRAM in the fall semester and again in the spring semester. FITNESSGRAM is a complete battery of health-related fitness items that are scored using criterion-referenced standards. FITNESSGRAM is also a report card that summarizes the student's performance on each component of health-related fitness.

All students will also participate in a week-long dance unit that will feature square dancing and line dancing.

Aquatics Program

All 9th & 10th grade classes will participate in an instructional swimming program.

All 11th & 12th grade classes will participate in a water sports program. This program will consist of: water polo, water basketball, kayaking, snorkeling and water aerobics.

Selective Activities Available:

Lifetime Activities:

Tennis, Biking, Personal Living Skills, Fitness/Wellness Training, Recreational Games Unit, Aerobics, Indoor Racquet Games

Team Sports:

Basketball, Flag Football, Soccer, Lacrosse, Volleyball, Floor Hockey, Softball

Introduction to Sports Medicine

(Offered even years starting 2016)

Semester Course ½ Unit Grades 10-12

This course is designed to give students an introduction to Sports Medicine. The purpose is to teach students interested in health related careers fundamentals skills and knowledge.

Course Objectives

- Teach names, structures, and functions of skin, muscles, and bones
- Teach injury prevention and recognition along with possible treatments and rehabilitation
- Teach basic concepts in nutrition and weight control
- Teach preventative taping skills
- Teach career education

Internship Possibilities

- Local Sports Teams (Rhinos/Amerks, etc.)
- Local Physical Therapists
- Local Occupational Therapists
- Local Physicians and/or Physician Assistant
- Local Sports Medicine Physician

This course has the opportunity to be interdisciplinary with the Technology Department, Health Department, Science Department, and Athletics.

Science

Gates Chili High School science classes are designed to prepare students to be college and career ready by exposing them to the necessary knowledge and essential skills as they grow into 21st century learners. Our instruction is based on the Common Core and New York State Curriculum Standards. Our intention is to challenge all students with high quality instruction in science education. Science classes engage students through hands-on laboratory experiments, problem-solving, critical thinking, oral and written communication skills, collaboration, creativity, and using innovative technology.

In order to be college and career ready, the Gates-Chili science department STRONGLY ENCOURAGES all students to enroll in four years of science, consisting of the four CORE science classes (Physics, Earth Science, Chemistry, and Biology). These courses each culminate with the NYS Regents examination and require students to complete 1200 minutes of documented laboratory work.

Physical Setting/Earth Science R

Full Year Course **1 Unit**
Grades 9-12

Prerequisites: Successful completion of 8th grade Science and currently taking or completed Algebra 1 R, with teacher's recommendation.

The course includes state mandated laboratory-based units of study. Some of the units include information on Earth's structure, forces and energy, effects of Earth motions and the Earth's place in space. The course also includes the study of the Earth's dynamics, natural disasters, weather, rock formation and erosion and development of landscapes, as well as how changes impact humans and the environment. This lab course culminates with a state lab skills and written Regents examination.

Living Environment (Biology) R

Full Year Course **1 Unit**
Grades 9-12

This course meets and exceeds the requirements of the Living Environment curriculum and will culminate in the Regents examination. Covered topics include:

1. Similarities/Differences among living things
2. Genetics
3. Chemistry of living organisms
4. Evolution
5. Maintenance in living things
6. Ecology
7. Reproduction and development

Living Environment (Biology) H

Full Year Course **1 Unit**
Grades 9-12

Prerequisite: 8th Grade Earth Science and/or Physical Setting/Earth Science R with teacher's recommendation

This course will be an expanded and enriched Honors Biology course, with additional options for a faster paced, higher ability group than Biology R. This is a lab course and includes animal dissections. There will be a cumulative final in addition to the Regents examination.

AP Biology

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: Successful completion of Biology R or Honors Biology and Chemistry R or Chemistry H.

The purpose of Advanced Placement Biology is to prepare the above average student for the typical college level work in Biology. Major emphasis of the course will be in the following areas:

1. Laboratory Experience
2. Molecular and Cellular Biology
3. Anatomy and Physiology
4. Classical and Modern Genetics
5. Evolutionary and Ecological Biology

Summer reading is required prior to the beginning of the course.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Biotechnology/Research

Full Year Course **1 Unit**
Grades 10-12

Prerequisites: Successful completion of Living Environment and successful completion or concurrent enrollment in a Physical Setting Science.

