

Germantown Central School District  
123 Main Street  
Germantown, NY 12526



2022-2023  
Course Descriptions  
Handbook  
Grades 7 - 12

“Sail to Success”

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# New York State Graduation Requirements

## New York State Diploma Requirements Applicable to All Students Enrolled in Grades 9-12

### CREDIT REQUIREMENTS

(Apply to all diploma types: local, Regents, Regents with advanced designation)

	MINIMUM NUMBER OF CREDITS
English	4
Social Studies (see note #6) <i>Distributed as follows:</i> U.S. History (1) Global History and Geography (2) Participation in Government (½) Economics (½)	4
Science <i>Distributed as follows:</i> Life Science (1) Physical Science (1) Life Science or Physical Science (1)	3
Mathematics	3
Languages Other than English (LOTE)	1(**)
Visual Art, Music, Dance, and/or Theater	1
Physical Education <i>(participation each semester)</i>	2
Health	0.5
Electives	3.5
<b>Total</b>	<b>22</b>

(\*\*) Students with a disability may be excused from the requirement for 1 unit of credit in LOTE if so indicated on their IEP, but they must still earn 22 units of credit to graduate.

- 1.) **Pathways**  
A student must either:
  - complete all the requirements for the CDO's Commencement Credential (<http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/cdos-field-memo-june-2016.pdf>); or
  - pass an additional math Regents examination in a different course or Department approved alternative; or
  - pass an additional science Regents examination in a different course or Department approved alternative; or
  - pass an additional social studies Regents examination in a different course or Department approved alternative; or
  - pass an additional English assessment in a different course selected from the Department Approved Alternative list; or
  - pass a Department approved CTE pathway assessment, following successful completion of an approved CTE program; or
  - pass a Department approved pathway assessment in the Arts; or
  - pass a Department approved pathway assessment in a Language Other than English (LOTE)

See Multiple Pathways (<http://www.nysed.gov/curriculum-instruction/multiple-pathways>).  
See Department Approved Alternative Examinations (<http://www.p12.nysed.gov/assessment/hsgen/archive/list.pdf>).
- 2.) **Appeals**  
Appeals are subject to local district approval.  
See information on an Appeal to Graduate with a Lower Score on a Regents Examination (<http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/3-18appealformincludingself-swdmarch2018.pdf>).
- 3.) **Special Endorsements**  
**Honors:** A student earns a computed average of at least 90 on the Regents examinations applicable to either a Regents diploma or a Regents diploma with advanced designation. No more than 2 Department approved alternatives can be substituted for Regents examinations. The locally developed Checkpoint B LOTE examination is not included in the calculation.  
**Mastery in Math and/or Science:** A student meets all the requirements for a Regents diploma with advanced designation AND earns a score of 85 or better on 3 math Regents examinations and/or 3 science Regents examinations.  
**Technical Endorsement:** A student meets the requirements for either a local diploma, a Regents diploma or a Regents diploma with advanced designation AND successfully completes a Department approved CTE program including the 3-part technical assessment.
- 4.) **Languages Other than English (LOTE) Exempt Students**  
Students with a disability may be excused from the required units of credit in LOTE if so indicated on their IEP, but they must still earn 22 units of credit to graduate. A LOTE exempt student who seeks a Regents diploma with advanced designation does NOT have to complete the 5-unit sequence in the Arts or CTE in lieu of LOTE in order to meet the assessment requirements for the advanced diploma.
- 5.) **Superintendent Determination of a Local Diploma**  
Students with a disability who are unable to attain a local diploma through the various safety net provisions may be eligible for a Superintendent Determination of a local diploma under certain conditions. See Superintendent Determination Option for Graduation with a Local Diploma (<http://www.p12.nysed.gov/specialed/publications/superintendent-determination-option-august-2018.html>).
- 6.) **Social Studies Requirement for Students entering grade 9 prior to September 2016**  
All students first entering grade 9 in 1985 and thereafter but prior to September 2016, shall earn four units of credit in social studies. Such requirement shall include: one unit of credit in American history and one half unit of credit in Participation in Government and one half unit of credit in Economics.

### EXAMINATION REQUIREMENTS

REGENTS EXAM or passing score on a Department approved alternative	Regents Diploma for All Students		Regents Diploma via Appeal for All Students		Local Diploma via Appeal for All Students		Local Diploma for Students with a Disability		Local Diploma via Appeal for English Language Learners	
	# of Exams	Passing Score	# of Exams	Passing Score	# of Exams	Passing Score	# of Exams	Passing Score	# of Exams	Passing Score
English Language Arts (ELA)	1	65	1	1 Regents exam with a score of 60-64 for which an appeal has been granted by the district and all remaining Regents exams with a score of 65 or above	1	2 Regents exams with a score of 60-64 for which appeals have been granted by the district and all remaining Regents exams with a score of 65 or above	1	55 <sup>5A</sup>	1	Either the ELA Regents exam with a score of 55-59 for which an appeal has been granted by the district, and all remaining Regents exams with a score of 65 or above, OR 1 Regents exam with a score of 60-64 and the ELA Regents with a score of 55-59 for which appeals have been granted for both by the district, and the remaining Regents exams with a score of 65 or above <sup>1</sup>
Math	1	65	1		1		1	55 <sup>5A</sup>	1	
Science	1	65	1		1		1	55 <sup>5A</sup>	1	
Social Studies	1	65	1		1		1	55 <sup>5A</sup>	1	
Pathway (See note 1 on reverse side)	1 or CDOS	65 If Regents Exam	1 or CDOS		1 or CDOS		1 or CDOS	55 <sup>5A</sup> If Regents Exam	1 or CDOS	1 or CDOS
Compensatory Safety Net		Non-Applicable		Non-Applicable		Non-Applicable		Scores of 45-54 on any required Regents exam (except ELA and Mathematics) can be compensated by a score of 65 or above on another required Regents exam including ELA and Mathematics.		Non-Applicable

### REGENTS DIPLOMA with ADVANCED DESIGNATION

Depending on the pathway a student chooses, the Regents diploma with advanced designation requirements may be met in multiple ways. Students seeking the Regents diploma with Advanced Designation may choose from the following assessment options:

Traditional Combination	ELA, Global History and Geography, US History and Government, 3 mathematics, 2 science (1 life science, 1 physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE Exam OR a 5-unit sequence in the arts or CTE.
Pathway Combination (other than STEM)	ELA, 1 social studies, 3 math, 2 science (1 life science, 1 physical science), 1 Pathway (other than science or math) or complete the requirements for the CDOS Commencement Credential = 7 (+CDOS) or 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE Exam OR a 5-unit sequence in the arts or CTE.
STEM (Mathematics) Pathway Combination	ELA, 1 social studies, 4 math <sup>1</sup> , 2 science (1 life science, 1 physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B Exam or a 5-unit sequence in the arts or CTE.
STEM (Science) Pathway Combination	ELA, 1 social studies, 3 math, 3 science (at least 1 life science, at least 1 physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE Exam OR a 5-unit sequence in the arts or CTE.