Biotechnology is a course designed to give students a comprehensive introduction to the scientific concepts and laboratory research techniques currently used in the field of biotechnology; biotechnology includes bioinformatics, nanotechnology, genetic manipulations, bacteriology and ecological applications. Students attain knowledge about the field of biotechnology and deeper understanding of the biological concepts used. In addition, students develop the laboratory, critical thinking, and communication skills currently used in the biotechnology industry. Furthermore, students will explore and evaluate career opportunities in the field of biotechnology through extensive readings, laboratory experiments, class discussions, research projects, guest speakers, and workplace visits.

General Chemistry

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Successful completion of Algebra or its equivalent, and Living Environment or Physical Setting/Earth Science R; teacher recommendation.

This course entails a general overview of the principles of chemistry. Emphasis is placed on the conceptual aspects of chemistry, including a laboratory component. The course is designed for students who meet the minimum mathematics requirement. Students must take a local final examination and have the option to challenge the Regents examination with teacher approval. Successful completion of 30 labs (1200 minutes) is required to take the Regents.

Chemistry R

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: Successful completion of Algebra 1 R and concurrent enrollment in Geometry; Successful completion of Living Environment or Physical Setting Earth Science; teacher recommendation.

This course explores an enriched version of the New York State chemistry curriculum. Emphasis is placed on conceptual and mathematical aspects of chemistry. This course is designed for students who may wish to consider upper level science courses in high school or college. This course culminates in a Regents examination.

Chemistry H

Full Year Course **1 Unit**
Grades 10-12

Prerequisite: Successful completion of Geometry R; Successful completion of Living Environment R or Physical Setting/Earth Science with teacher's recommendation.

This course will be an expanded and enriched Honors Chemistry course and will provide additional options for a faster paced, higher ability group than the Chemistry group. This course culminates in a Regents examination. Chemistry R students are not eligible for Honors Chemistry, but may continue to Advanced Placement Chemistry.

AP Chemistry

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Successful completion of the Chemistry examination and Algebra II, or equivalent, with teacher's recommendation. This course is equivalent to two (2) semesters of college level chemistry.

AP Chemistry is a course based on the major concepts that form contemporary chemistry in conjunction with an emphasis on the basic understandings of elementary chemistry. The course is an advanced sequel to Chemistry R or Honors Chemistry with typical college laboratory experiences and requirements.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Forensic Science

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Successful completion of two Regents science courses and Regents examinations.

This is a lab based course that offers the student the opportunity to investigate many aspects of Forensic Science. Fingerprinting, DNA and blood analysis, fiber, hair, glass and soil examinations, ballistics, tool markings and impression evidence will be explored. Selected topics in Forensic Science such as Forensic Anthropology, Forensic Pathology, Forensic Odontology and Forensic Entomology will be investigated. This class will intrigue the student as well as encourage the use of critical thinking and problem solving skills.

Forensic Science — Syracuse University: Chemistry 113 +

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Living Environment R and Chemistry R

This is a Syracuse University course being offered at the Gates Chili Campus. The course will be taught by an adjunct professor of Syracuse University. The tuition cost is \$440. Financial aid is available based on need. Successful completion of the course awards 4 college credit hours as well as one high school science credit. This is a lab based course and will include techniques commonly employed in forensic investigations. Topics that will be covered include blood analysis, organic and inorganic evidence analysis, microscopic investigations, hair analysis, DNA, drug chemistry and toxicology, fiber comparisons, paints, glass compositions and fragmentation, fingerprints, soil comparisons, and firearm investigations.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

+ Dual enrollment course

AP Environmental Science

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Successful completion of Living Environment or teacher recommendation.

The objective of this course is to offer the average to above average student the opportunity for an advanced course, which combines the environmental aspects of Living Environment, Earth Science and Chemistry. This course would be of interest to not only those students interested in science careers, but would be of benefit to almost any college or career choice from engineering, criminal justice, business, marketing and advertising. Major emphasis of the course will be in the following areas:

- Interdependence of Earth's Systems
- Human Population Dynamics
- Renewable and Nonrenewable Resources
- Environmental Quality
- Global Changes and their Consequences
- Environment and Society

Field trips and lab work will be an integral part of this course.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Conceptual Physics

Full Year Course 1 Unit
Grades 10-12

Prerequisite: Successful completion of Algebra, Living Environment, a Physical Setting science course and one Regents science examination with teacher's recommendation.