<sup>1</sup> A student with a disability may appeal scores between 52 and 54 on up to two Regents examinations in any discipline and graduate with the local diploma. See Diploma Requirements Chart: Local diploma for Students with Disabilities (<http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/diploma-and-credentials-summary-requirements.pdf#page=4>).

<sup>2</sup> In the event a student with a disability is unable to attain a passing score on any Regents examination, the student may be eligible for a Superintendent Determination of a local diploma. See Information Related to Graduation Requirements for Students with Disabilities (<http://www.p12.nysed.gov/special/gradrequirements/home.html>).

<sup>3</sup> English Language Learners seeking an appeal for a score of 55-59 on the ELA Regents Exam are only eligible if they entered the United States in grade 9 or after and were classified as an English Language Learner when they took the test the second time. See Diploma Requirements Chart: Local Diploma: English Language Learners Only (<http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/diploma-and-credentials-summary-requirements.pdf#page=6>).

<sup>4</sup> The 4<sup>th</sup> mathematics examination can be selected from the list of Department Approved Alternative Examinations (<http://www.p12.nysed.gov/assessments/hsgen/archive/list.pdf>).

## COURSE OF STUDY EARNING CREDIT

### GETTING STARTED

Prior to entering Grade 9, each student's parents are afforded an opportunity to meet with the School Counselor to choose a course of study. This session will allow all parties to review academic potential, staff recommendations, and student/parent educational goals. We are hopeful that this process provides a sound basis for course selection decisions and for subsequent student/parent and counselor meetings. Parents are encouraged to discuss courses and programs with their children. A TOTAL OF 22 CREDITS ARE NEEDED TO MEET HIGH SCHOOL GRADUATION REQUIREMENTS.

### CHANGING YOUR COURSE SELECTIONS

Courses and teachers are scheduled according to student choice and/or availability of course offerings. Students have the opportunity to add or drop courses (with teacher/parent permission) during the set Add/Drop period, which ends after the first two weeks of the 1<sup>st</sup> and 2<sup>nd</sup> semester. The date ending the Add/Drop period is announced in homerooms and posted on Germantown CSD's Facebook page. Changes can only be considered on a space-available basis.

### UNITS REQUIRED TO ENTER GRADE 10

5.5 credits are required for promotion to grade 10

### UNITS REQUIRED TO ENTER GRADE 11

11 credits are required to enter grade 11

### UNITS REQUIRED TO ENTER GRADE 12

16.5 credits are required to enter Grade 12

### UNITS REQUIRED TO GRADUATE

22 credits are required to graduate from high school.

## Advanced Placement Program

### What is the AP Program?

The College Board's® Advanced Placement Program® enables students to pursue college-level studies while still in high school. Course credit is linked to AP exam scores and is determined by individual institutions. Students should consult the college/university that they will attend to find out the school's policies on awarding credits. Policies may differ greatly from school to school and even within departments in a single university. Families are responsible for the exam fee (\$96 during the 2021-2022 school year). This fee is due to the High School Office by October 1<sup>st</sup>.

Visit the College Board® online at <http://collegeboard.com/> for more information on the AP Program®, SAT®, PSAT/NMSQT®, applying to Colleges and Universities, and Financial Aid.

## University in the High School Program

If students are enrolled in the University in the High School Program, they will be expected to perform at an advanced standard in an accelerated and/or enriched environment. If available that particular year, students may opt for college credit in *Research Methods* through SUNY Albany, a three year long research course, and *Basic Drawing, Chemistry, College Algebra, English 101 (Composition) & 102 (Composition and Literature), Pre-Calculus, and Calculus* through Columbia Greene Community College. Students may also choose not to obtain college credit through University in the High School courses, and simply obtain credits toward high school graduation. Please note, college credit is offered by the cooperating College/Universities at a reduced cost.

The necessary paperwork is given directly to the student, as well as mailed home. Fall semester applications are distributed during the summer, spring semester and full year course paperwork is distributed in class around December. Course instructors may also provide specific paperwork at the beginning of the participating school year- depending on the cooperating College/University requirements. Students must complete and hand in this paperwork by the set deadline to obtain college credit.

## General Education Requirements Grades 7 and 8

### Grade 7

- English Language Arts 7
- Mathematics 7 or Mathematics 7/8
  - Science 7
  - Social Studies 7
- Physical Education (alternate days)
  - Technology 7
  - Health 7
  - Art 7
- One of the following:  
Band, General Music, or Chorus (alternate days)

### Grade 8

- English Language Arts 8 or English 9 (high school credit accelerated course)
  - Mathematics 8 or Algebra 1 (high school credit accelerated course)
  - Science 8 or Living Environment (high school credit accelerated course)
    - Social Studies 8
- Spanish I (students who pass the Second Language Proficiency Exam may earn 1 high school credit)
  - Physical Education (alternate days)
    - FACS 8
  - One of the following:  
Band, General Music, or Chorus (alternate days)

## GRADE 7 & 8 COURSE DESCRIPTIONS

### ART 7

This course is designed to give the 7<sup>th</sup> grade student an overview of art techniques, materials, and terms. Emphasis will be placed on the development of 2-D and 3-D skills, and preparing them for high school Studio Art.

### English 7

English Language Arts is comprised of the study of reading, writing, listening/speaking, and language skills, following the Common Core Standards, including: Completing a summer reading assignment based on self-selection of texts, interacting with each other to make connections to literature and analyze texts, reading texts independently, demonstrate comprehension and analysis. Students will practice reading comprehension, paragraph writing and editing skills in preparation for the ELA exam and final examination.

### English 8

Students will continue to read, write, listen, and speak while studying several works of literature. Through fiction, drama, nonfiction and poetry reading, students will practice reading strategies and comprehension skills in alignment with state learning standards. They will study vocabulary and word families from Prestwick House's Greek and Latin Roots. The focus of writing will be on narrative, informational and argumentative writing. Students will practice and prepare for the ELA State Exam administered in the spring.

### Health 7

Students will gain knowledge in the basic body system, changes that accompany puberty, STD's, non-communicable and communicable diseases, the effects of alcohol/drug use on the body, and safety and first aid. Students will also study different influences that affect health decisions and behaviors, understand the need for personal involvement in improving their environment and analyze how culture, media and technology affects decision making regarding personal and community health issues, and understand the importance of physical activity and proper nutrition in their daily lives.

### Health, Family and Consumer Sciences 8 (HFCS)

Students will learn how to manage money, time, and personal issues, how to have positive relationships in the home and school, how to deal with peer pressure, and bullying, conflict resolution, write a resume and fill out a job application. They will also learn about child development and how to take care of a baby (Baby Think-It-Over project). They will also learn basic cooking techniques and how to do basic sewing.

### Math 7

Topics include: Integers, decimals and fractions, ratio, rates and proportions, application of percent, geometry and measurement, algebra (formulas, equations, and inequalities), interpreting graphs and charts, probability, statistics, and the real number system.



## Math 7/8

Prerequisite: 90 or higher in each quarter in 6<sup>th</sup> grade mathematics, teacher recommendation and/or a score of high 3 or 4 on the state assessment.

Math 7/8 is an advanced seventh grade math class that includes topics covered in the 7<sup>th</sup> grade curriculum as well as the 8<sup>th</sup> grade curriculum. It is an advanced class for seventh grade students based largely upon using algebra in most of the topics covered. Topics include - Integers and operations with integers and rational numbers (decimals and fractions), ratio, rates and proportions, scale drawings, application of percent, measurement and geometry, interpreting graphs and charts, probability and statistics, algebra (formulas, equations, and inequalities), line and angle relationships with algebra, the real number system, graphing linear and quadratic functions, functions, interpreting functions, and polynomials.

## Math 8

A pre-algebra course designed to prepare students for high school mathematics. Topics include: data analysis; algebraic expressions and algebraic equations, linear equations, rational and irrational numbers; geometry, area, volume, functions and their graphs, interpreting functions, similarity and transformations, congruence and probability.

## Physical Education

Students will participate in Physical Education to increase physical fitness, sportsmanship, skill development and lifetime sports skills. Students will demonstrate knowledge of different sports skills through participation and a written final exam.

## Science 7 - Life Science

This is an introductory level course to the biological sciences. Students will engage in inquiry-based activities, such as laboratory experiments, creative projects, and technology-based lessons and research. In the 2021-2022 school year, we will focus on five major units: **Cell Biology, Classifying Life, Genetics, Diseases, and Ecology**. Within each unit, we will use the scientific method to help us make predictions, design experiments, and analyze and report data. We will incorporate scientific literature, as well as current technology to enhance the curriculum.

## Science 8 - Physical Science

Students will study matter and energy, areas of chemistry and physics, to include the study of physical and chemical changes, atoms, the periodic table, motion, machines, forces, electricity, magnetism, light and sound.

## Social Studies 7 – History of the United States & New York State I:

Grade 7 Social Studies is first of a two-part curriculum, and is arranged chronologically and incorporates geography as well as economic, social, and political trends. The course content is divided into ten key ideas, tracing the human experience in the United States from pre-Columbian times until the Civil War, with a focus on the people, events, and places in New York State as applicable.

## Social Studies 8 – History of the United States & New York State II:

Grade 8 Social Studies is second of a two-part curriculum, and is arranged chronologically and incorporates geography as well as economic, social, and political trends. The course content is divided into ten key ideas, tracing the human experience in the United States from Reconstruction up through present day, with a focus on the people, events, and places in New York State as applicable.

## Spanish 8

An introductory course designed to build basic vocabulary and grammar, also, to enrich cultural knowledge about Latin-American countries. A Final Exam, that meets the NY State Foreign Language Standards, is given at the end of this course. **This course is required of all students to obtain one credit for High School graduation.**

## General Music 7/8

General Music is an exploratory class through which students will study music of the past and present. The class covers topics including current events in music, careers in music, world music, musical instruments, music technology, and musical theater. Some basics of piano and guitar/ukelele may also be covered.

## Junior High Band

This performance-based course is a continuation of the elementary band experience offered in grades 4 through 6. Through this course, students will continue to develop skills on their instruments, while gaining experience performing in a variety of genres ranging from classical to modern. This course consists of rehearsals (every other day; regularly scheduled), small group lessons (bi-weekly, on a rotating schedule), and three evening concerts. Participation in all three components of this course is mandatory. It is the responsibility of the student to make up missed lessons, as well as any academic work missed while attending lessons. Additional performing opportunities available to members are All-County Band and the NYSSMA Solo and Small Ensemble Festival. Students with strong work ethics may audition for the Germantown Jazz Band or the Germantown Marching Band.

## Junior High Chorus

Junior High Chorus is a performance-oriented class which meets every-other day for the entire year during the school day. This course will teach students the basics of singing and how to properly use their voices. The group prepares a variety of music for three concerts a year. Attendance at scheduled performances is required and make up part of the students' grades.

## Studio Art

Grades: 8-12

1 unit of credit

Studio Art is a foundation Art class required for graduation that explores the Elements of Art and Principles of Design using a variety of Art techniques such as painting, drawing, printmaking, and sculpture, in various media. This class will emphasize developing an appreciation for the visual arts through understanding and exploring your own artistic voice in new creative ways. This is the preparatory class for Drawing and Painting, and an excellent starting point for all future art courses.

## Technology 7

Seventh Grade Technology Education course is designed to give each seventh grade student an educational experience and understanding of manufacturing, construction, production, and transportation technologies related but not limited to: design, tool manipulation, measurement, use of math skills, proper and safe use of tools, problem solving abilities and a creative experience. Students leave this part of their course with completed projects in each area of technology, which reflects their abilities and newly attained technological and hands-on knowledge. Students will engineer, evaluate, and modify projects based on the NYS technology standards.

**9TH - 12TH**  
**GRADE**  
**COURSE DESCRIPTIONS**

## ART DEPARTMENT

**Successful completion of 1 unit of credit The Arts is required for graduation. Students may complete 5 credits in The Arts for a Regents Diploma with Advanced Designation.**

### Studio Art

Grades: 8-12

1 unit of credit

Studio Art is a foundation Art class that explores the Elements of Art and Principles of Design using a variety of Art techniques such as painting, drawing, printmaking, and sculpture, in various media. This class will emphasize developing an appreciation for the visual arts through understanding and exploring your own artistic voice in new creative ways. This is the preparatory class for Drawing and Painting, and an excellent starting point for all future art courses.

### Advanced Studio Art

Prerequisite: Studio Art

Grades: 9-12

1 unit of credit

Continuing your foundation in Art, you explore a variety of techniques such as painting, drawing, printmaking, and sculpture in further depth.

### Drawing and Painting

Prerequisite: Studio Art or teacher permission

Grades: 9-12

1 unit of credit

Drawing & Painting is a studio class in which students will learn drawing and painting skills, and start to develop a personal style. Using charcoal, graphite, oil paint, acrylic paint, watercolors, and a variety of other materials, students will learn how to shade, mix color, and create excellent compositions. A variety of styles will be explored- it is not necessary that you come to this class already knowing how to draw things realistically - you will learn how! The emphasis is on learning various techniques, not exclusively photo-realism. This class will strive to eliminate the intimidation factor many face when confronting a blank page. We will depict various subjects: still life, landscape, figure and abstract composition. This is an excellent class for anyone planning to pursue art, or who simply wishes to create art as a rewarding hobby.

### Ceramics

Grades: 9-12

1/2 unit of credit

This is a studio class in which the various methods of hand building with clay are taught. These methods include coil, slab, drape, and modeling. Pieces will be fired and glazed. Students will create pottery, sculptures, and tiles out of white clay, and terracotta clay. They will learn basic terms and some historical styles. The emphasis will be on sound construction techniques, executing well-modeled forms, and creating beautifully finished pieces to take home.