This is a full-year elective course designed for the student who needs a general overview of physics. Emphasis is placed on the basics of physical principles and their applications to every day situations rather than the more technical aspects of this field. Students must take a local final examination and also have the option to challenge the Regents examination with teacher approval.

Physics R

Full Year Course 1 Unit
Grades 10-12

Prerequisites: Successful completion of Geometry R.

Physics R is the study of five major topics: Mechanics, Energy, Wave Phenomena, Electricity-Magnetism, and Modern Physics. In all of the topics, both problem solving and the processing of information are stressed. Emphasis is, therefore, placed heavily on reasoning and deduction rather than rote memorization. Added bonuses are the ability to come to know, use and develop some skills in the use of various instruments and devices. Emphasis is also placed on the ability to derive physics relationships and communicate them in writing.

AP Physics I

Full Year Course 1 Unit
Grades 11-12

Prerequisite: Algebra II R or equivalent. The course involves the use of trigonometric functions. **Successful completion of other Regents or Honors Science courses and with teacher recommendation.**

This course is offered to the above average science student who wants a comprehensive study of non-calculus based Physics at the college level. The course meets and exceeds the requirements of the Physics R curriculum and will culminate in the Regents examination. The course is designed for:

- Juniors or Seniors intending to major in Physics, Engineering, Chemistry, Pharmacology, Medicine, Math, or Computer Science.
- Students continuing an advanced placement program.

The course provides the opportunity for college credit upon successful completion of the AP Physics I examination. All students will be required to take the NYS Regents Physics exam.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

AP-C Physics

Full Year Course 1 Unit
Grade 12

Prerequisites: AP Physics I, with teacher recommendation; Calculus or currently taking Calculus with teacher's recommendation.

The intention of this course is to prepare students for the demanding calculus-based College Physics for Engineering. It deals with calculus applications in classical mechanics. Topics such as Vectorial Analysis, Particle Dynamics, Work and Energy principles, etc., are covered in depth.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Intro to Optics

Full Year Course 1 Unit
Grades 10-12

Prerequisites: Successful completion of Geometry R and two science courses that culminate in a Regents examination.

This is an introductory course in the field of optics. The optics field has great opportunities that are highly paid. Students interested in photography will also find the course beneficial. Students will learn about mirrors, prisms, thin and thick lenses, diffusers, stops and various types of light sources. Reflection, refraction, dispersion, image formation and aberrations are studied with the emphasis on the ray concept of light. This course meets one period per day with no additional lab period. Students can obtain 4 college credits through the Monroe Community College Dual Enrollment Program. The college credit option requires a fee. This course is required for students in MCC's Optical Systems Technology program (both the AAS and certificate programs).

Unified Science

Full Year Course 1 Unit
Grades 10-12

Prerequisites: Successful completion of two Regents science courses that culminate in a Regents examination.

This course involves learning about nutrition, food origin, alternative energy and conservation. Botanical skills are utilized when students grow their own gardens and learn about technologies that are designed to increase food nutrition and crop yield. The gardens are grown in the science atrium, where unified science students give tours to 5th grade students. The tours and the atrium garden give students the opportunity to share their knowledge of good food practices with the community.

Anatomy and Physiology

Semester Course ½ Unit

Prerequisites: Successful completion of Living Environment or equivalent. Student must take a core physical setting science course or an AP level course concurrently with Anatomy and Physiology.

Anatomy and Physiology is a laboratory-based study of the human body. Basic concepts of human anatomy and physiology, including the structure of cells, tissues, and organs will be studied.

This course would be advantageous for potential science majors in college. This course is designed for biology and health career majors. Students will demonstrate an in-depth knowledge of human anatomy and physiology and its real world applications at the conclusion of the course.

Anatomy and Physiology II

Semester Course ½ Unit

Prerequisites: Successful completion of Living Environment or equivalent. Student must take a core physical setting science course or an AP level course concurrently with Anatomy and Physiology.

Anatomy and Physiology II is a laboratory-based course that continues the tour of the form and function of the human body introduced in Anatomy and Physiology I. The immune system, central nervous system, endocrine system, respiratory system and digestive system will be covered. This course would be advantageous for potential science majors in college. This course is designed for biology and health career majors. Students will demonstrate an in-depth knowledge of human anatomy and physiology and its real world applications at the conclusion of the course.

Social Studies

Students are required to take Global History and Geography and United States History and Government. Students are also required to take Dynamics of Citizenship and Economics. Elective offerings in the Social Studies Department follow the description of the required courses.