## Advanced Ceramics

Prerequisite: Ceramics

Grades: 9-12

1/2 unit of credit

In this class, you will learn the basics on how to use a potter's wheel and throw some pieces, as well as build on your hand-building knowledge from your introduction to ceramics. You will also survey the work of modern day ceramic masters. You will work more independently and consult with the instructor to design your own final project that will showcase your unique artistic view and strongest skills. You will also experiment with advanced glazing techniques such as under-glazing and sgraffito. Enjoy another year of clay!

## Digital Photography

Grades: 9-12

1/2 unit of credit

Learn how to take great photos and how to manipulate and combine images in Photoshop! Using simple composition techniques and the Principles of Design, you will learn how to frame your shot like a pro. You will also learn how to combine photos, retouch images, and add special effects and text. You will learn about the work of several famous groundbreaking photographers. This is a fun class with tons of room for your imagination to roam. You do not need to own a camera for this class; you make take images with your cell phone.

## Advanced Digital Photography

Prerequisite: Digital Photography

Grades: 9-12

1/2 unit of credit

A continuation of Digital Photography, you will enjoy entirely new projects that focus on fine art photography skills and more advanced Photoshop techniques. You will work to develop an image portfolio and also do a photographic series on a theme of your choosing. You will be given an opportunity to do independent projects and explore the work of today's top photographers as a source of inspiration. You will be encouraged and given project time to enter Digital Photography contests in pursuit of scholarships and resume building. This is an excellent course for anyone considering art or photography as a career, as well as anyone who just enjoys working/playing in Photoshop!

## American Landscape Art

Grades: 9-12

1/2 unit of credit

If you enjoy drawing and painting landscapes or just want to learn how, then this is the class for you! Learn how to make beautiful landscape art in acrylics, watercolor, pencil, colored pencil, printmaking, and textured painting on wood. You will explore a variety of media, and a variety of styles and skills. You will also survey work by the great landscape artists of the Hudson Valley, including Frederic Church and Thomas Cole. We will work mostly from photos that you take, but also from imagination, and if weather permits, outside drawing sessions. You will learn what Plein Air painting is, how to "capture" a sense of light, and how to create a naturalistic look. You do not need to be a gifted painter or someone who can draw meticulously to enjoy this class. Just come to learn something new and enjoy your projects!

## Sculpture

Grades: 9-12

1/2 unit of credit

In this class, you will learn the basics of sculpture through hands-on projects, using both historical and cutting-edge modern examples as sources for inspiration. You will learn relief, high relief, and 3-Dimensional sculpture. You will learn a variety of techniques such as copper embossing, freeform wire sculpture, found object/recycled assemblage, and work in a variety of media, including clay. You will also learn how to create, on the computer, a small-scale 3-D sculpture that we will fabricate using our new 3D printer!

## Introduction to Filmmaking

### **Prerequisite: Computer apps or Digital Photography**

Why? You must know how to: Use a flash drive, copy files to and from a flash drive, move and copy files within file manager, make a folder, navigate to files easily, save or open a file, save as, cut and paste, and know some basic file extensions- .jpg, .mp4, .mov, .doc, .mp3.

Grades: 9-12

1/2 unit of credit

In this half-year course, you will learn how to produce a short video from beginning to end. You will go from concept and story boarding to video production and a wide range of video editing techniques: combining, cutting, audio, adding titles, credits, still frames, slow-motion, and more! Your movie will follow industry-standard steps from beginning to end. You will be learning the program Adobe Premiere- one of the most powerful programs used in the movie industry! You will also learn how to create great footage using sound composition framing, lighting, and sound techniques. This class will culminate in a popcorn fueled in-class film festival!

## Graphic Design

Grades: 9-12

1/2 unit of credit

Learn the basic of graphic design, what makes one design look so-so, and another look great? Learn how to use type, color, images, and other artistic elements to reach a specific target audience and effect powerful visual communication. You will create logos, page designs, and even some packaging design using Gestalt design principles. Want to design an awesome T-shirt for your band or class? Then this class is for you! This class is an excellent choice for anyone who enjoys digital art! We will often meet in the computer lab.

## Yearbook

Grades: 9-12

1 unit of credit

Yearbook is a hands-on, activity-based course that focuses on the development of skills leading to a finished book. Students will learn the fundamentals of photographic composition, scanning, how to use online software to create pages, and the basics of design. They will learn marketing techniques and practice skills for selling and designing advertising. Students will work as a team to place the content in the yearbook and prepare the yearbook for printing. This is a class that requires time spent taking photos outside of class hours. The yearbook team is responsible for the overall look of the book- they choose the cover every year!

CGCC\* College Drawing ClassNOT OFFERED 2022-2023\*

Prerequisite: Studio Art, Drawing and Painting

Grade: 12

1 unit of credit

This is a drawing course that uses direct observation- you draw what you see! It will include natural and man-made objects, figure and portrait drawing, landscape, and basic perspective. You will use charcoal, pencil, ink, crayon, conte crayon, and watercolor pencil.

\*Columbia Greene Community College

**PERFORMING ARTS DEPARTMENT**

**Successful completion of 1 unit of credit in The Arts are required for graduation. Students may complete 5 credits in The Arts for a Regents Diploma with Advanced Designation.**

**Concert Band**

Prerequisite: Jr. Band or Entrance Exam

Grades: 9-12

1/2 unit of credit

Germantown's premiere instrumental ensemble is a continuation of Band 7-8 and is open to students in grades 9 through 12. Through this course students will develop intermediate to advanced skills on their instruments, while gaining experience performing in a variety of genres ranging from classical to modern. This course consists of rehearsals (every other day, regularly scheduled), small group lessons (bi-weekly, on a rotating schedule), and performances (evening concerts in December, March, and June, two spring parades, graduation, and additional performances TBD by the ensemble). Participation in all three components of this course is mandatory; it is the responsibility of the student to make up missed lessons, as well as any academic work missed while attending lessons. Additional performing opportunities that students can apply or audition for are All-County Band, Area All-State Band, Conference All-State Band, Drama Club pit orchestra, Germantown Jazz Band and the NYSSMA Solo and Small Ensemble Festival.

**Concert Chorus**

Grades: 9-12

1/2 unit of credit

Concert Chorus is a performance-oriented class which meets every-other day for the entire year. This course will teach the fundamentals of singing including proper singing technique, note reading, and performance skills. The group prepares a variety of works for three school concerts each year. Attendance at scheduled performances is required and makes up a part of the students' grades. Students are required to attend a small group lesson, scheduled during the school day, once every two weeks for supplementary instructional time. Students may be asked to sing alone during small group lessons, but never in front of the entire group.



## Piano I

Grades: 9-12

1/2 unit of credit

This fall semester course is an opportunity for students with no piano experience to learn how to play piano and for students with some piano experience to improve in their piano-playing ability. Students will learn the basic elements of playing the piano, such as hand position, note-reading, scales, melody with accompaniment, and chords. Students will learn classical notation as well as chord symbols. Students with prior knowledge of music notation and piano basics will study advanced level music theory. This course is designed so that students may work at their own level and at their own pace. Many assignments throughout the course allow students to choose their own songs to play and topics to research and practice. Students do not need to own a piano or keyboard to take this course, though outside practice is helpful. No prior piano or music experience is necessary.