Global History and Geography 9 Regents

The general subject matter is the same for all students; the materials used, the depth of content studied and the methodology varies. In determining a suitable course, the student and parent(s) should realistically assess the student's reading, writing and verbal skills, dedication to work, work habits and interest in the subject. Teacher recommendations for course selection will consider academic achievement, ability in test taking skills, performance on achievement tests and effort and interest. All students in each course will have to pass the Global History Regents examination at the end of Global History 10 to meet graduation requirements.

All Global History and Geography courses include such topics as an introduction to global history, the ancient world, civilizations and religions (4000 BC-500 AD), expanding zones of exchange and encounter (500-1200 AD), global interactions (1200-1650), the First Global Age (1450-1770), and an Introduction to the Age of Revolutions. There will be considerable geographical, historical, and factual content. In preparation for the Global History Regents examination in grade 10, students at all levels will do extensive writing.

Global History and Geography 9 R

Full Year Course 1 Unit

Students will continue to develop test-taking skills including Regents essay writing, as well as studying concepts that appear in the curriculum. Research projects, outside reading and homework are assigned to reinforce the extensive content of the curriculum. The course will emphasize the preparation for the Regents examination in 10th grade.

Historical Perspectives in World History I R

Full Year Course 1 Unit

Prerequisite: Teacher recommendation.

This course is designed to meet the requirements of the Vertical AP Program. This course is for highly motivated students who need reinforcement in the skills necessary to successfully complete an Advanced Placement course of study in social studies. Students are expected to complete extensive outside reading and research. The course will give students the tools and knowledge to succeed in future Advanced Placement courses. A recommended summer reading list is given to students. Students who continue this course in the tenth grade will take the Regents Examination in June.

AP World History I

Full Year Course 1 Unit

Prerequisite: Teacher recommendation.

This course is designed for students who have above average interest in social studies, are highly skilled, and are highly motivated. Students should be willing to go into more depth by doing outside research projects and handling more challenging reading, homework, and examinations. This AP World History course highlights the following five themes: interaction between humans and the environment; development and interaction of culture; state-building, expansion, and conflict; creation, expansion, and interaction of economic systems; development and transformation of social structures. Changes in functions and structures of states and in attitudes toward states and political identifies will be explore. The current textbook used in this course is *The Earth and Its Peoples: A Global History*, Houghton Mifflin. Students who continue AP World History II in 10th grade will take both the Regents Examination and have the opportunity to take the AP Exam.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Grade 10 Global History & Geography

Global History and Geography 10 includes such topics as world geography, the age of revolutions, 1750-1914; a half century of crisis and achievement, 1900-1945; the twentieth century since 1945, and a concluding unit on making global connections and interactions.

The general subject matter is the same for all students; the materials used, the depth of content studied and the methodology varies. In determining placement the student and parent(s) should realistically assess the student's reading, writing and verbal skills, dedication to work, work habits and interest in the subject. Teacher recommendations for phase placement will consider academic achievement, ability in test taking skills, performance on achievement tests and effort and interest.

Global History & Geography 10 R

Full Year Course 1 Unit

Prerequisite: Global History and Geography 9 R

Students will continue to develop test-taking skills including Regents essay writing, as well as studying concepts that appear in the curriculum. Research projects, outside reading and homework are assigned to reinforce the extensive content of the curriculum. The course will emphasize the preparation for the Regents examination in 10th grade.

Historical Perspectives In World History II R

Full Year Course 1 Unit

Prerequisite: Historical Perspectives in World History I or teacher recommendation

This course is designed to meet the requirements of the Vertical AP Program. This course is for highly motivated students who need to reinforce the skills necessary to successfully complete an Advanced Placement course of study in social studies. Students are expected to complete extensive outside reading and research. The course will give students the tools and knowledge to succeed in future Advanced Placement courses. Students who continue this course in the tenth grade will take the Regents Examination in June and will be expected to enroll in Advance Placement American History in 11th grade.