## Piano/Guitar II

Prerequisite: Piano I

Grades: 9-12

1/2 unit of credit

This course is a continuation of Piano I and will give students the opportunity to specialize in one or more musical areas. Students will take their knowledge of basic music theory and music literacy that they learned in Piano I and apply it as they further their musical education. In this course students may choose to learn guitar (basic or advanced, depending on prior experience) and/or electric bass, or they may elect to continue to study piano at a more advanced level. Students who elect to continue to study piano may choose to specialize in jazz piano, rock piano, or synthesized keyboard (including some study of MIDI), if they so desire. The material studied in this course will be highly student-driven and students will be required to work independently to an extent.

## Advanced Piano/Guitar

Prerequisite: Piano I

Grades: 9-12

1/2 unit of credit

Students will have the opportunity to continue their studies in piano and/or guitar, as well as increase their understanding music theory. Much of the repertoire/material studied in this class will be student-selected. Students do not need to own a piano, keyboard, or guitar to take this course.

## Musical Theater Analysis and Performance

Grades: 9-12

1/2 unit of credit

Students will analyze and perform several musical theater songs in a variety of styles. Students will learn several elements of basic vocal technique including appropriate vocal approaches to certain songs. The focus of this analysis will be uncovering the ways the composer and performer use the song's musical elements to help tell the story and convey what the character is feeling and/or doing as the song is being performed. Students will learn to apply acting techniques to their vocal performance in order to convey the song's story. The material studied in this course will be highly student-driven and students will be required to work independently to an extent. Students will also learn how to give critical feedback and apply critiques to their

own performance. Students do not have to have any prior singing or acting experience to take this course.

## Music and Theatre Technology

Grades: 9-12

1/2 unit of credit

In this fall semester course, students will learn how technology is used to enhance musical and theatrical performances. Items that will be studied include the operation of a light board, operation of a sound board, and the operation and use of various types of microphones, amplifiers, speakers and other A/V equipment. Audio and video recording and mixing, video projection, and several other topics may be studied as well if timing allows for it. One component of this course is “practical experience” and, through this component, students will apply what they learn in class as they assist with lighting and sound technology in school concerts and/or theatre productions.

## Dance I

Grades: 9-12 (7-8 with instructor permission)

1/2 unit of credit

Students will learn the basic elements of dance including stretching, conditioning, technique, choreography and history. Students will study several different styles of dance, including, but not limited to, ballet, jazz, contemporary, hip-hop, musical theater, and African dance. Students will demonstrate knowledge through practice and participation throughout the semester, which may culminate in a final performance. Students will be required to change clothing to participate in class.

## Dance II

Prerequisite: Dance

Grades: 9-12 (7-8 with instructor permission)

1/2 unit of credit

Students will continue their exploration of dance, choreography and performance. They will demonstrate knowledge through practice and participation throughout the semester. The semester may culminate in a student choreography project and final performance. Students will be required to change clothing to participate in class.

## Dance III and IV

Prerequisite: Dance I and II sequence

Grades: 9-12 (7-8 with instructor permission)

1/2 unit of credit

Student will continue their exploration of dance, choreography and performance. They will demonstrate knowledge through practice and participation in class throughout the semester. Each semester may culminate in a student choreography project and/or final performance. Students will be required to change clothing to participate in class.

## Acting

Grades: 9-12

1/2 unit of credit

Students will explore many facets of acting in this course, including body language, character development, scene building, stage direction, character interaction, and improvisation. Students will be introduced to several different acting methods throughout this course, as well as developing their own processes. Students will study monologues, selected scenes, and entire works from a wide variety of sources. Students will also learn how to give critical feedback and apply critiques to their own performance. Students in this class must be open-minded and willing to try new things. No previous knowledge or experience necessary!

## Acting II

Prerequisite: Acting I

Grades: 9-12

1/2 unit of credit

Students will continue their studies from Acting I in character development, stage direction, and improvisation through a more concentrated focus on performance both as an individual and as a group. Students will study entire works from a wide variety of source in addition to monologues and scenes. Students will hone their ability to give and apply critical feedback.

## **BUSINESS DEPARTMENT**

### Computer Applications and Coding

Grades: 9-12

1/2 unit of credit

In this course, students are introduced to line coding through various hands-on projects. These activities include circuit building using Arduino boards, online coding communities and robotic applications. Weaved within this curriculum, students will also learn essential skills needed to navigate the Microsoft Office Suite.

### Advanced Computer Coding and App Writing

Prerequisite: Computer Applications

Grades: 9-12

1/2 unit of credit

This elective course will explore advanced programming using various coding languages and applications. In addition to online coding and robotics, students will learn to create various Apps for smart phones and handheld tablets. The course will place an emphasize collaboration, problem solving and real world applications of various software.

### Personal Finance

Grade: 12

1/2 unit of credit

Many young people are finding themselves in serious financial problems very early in life. In this course students will learn how to effectively manage money, create a personal budget, learn about savings and investing plans, select strategies to use in managing credit and debt, and how to utilize insurance in order to maximize their financial knowledge. Areas of study include: Financial Self Identity, Money Management, Student Loans and others.

## ENGLISH DEPARTMENT

**Successful completion of 4 units of credit in English Language Arts are required for graduation.**

### English 9

Grade: 9

1 unit of credit

In English 9 students work toward meeting the Next Generation standards and competencies needed to successfully participate in this ever-changing, global world. They study several modes of text including fiction, non-fiction, poetry, and drama. Literary terms are used to frame their text-based analyses. Students write essays to broaden their understanding of the works studied and to develop their writing skills. Students strengthen language skills through vocabulary acquisition, grammar, small and whole group discussions, and presentations. In addition, they will participate in small and large group discussions, and practice presenting in small and large group formats. Throughout each area of study, they will also practice standard English conventions in writing while working to expand their vocabularies.

### English 10

Prerequisite: English 9

Grade: 10

1 unit of credit

In English 10 students will continue to develop the skills and competencies needed to successfully participate in this global 21<sup>st</sup> century world and to master the Next Generation English Language Arts Learning Standards. They will learn and practice these blended skills of reading, writing, and speaking through multiple modes aligned with key areas of study in Global Ten. They will read a variety of classic and contemporary texts, in order to analyze and respond to those texts, both literally and figuratively. They will analyze and write argumentative, informative, and narrative essays. There is also an in-depth research project where students will learn the skills needed to conduct research in all subjects.

### English 11

Prerequisite: English 10

Grade: 11

1 unit of credit

In English 11 students work toward meeting the Next Generation English Language Arts Learning Standards. They study several major works of American literature and poetry, along with a play by William Shakespeare. Students write essays that both broaden understanding of the works studied and practice skills in preparation for the English Regents exam. At the same time students strengthen language skills through vocabulary, grammar/mechanics, and oral presentation practice. A Regents exam is given in June.