AP World History II

Full Year Course 1 Unit
Grade 10 or Grade 12 elective

Prerequisite: Historical Perspectives in World History I, AP World History I or teacher recommendation

AP World History students will be preparing to take both the AP examination in May as well as the Global History and Geography Regents examination in June to meet New York State Regents diploma requirements. Students should possess above average skills in reading and writing and should expect to be working on college-level reading material. The AP World History course highlights the following six themes: impacts of interaction among major societies, relationship of change and continuity, the impact of technology and demography on people and the environment, systems of social and gender structure, cultural and intellectual developments and interactions among and within societies and changes in functions and structures of states and in attitudes toward states and political identities. This course is designed to increase student knowledge of the impact of historical events on the modern world, and stimulate intellectual growth. A summer reading and writing assignment will be given prior to the start of the course.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Grade 11 United States History and Government

The emphasis in this course is on the United States as an industrial nation, the constitution, legal issues, and international involvement by the United States.

The general subject matter is the same for all students; the materials used, the depth of content studied and the methodology varies. In determining placement the student and parent(s) should realistically assess the students reading, writing and verbal skills, their dedication to work, work habits and interest in the subject. Teacher recommendations for phase placement will consider academic achievement, ability in test taking skills, performance on ability tests and effort and interest. Students are required to have successfully completed Global History 10 R.

U.S. History and Government 11 R

Full Year Course 1 Unit

Prerequisite: Global History & Geography 10 R

This course is designed to prepare students to meet a graduation requirement of the Regents examination. Students will find emphasis placed on test taking skills including memorization, analysis, organization and essay writing. Students are expected to have average to above average skills.

AP American History

Full Year Course 1 Unit

Prerequisite: AP World History or teacher recommendation.

This is a one-year college level course for students planning on attending college. The content of the course involves the chronological study of the economic, political, diplomatic, social and cultural history of America from pre-colonial times to the present. Students will be expected to do college level reading, participate in seminar discussions and write papers based on primary sources. Textbooks will be distributed in June prior to the September start of class. Independent note taking will be assigned from the textbook. Juniors will take the Regents exam to fulfill state graduation requirements.

The course is recommended for college-bound students who have a recommendation from their previous year's Social Studies teacher.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

AP Government and Politics: American & Comparative

Full Year Course 1 Unit

Prerequisite: U.S. History and Government R or AP American History and the recommendation of the 11th grade teacher.

This course is designed for college-bound seniors who have a particular interest and/or ability in the field of American Government and Political Science. The course will include a study of such topics as: the constitutional foundations of American government, the citizen base of politics, political parties and interest groups, the institutions of the three branches of national government, the policy making process, and civil rights and civil liberties. Extensive reading and writing at a college level will be expected. Students will be required to participate in community activities or attend government meetings outside the classroom. Students will be preparing to take the Advanced Placement exam(s) in May.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

This course may be substituted for the Dynamics of Citizenship course required for graduation.

Dynamics of Citizenship

Semester Course ½ Unit

Prerequisite: Global History and Geography, U.S. History and Government

This course will engage students in how to balance the rights and responsibilities of individual members with the needs of society as a whole. Topics in American government are studied with an emphasis on local needs and issues. Students investigate course content through instruction, guest speakers, research, readings, class discussions, and community service learning (CSL) projects. Since CSL is a major component of this course, students may need transportation to cooperating sites and MUST exhibit positive citizenship behavior. Content includes the study of current public policy issues in the communities of Gates and Chili and New York. Topics may include philosophy of democracy, citizenship, authority, and constitutional and criminal law.

Economics+

Semester Course ½ Unit

Prerequisite: U.S. History and Government, Global History and Geography

This course will include the basic economic concepts and understandings necessary for economic decision-making in today's world. Students will look at economics as it applies to both the United States and the world economic situation.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Junior Achievement Economics +

Semester Course ½ Unit

Prerequisite: U.S. History and Government, Global History and Geography and teacher recommendation

This course is an enriched alternative to Economics includes not only the basics of micro and macroeconomics, but encompasses an enriched curriculum with a consultant from business or industry in Rochester. Students enrolled in this course will spend time in small group "companies" learning about management decisions and roles; competing in a computer simulation with the other "companies" in the class. The course is offered in conjunction with Junior Achievement of Rochester.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

AP Micro and Macro Economics +

Full Year Course 1 Unit

Prerequisite: Successful completion of U.S. History and Government R or AP American History and the recommendation of the 11th grade Social Studies teacher.