### English 12

Prerequisite: English 11

Grade: 12

1 unit of credit

While English 12 is a full-year course, it is split into two basic sections: a first semester introduction to a variety of writing modes students will encounter in a college-level Intro to Writing course and/or the workplace; and a second semester survey of the forms and techniques

of literature with emphasis on analysis and interpretation of selected novels, plays, short stories, essays, and poetry. Both semesters will include reading (non-fiction texts in 1<sup>st</sup> semester) and extensive practice in the writing process. This course is also designed to reinforce the structures and principles of effective research and essay writing. Students will demonstrate proficiency in various writing modes and speech/public speaking situations.

### AP English Literature and Composition (offered alternating years)

#### Offered 2021-2022

Prerequisite: Minimum grade of 85 cumulative and 90 in English, 2-3 credits of H.S. English and Teacher Recommendation

Grade: 11-12

1 unit of credit

The Advanced Placement English Literature and Composition course is designed to be a challenging, engaging, college level exploration of literature. To this end, students will read “widely and deeply” from both British and American writers, and from works written from the 16<sup>th</sup> Century through the present. Some works in translation (such as Russian, French, or Latin American) may also be included. Writing is also an integral part of the course, in such forms as analytical and argumentative essays, reader response papers, research papers, and timed essays modeled after the A.P. exam. Completion of written assignments, as well as development of wide-ranging vocabulary, will help students develop stylistic maturity in their writing. The overarching goal of A.P. English is for students to develop the critical reading, discussion, and writing skills that they will need for success in college courses as well as on the A.P. exam administered in May. It is important to note that students in A.P. English carry considerable intellectual responsibility for preparation and active participation in discussion, as these are essential to understanding, growth, and the refinement of ideas.

### AP English Language and Composition (offered alternating years)

#### Offered 2022-2023

Prerequisite: Minimum grade of 85 cumulative and 90 in English, (and History recommended), 2-3 credits of H.S. English and teacher recommendation for advanced-level work.

Grade: 11-12

1 unit of credit

AP Language is an introductory college-level course open to qualifying 11<sup>th</sup> or 12<sup>th</sup> grade students. In the course, students cultivate their understanding of writing and rhetorical arguments through reading, analyzing, and writing texts as they explore topics like rhetorical situation, claims and evidence, reasoning and organization, and style. Course content is wide-ranging, including units on Pop Culture, The Environment, Gender, Criminal Justice, and Education. Students analyze texts like speeches, essays, legal arguments, editorial writing, creative non-fiction, satirical writing, and advertisement. Completion of reading and writing assignments, as well as development of wide-ranging vocabulary, will help students develop stylistic maturity in their writing. Students take a College Board AP exam in May, and a qualifying score provides college credit and/or advanced placement in college courses. The overarching goal of AP English is for students to develop the critical reading, discussion, and writing skills that they will need for success in college courses as well as on the AP exam. It is important to note that students in AP English carry considerable intellectual responsibility for preparation and active participation in discussion, as these are essential to understanding, growth, and the refinement of ideas.

**CGCC\* English (EN 101) .5 units of credit or 3 semester hours**

Prerequisites: 85 in English 11 and completion of CGCC College in the High School application

Grade: 12

This is an introductory college-level course emphasizing the processes and patterns of writing college-level essays. Included are reading assignments; extensive practice in writing clear, well-developed, grammatically correct essays; a research paper; and an oral presentation.

**CGCC\* English (EN 102) .5 units of credit or 3 semester hours**

Prerequisites: Completion of CGCC EN 101 and CGCC College in the High School application

Grade: 12

This introduction to writing about literature is conducted as a survey course in which students use the writing skills they have developed in EN 101 to analyze and discuss literary texts. These will include poetry, short stories, novels and drama. Every student's ability to contribute to class discussion about the various texts is essential. The course includes analytical essays, a research paper, and an oral presentation.

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**Journalism**

**\*\*\* This is an elective credit, unless 3 units of English have ALREADY been SATISFACTORILY completed.**

Grades: 9-12

1 unit of credit

The primary focus of the Journalism class is the production of the school newspaper, *The Stylus*. Being part of the school paper allows students a voice in school life, helps capture the interests and issues of our times, and helps sharpen writing skills! Students have writing and editing responsibilities and the staff collaborates to determine the content of each issue of the paper. Students have the freedom to choose the articles they write, with the guidance of the teacher. During the production weeks between each issue, students work on improving research, reporting, and profile writing skills. In addition, the class discusses issues, ethics, and controversies in journalism, and, time permitting, views films that explore such issues. Nearly all work can be completed during class. An interest in writing and an 85 average in English class are recommended.

**Public Speaking**

**\*\*\* This is an elective credit, unless 3 units of English have ALREADY been SATISFACTORILY completed.**

Grades: 9-12

1 unit of credit\*\*

This class is an introductory class in Public Speaking using formal and informal discussion and presentations. Students will learn to engage effectively in discussions; respond to an audience; evaluate a speaker's point of view, reasoning and evidence; and learn to give well-prepared, logical speeches. Assessments include class discussions, speech preparation, speech delivery, visual aids and evaluations of other speeches. Each speaking assignment will include a range of choices. This course is aligned with the Next Generation English standards.

## FOREIGN LANGUAGE DEPARTMENT

**Successful completion of 1 unit of credit in Language Other than English (LOTE) is required for graduation.**

### Spanish I

Grade: 8

1 unit of credit

An introductory course designed to build and develop basic vocabulary and grammar concepts as well as enrich cultural knowledge of Spanish speaking countries. A final exam that meets the NYS Foreign Language Standards is given at the end of this course. This course is required for all students to acquire one credit for high school graduation.

### Spanish II

Prerequisite: Spanish I

Grades: 9-12

1 unit of credit

A gateway course designed to increase proficiency and bring students from an elementary level to an intermediate level. In this course, students will expand their knowledge of vocabulary, grammar, and Spanish culture.

### Spanish III

Prerequisite: Spanish II

Grades: 10-12

1 unit of credit

An intermediate course designed for students to learn more detailed vocabulary and grammatical concepts as well as enrich their cultural knowledge of Spanish speaking countries through the use of Internet, creative dialogues, imaginative power points, and research.

## HEALTH, FOOD AND CONSUMER SCIENCE DEPARTMENT

**Successful completion of 1/2 credit of Health is required for graduation.**

### Health

Grade: 12

1/2 unit of credit

Topics such as human growth and development, emotional/social/physical health, fitness/nutrition, environmental health, family life, STD's/pregnancy, diseases and disorders, tobacco, alcohol and other drugs, consumer health/safety and first aid will be discussed in detail. During the safety and first aid section, students will learn "hands only" CPR, how to properly use an AED, "Stop the Bleed" training, and some basic first aid techniques.

### Food & Culture

Grades: 9-12

1/2 unit of credit

This course will introduce students to the meal patterns and food preparation methods for different regions throughout the world. A variety of foods from these places will be prepared. Students will choose a country from that area and complete a small research project on that country.

### Nutrition & Fitness

Grades: 10-12

1/2 unit of credit

Course introduces students to the basics of nutrition and nutritional trends and the importance of supplementation and lifestyle in maintaining and promoting health, as well as disease prevention. In addition to nutrition, information regarding the 5 components of physical fitness will be addressed. Students will learn basic assessment measures for each fitness component, plus monitor their own independent fitness and nutrition program. Instruction will be given in proper weight-training techniques, safety measures and specific exercises for each major muscle group. Body weight and some free-weight equipment will be used.



## MATH DEPARTMENT

**Successful completion of 3 units of credit in Mathematics are required for graduation.**

### Algebra I

Prerequisite: Successful completion of Math 8 or Math 7/8. (Students that have completed Math 7/8 will be recommended to Algebra I based on the following criteria: an 88 or higher for each quarter, an 80 or higher on the final, acceptable STAR assessment scores and/or state assessment scores, and/or teacher recommendation.)

Grades: 8-12

1 unit of credit

This class prepares students for the Algebra I Common Core Regents Exam. Topics include: algebra, graphing linear, absolute values and quadratic equations, linear and non-linear systems of equations, exponential functions, right triangles, trigonometry, radical expressions and polynomials, bivariate and univariate data. The final exam is the Algebra I Regents given in June.

### Algebra IA

Prerequisite: Successful completion of Math 8 with teacher approval/recommendation

Grades: 9-11

1 unit of credit

Algebra Part IA is the first year of a two-year Algebra I program. This class and Algebra IB prepare students for the Algebra I Regents Exam. Some of the topics include: algebra, graphing linear and nonlinear functions, absolute values and quadratic equations, linear and non-linear systems of equations, exponential functions, ratios and proportions. The final exam is a local exam given in June.

### Algebra IB

Prerequisite: Successful completion of Algebra IA with teacher approval/recommendation

Grades: 10-12

1 unit of credit

Algebra IB is the second year of a two-year Algebra I curriculum. Topics include: review of algebra, factoring polynomials, operations with radicals, quadratic equations, algebraic fractions, bivariate and univariate data, data analysis, statistics and probability, data collection and organization of data. Students will take the Algebra I at the end of the year. The final exam is the Algebra I Regents given in June.

### Algebra II

Prerequisite: Successful completion of Algebra I and teacher approval/recommendation

Grades: 9-12

1 unit of credit

This Regents course includes the study of sequences and series, complex numbers (quadratics with imaginary roots) absolute value, exponential and logarithmic functions, and circular functions and their graphs. There will be a continuation of topics in probability and statistics. The final exam is the Algebra II Regents exam given in June.

### Intermediate Algebra A

Prerequisite: Successful completion of Algebra I/IB and teacher approval/recommendation

Grades: 10-12 1 unit of credit

This course will expand on topics covered in Algebra I which may include: Linear expressions, equations and inequalities; functions; systems of linear equations and inequalities; exponential properties; polynomials; quadratic functions; roots and irrational numbers; Geometry; the study of sequences and series; absolute value; piecewise functions. Coding will be introduced and utilized as often as possible as it applies to the curriculum being covered.. The final exam is a local final given in June.

### Intermediate Algebra B

Prerequisite: Successful completion of Algebra I/IB and/or Intermediate Algebra A and teacher approval/recommendation

Grades: 10-12 1 unit of credit

This course will touch on the topics covered in Algebra II which may include: the study of sequences and series, complex numbers (quadratics with imaginary roots) absolute value, exponential and logarithmic functions, and circular functions and their graphs. There will be a continuation of topics in probability and statistics. The final exam is a local final given in June.

### Geometry

Prerequisite: Successful completion of Algebra II/Algebra I with teacher approval

Grades: 9-12 1 unit of credit

The State developed curriculum includes: properties of geometric shapes, transformations, quadratics function, right triangle, trigonometry, geometric proofs, analytical proofs, chords, secants and tangents. The final exam is the successful Geometry Regents exam given in June.

### Mathematical Applications

Prerequisite: Completion of Algebra IA and IB, or higher

Grades: 11-12 1 unit of credit

A course designed for students who have completed the prerequisite math courses for a Local Regents diploma, but do not plan on working towards an Advanced Regents Diploma. This course emphasizes project-based mathematics using real world situations. Topics include some of the following: statistics, data analysis, consumer mathematics, networking, geometry, and tiling. The final exam is a local final given in June.

### Statistics

Prerequisite: Successful completion of Algebra I

Grades: 10-12 1 unit of credit

The purpose of the Statistics course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: 1. Exploring Data; 2. Sampling and Experimentation; 3. Anticipating Patterns; and 4. Statistical Inference. **This course is a requirement for all students enrolled in Science Research.**

### CGCC\* Precalculus 111/Precalculus

Grades: 11-12

1 unit of credit or 4 semester hours

Prerequisite: Successful completion of Algebra II, CGCC Early Admission Application and college approval

This is a study of functions that model real world behavior. Linear, exponential, logarithmic, trigonometric, polynomial and rational functions are studied. This course serves as a foundation for student going on to Calculus. The final exam is a local exam given in June.

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### CGCC\* College Algebra/Senior Algebra

Prerequisite for CGCC Algebra: 2 credits of Math, CGCC Early Admission Application and college approval

Grades: 11-12

1 unit of credit or 4 semester hours

This is a reform math course. Students will work in collaborative groups on activities in which the mathematics arises from context. Real life data is interpreted numerically, symbolically and graphically. Topics include linear, quadratic, rational and exponential functions. (From the CGCC course description book.) The final exam is a local final given in June.

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### CGCC\* Calculus 122/Calculus

Prerequisite for CGCC Calculus: Successful completion of CGCC Precalculus/Precalculus, CGCC Early Admission Application and college approval

Grades: 11-12

1 unit of credit or 4 semester hours

This course introduces the differential and integral calculus of functions of one variable, limits and continuity, differentiation, mean value theorem, extrema, integration, fundamental theorem of calculus, methods of anti-differentiation, and applications. The final is an average of the end of year exam given in June and the final course project (if given).

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## PHYSICAL EDUCATION DEPARTMENT

**Successful completion of 2 units of credit in Physical Education are required for graduation.**

### Physical Education

Grades: 9-12

1/2 unit of credit

Students will participate in Physical Education to increase physical fitness, sportsmanship, skill development and lifetime sports skills. Students will demonstrate knowledge of different sports skills through participation and a written final exam.

## SCIENCE DEPARTMENT

**Successful completion of 3 units of credit in Science are required for graduation.**

### Earth Science

Grades: 8-12

1 unit of credit

This course includes the study of geology, meteorology, astronomy, oceanography, mineralogy, earthquakes, earth history and the forces that make our planet. Emphasis is on problem solving, observation, data collection and interpretation. Required laboratory time is 1200 minutes. The Regents exam is offered in June. **8<sup>th</sup> graders need an 85 or better in Science 7 and teacher recommendation to participate.**

### Living Environment

1 unit of credit

Grade: 9-12

In this course you will embark on a journey to explore the living world around you. Too often, we take trees, animals and our very own bodies for granted. I hope that after this class is over, you will all walk around with a greater awareness of how remarkable life on planet Earth truly is.