This course is designed for college bound seniors who are interested in the fields of business, accounting, law or economics. This course will focus on macro-economics and students will study how scarcity and choice influence the decisions made by society and by individuals in the marketplace. The course uses classical, Keynesian and monetarist theories to explain how national income, price, aggregate demand and money supply are determined. Extensive reading and writing at a college level will be expected. Students will be preparing to take the Advanced Placement exam(s) in May.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

African-American History

**Semester Course ½ Unit
Grades 9-12**

This course will examine African American history and culture throughout the 17th century to the present day. Topics that will be explored within this class include; the African slave trade, the Abolitionist Movement, the fight for rights in both America's political and economic systems, modern day issues, as well as cultural contributions to the United States of America. Students will also delve into the depiction of blacks in popular culture; such as jazz, hip hop and snitching. Opportunities will be provided for students to discuss famous and influential African Americans and their contributions throughout American history.

+ Dual enrollment course

Current Issues

Semester Course ½ Unit

Prerequisite: Global History & Geography 9 R

This course will explore areas of controversy and/or change within our society today. The objective of the course will be to explore various aspects of a given topic currently in the news. Newspapers and magazines will be the primary source of information. Students will research and present issues on a local, state and national level. Newsworthy events in the fields of art, politics, science, sports, world events, movies, social media and TV will be included. In addition, students will be expected to develop skills of analysis and critical thinking to understand the role and power of the media in today's world.

Introduction to Criminal Justice+

Semester Course ½ Unit

Prerequisite: Global History & Geography 10 R

This course focuses on the relationship between American citizens and the three components which make up the criminal justice system: law enforcement, the courts, and the prison system. Each component will be examined from its historical development through its present day status. What is criminal behavior? How bad is crime in the United States? Do criminals have enough rights? Do they have too many rights? What is cruel and unusual punishment? Is the death penalty a deterrent to crime? Should prisons punish or rehabilitate? These issues, as well as many others, will be examined through activities such as readings, discussions, research, and role playing.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Psychology

Semester Course ½ Unit

What makes people "tick"? Why do people act and think as they do? Psychology attempts to explore and answer these questions and others pertaining to human behavior and mental processing. This is a survey course that explores the fascinating and interesting field of the human mind. Topics will include this as psychological disorders, sleep and dreams, altered states of consciousness and personality development. Students will complete a variety of assignments in which they will explore and examine human thought and behavior.

AP Psychology

Full Year Course 1 Unit Grades 10 -12

Prerequisite: Teacher recommendation

Note: Psychology is NOT a prerequisite

Psychology is the social science that seeks to understand human and animal behavior and mental processes through a variety of perspectives and to apply that understanding for the benefit of humanity. Psychological research has yielded important clues and valuable theories as to why we think, feel and behave as we do. The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior of human beings and animals. It is open to highly motivated 11th and 12th grade students who are willing to meet the challenges and demands of a rigorous curriculum. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major fields within psychology. This course is recommended for college bound students who have the recommendation of their previous year's Social Studies teacher.

High School students can earn college credit for qualifying AP Exam scores. The college credit option DOES require a fee.

Sociology

Semester Course ½ Unit

Prerequisite: Global History and Geography 9 R

Society has problems. They are your problems. It is your responsibility as a human being to study and understand them so they can either be solved or lessened. It is your world -- make it a happier one. In an examination of Sociology, we can get some ideas of the roles of religion, school, industry, government, and family. Opportunities are offered to study these ideas and also to do individual investigations.

World War, Holocaust and Rebuilding

Semester Course ½ Unit

Prerequisite: Global History & Geography 9 R

This course will cover European involvement in World Wars I and II, the Holocaust, and the aftermath of World War II, including present day Europe and Germany. The course purpose is to analyze the historic roots of the World Wars, the Weimar Republic, the Nazi period of Germany, and the Holocaust. Students will research the results of World War II on Europe and the impact on Holocaust survivors.

+ Dual enrollment course

Technology

All Technology Education courses may be chosen by any student as separate electives or a five-unit sequence requirement of graduation. Courses in a sequence may be taken in any order and are open to all grades.

Technology Education is an exploratory program of instruction in the resources, systems, and impacts of technology. Students enrolled in Technology Education courses study the major technological systems of the world and our society. Technology Education courses have been designed to meet the needs of all academic levels and are taught through laboratory-based, “hands-on” learning activities.

Students who choose to be Technology Majors may waive the foreign language graduation requirement with a 5 unit sequence of Technology for the Regents with Advanced Designation Diploma.

Half Year - ½ Unit Courses:

- Computer Aided Design & Drawing+ (CADD)
- Transportation Systems
- Residential Architecture
- Electricity/Electronics+
- Digital Electronics+
- Creativity & Innovation (woodworking)*
- Web.com 101
- Graphic (Electronic) Processes
- Web.com 202
- Photography I/Technical+
- Construction Systems
- Photography II/Applied
- Metals and Fabrication
- Manufacturing Systems*
- Architectural Design

* *Wood is the primary material.*

Full Year - 1 Unit Courses:

- Design & Drawing for Production+**
- Principles of Engineering
- World of Technology

***Note: All students may take this course as an alternative for the Art/Music requirement.*

Dual Enrollment College Course Option

Receive high school plus college credit for taking the following courses: This option requires a fee paid to the college at a reduced tuition cost.

- Digital Electronics+
- Photography I/Technical+
- Electricity/Electronics+
- Computer Aided Design & Drawing+(CADD)
- Drawing for Design and Production (DDP)

Architectural Design

(Offered every other year opposite Residential Architecture – odd years starting 2017)

Semester Course ½ Unit
Grades 10-12

Prerequisite: None

Students in Architecture Design will take on the role of a developer to layout a small community given a specific piece of land to work with. From the layout students will then design the buildings needed for the community such as restaurants, mini-marts, gas stations, town hall, school, Fire Department. Students will explore: typography/ surveying skills, basics of development layout and the elements of good design. Students will sketch design concepts and finalize plans through the use of Computer Assisted Drawings (CAD) for their projects.

Residential Architecture

(Offered every other year opposite Architectural Design – even years starting 2016)

Semester Course ½ Unit
Grades 10-12

Prerequisite: None

Students in Residential Architecture will design a home in the style of their choice. The house design portfolio will consist of sketches, drawings and possibly a scale model. Students will explore: architectural styles, elements of good design and construction techniques. Students will use both hand drawing and Computer Assisted Drawing (CAD) in their projects.

Computer Aided Design & Drawing + (CADD)

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

This is a beginning course in engineering drawing using design software. The key part of this course involves creating and manipulating 3-dimensional solids to solve technical problems and produce quality drawings. A variety of drawing practices will be covered such as: wire-frame modeling, engineering analysis, and rendering.

Dual Enrollment - Students may elect to take this course for college credit. The college credit option DOES require a fee.

Construction Systems

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

In this course students will gain knowledge in the Construction field. This course will provide students with the proper knowledge to successfully maintain their own houses as well as provide students with the construction background to successfully continue a career in one of the construction trades. Units to be covered are Concrete, Framing, Roofing, Drywall, Plumbing, Finish Carpentry, and House Financing.

Creativity and Innovation

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

The student will design and build a project of their choice. Typical projects have included items of furniture, speaker enclosures and storage units. Students will be taught how to use tools and machinery necessary to complete their projects. The student will work with the instructor to develop plans to satisfy the course requirements.

Design and Drawing For Production+

Full Year Course **1 Unit**
Grades 9-12

Prerequisite: None

Students will work through the creative design process to develop solutions to various design problems. An emphasis will be placed on sketching and 3-D computer modeling as a means to accurately describe their solutions to problems. Students will learn the basics of: technical drawing, dimensioning, computer aided drawing, and model making.

Note: All students may use this course to satisfy the required one unit of Art/Music credit for graduation.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Digital Electronics+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: Electricity/ Electronics or teacher's permission.

This course is designed for students considering careers in engineering, computer science or electronics. The digital electronics course is modeled after freshman level college electronics courses. Students in this course will learn about circuits that are found in computers, watches, CD players, video games and calculators. Students will design, test and build many digital logic circuits. Students will use computer simulation software as a design tool.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Electricity/Electronics+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Students will learn how electricity is generated, transmitted, controlled, and used. This "hands-on" course will involve students in many activities including: building electronic projects, making printed wiring boards, automotive wiring, residential wiring, using testing instruments and using computer simulation software.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Graphic (Electronic) Processes

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

Students will have instruction and hands-on activities in the field of printing with image design, layout for pre-press processes, image transfer (printing), electronic imaging, finishing and desktop publishing. Other computer technologies will be stressed. Careers in the graphic arts fields will be explored.

Manufacturing Systems

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

In this course students will be working with a variety of machines and hand tools in order to mass produce products for consumers. Students will learn and implement techniques used in the manufacturing industry to increase production time as well as increase production quality. Students will be educated in the use of hand tools and machinery necessary to complete their manufacturing projects.

+ Dual enrollment course

Metals and Fabrication

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

This introductory course teaches students about the different types and properties of metals, along with the most common methods used to fabricate metal objects. Major areas of study include: applied shop math, soldering copper pipe, sheet metal layout and fabrication, precision measurement, precision turning, machining, brazing, and MIG welding. The course includes a basic review of technical sketching and dimensioning, along with an overview of the engineering design process. Shop safety is taught and stressed throughout the course. Students will complete activities and projects related to metalworking, and will work in teams to design, model, and prototype a solution to a problem that involves metalworking.

Photography I/Technical+

Semester Course **½ Unit**
Grades 9-12

Prerequisite: None

This photography course will introduce the student to the basic elements of photography which are: camera handling, film, film processing, enlarging techniques, and finishing procedures as well as digital photography. The course will begin with the basics and then help each student to develop a personal style of picture taking. A focus is on the processes involved in black & white still-image photography.

Dual Enrollment - Students may have the opportunity to obtain college credit for this course. The college credit option DOES require a fee.

Photography II/Applied

Semester Course **½ Unit**
Grades 9-12

Prerequisite: Photography I+ - or Instructor's Approval

The advanced photography course will explore in greater depth the technical aspects of photography. Items to be covered include: advanced enlarging and darkroom techniques, use of adjustable cameras (35mm cameras), lighting techniques, studio portrait photography, digital photography and career potentials in photography.

Principles of Engineering

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Algebra II & Physics R

Principles of Engineering (POE) is a course in applied physics and mathematics that helps students develop their understanding of the various fields of engineering and engineering technology. Topics of study include: the history of engineering, fields of engineering, technical writing, technical presentation and communication standards, computer-aided design (CAD), engineering design process, simple machines and mechanisms, fluid power, electrical systems and circuit analysis, automated control systems, applied engineering statistics and quality, materials and material properties, statics and kinematics.

Transportation Systems

Semester Course **½ Unit**
Grades 10-12

Prerequisite: None

Students will learn how land, aviation, aerospace and marine transportation systems operate. Students will design and build model rockets, airplanes and boats. Students will learn how to properly maintain vehicles.

Web.Com 101

Semester Course **½ Unit**
Grades 10-12

Prerequisite: Strong Familiarity with Computers

Students will learn HTML code language, to navigate the World Wide Web, send and receive e-mail, evaluate web sites for accurate content and how to use search engines. Students in this course will also learn how to design and create web pages and combine these into a workable web site. Students will use a variety of software to create and edit web pages. It is recommended that students have Internet access at home.

Web.Com 202

Semester Course **½ Unit**
Grades 10-12

Prerequisite: Web.com 101

Students will develop multiple web sites using Macromedia's Studio MX (Dreamweaver). Students will learn to use: Photoshop to prepare images for the web, create frames and image maps. Students will learn how to upload files for publishing their web site on the Internet. Students will use digital cameras and scanners.

World of Technology

Full Year Course **1 Unit**
Grades 11-12

Prerequisite: Successful completion of both Geometry and 1 unit of Regents Science.

World of Technology is a course in pre-engineering, and problem solving. Units in structural engineering, electrical/mechanical engineering, auto safety engineering, power tools, and engineering materials. This is a full year course. Students will enter the northeast high school STEM Competitions hosted at MCC in the spring. This course counts as a third unit in math or science. Students compete in 3 real world modeling competitions during the final months of the course. Students must be in 11th or 12th grade.

High School Technology Department

5-Unit Sequence Requirements

Required	Careers and Financial Management+		
Systems Courses			
Select 2	Manufacturing Systems	Transportation Systems	Construction Systems
Foundation Courses			
Select 2 *	Electricity/ Electronics+	DDP —1 unit	Graphic (Electronic) Processes

**Extra foundation course may be used as elective credit.*

Balance of 5 Units Chosen From This List		
Residential Architecture	Photography I – Technical+	Photography II – Applied
Creativity & Innovation	Web.com 101	Web.com 202
Digital Electronics+	Metals and Fabrication	Computer Aided Design & Drawing+
Principles of Engineering – 1 unit	World of Technology – 1 unit	

Suggested Sequence	
Grade 9	Design & Drawing for Production+ (DDP) 1 unit
Grade 10	System/Foundation Courses
Grade 11 and 12	Careers and Financial Management+
	System/Foundation Courses
	Remaining Elective Units

Students attending WEMOCO need to take Careers and Financial Management & Applications for Technology at Gates Chili.

+ Dual enrollment course



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