This course will prepare you for the Life Science - Biology (Living Environment) Regents Exam in June. This class covers the topics of ecology, biochemistry, evolution, molecular and human genetics, DNA technology, human physiology and human reproduction. Regents Biology is a rigorous and demanding course that requires studying at home to allow time for discussion, labs, and inquiry during class time. Required laboratory time is 1200 minutes.

### Chemistry

Prerequisite: Living Environment (75+ on Regents Exam), Algebra I (75+ on Regents Exam)

Grades: 10-12

1 unit of credit

This is the study of matter, its structure, properties and composition and the changes that matter undergoes. Some of the topics include: atomic structure, ionic and covalent bonding, acid and base theory, periodic table, electrochemistry and organic chemistry. Required laboratory time is 1200 minutes. A Regents exam is offered in June.

### Chemistry in the Real World

Prerequisite: Living Environment

Grades: 10-12

1/2 unit of credit

This course is designed to stimulate an understanding of Chemistry in your life. **Centered on laboratory** experiences, an appreciation of chemical processes and reactions are met through problem solving. **This course will be project-based and will incorporate power point presentations and lab activities.**

Approximately four weeks will be spent on the following topics:

- Chemistry of Nutrition
- Household Chemistry
- Hazardous Chemicals
- Medicinal Chemistry

**Environmental Science**

1 Unit of Credit

**Grade: 10-12**

Prerequisite: Earth Science and Living Environment.

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

This course is interdisciplinary; it embraces a wide variety of topics from different areas of study including geology, biology, chemistry and geography.

At the end of this course, students will have the **option** to take the AP Environmental Science Exam.

**Physics**

Prerequisite: Trigonometry, Chemistry

**Grades: 11-12****1 unit of credit**

This is a study of the fundamental laws of nature. Topics include: mathematical applications; motion; gravity; light; sound; magnetism and electricity. Required laboratory time is 1200 minutes. May include a field trip to an amusement park. A Regents exam is given in June.

**Practical Physics**

Prerequisite: Algebra

**Grades: 10-12****1/2 unit of credit**

Students will explore concepts of physical science pertaining to everyday situations. The course will be very hands-on and project oriented. Topics include basic household electricity, electric motors, solar energy and Nano science with an emphasis on environmental awareness and alternative fuel sources. Basic algebraic skills are used in some topics.

**Forensic Science**

Prerequisite: Living Environment

**Grades: 10-12****1/2 unit of credit**

This course will examine the field of forensic science. Emphasis will be placed on crime scene investigation, proper evidence collection, and both traditional and new technologies that aid in forensic investigation. Students will conduct investigations, collect real evidence, and analyze DNA in an effort to solve a staged crime.

**CGCC CH 101 General Chemistry 1**

Prerequisite: Chemistry (75+), Integrated Algebra (80+)

**Grades: 11-12****1 unit of credit or 4 semester hours**

A comprehensive introduction to chemical theories. Major topics include atomic structure, stoichiometry, dimensional analysis, ideal gas laws, chemical bonding, and molecular geometry. This course will contribute to the development of the students' abilities to think clearly and to express their ideas, orally and written, with clarity and logic. Students in such a course should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems.

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### Science Research 1 unit of credit per year and/or 12 credits from SUNY Albany

Grade: 10-12

Co-requisite: Statistics

Designed to provide students with an understanding of research methodology in the natural and social sciences. The course is directed to those students who wish to pursue excellence and progress into advanced areas of original research. Emphasis is on both laboratory and bibliographic research. Group seminars and individual consultations with doctoral level scholars are arranged. This is a 3-year research course worth 3 high school science credits. Students would earn 12 college credits over the 3 years and 2- summers at a cost of \$720 (4 payments of \$180). One year of statistics must be taken within the first 2 years of Science Research.

### Green Technology

Prerequisite: Living Environment

Grades: 10-12

1/2 unit of credit

This course will examine current and future sources of green and sustainable technologies. Emphasis will be placed on comparing and contrasting conventional technologies with green technologies. Students will conduct hands on activities to learn how green technologies work. Basic concepts of electricity, power generation, computers, and transportation will be discussed.

### Biotechnology I

Prerequisites: 80+ in Living Environment and Algebra I and pass Regents

Grades: 10-12

1 unit of credit

Students will receive a comprehensive introduction to the scientific concepts and laboratory research techniques currently used in the field of Biotechnology through problem-based learning and hands-on experiments. Students will learn the basic concepts of the biological and chemical processes of cells, tissues, and organisms. Students will also gain understanding in DNA replication, transcription, and translation. 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.

### Biotechnology II

Prerequisites: successful completion of Biotechnology I

Grades: 11-12

1 unit of credit

Biotechnology II is a continuation of Biotechnology 1 and is designed to give students understanding of the scientific concepts and laboratory research techniques currently used in the field of biotechnology. In this course, students attain knowledge about the field of biotechnology and deeper understanding of the biological concepts used. In addition, students further develop the laboratory, critical thinking, and communication skills currently used in the biotechnology industry, including use of a fume hood while learning the principles of plant tissue culturing, plant propagation, and cloning. The course will culminate in a student-driven independent research project.

### Paleontology

Grades: 11-12

1/2 unit of credit

Paleontology is the study of prehistoric life, covering everything from early bacteria, to Dinosaurs, to our most recent ancestors. We will be learning the history of life on Earth, through video, research, writing, and hands-on lessons. The beginning of the class will focus on field work and how paleontologist find and excavate samples, followed by how these scientists study modern life in order to understand how life worked in the past. The class grades will be based on short writing assignments, hands-on labs, and larger research papers.

## SOCIAL STUDIES DEPARTMENT

**Successful completion of 4 units of credit in Social Studies are required for graduation.**

### Global History and Geography 9 & 10

Grades: 9-10

1 unit of credit for each course

This two-year social studies program is designed to develop historical and cultural comprehension of various regions and nations outside of North America. In grade 9 students will study the Middle East, Africa, South and Southeast Asia and East Asia. In grade 10, students will study Latin America and Europe. Topics include: the geographic/historical setting, the dynamics of change, contemporary nations and cultures, economic development, the area within the global content and historical concepts. A Regents exam is given at the end of Global Studies 10.

### US History and Government

Prerequisite: Successful completion of Global History 9 & 10

Grade: 11

1 unit of credit for each course

This course begins with the colonial and constitutional foundations of the United States and explores the government structure and functions written in the Constitution. The development of the nation and the political, social, and economic factors that led to the challenges our nation faced in the Civil War are addressed. Industrialization, urbanization, and the accompanying problems are examined, along with America's emergence as a world power. A Regents exam is taken in June. Areas of study include: Colonial Foundations, Constitutional Foundations, Expansion, Nationalism, & Sectionalism, The Post-Civil War Era, and more.

### Economics

Prerequisite: Successful completion of U.S. History 11

Grade: 12

1/2 unit of credit

This course examines the principles of the United States free market economy. Students will analyze the role of supply and demand in determining the prices that individuals and businesses face. Students will explore the challenges facing the United States free market in a global environment and various policy-making decisions available to government to address these challenges. Areas of study include: Economic Principles, Consumers & Businesses, Taxation & Labor, and more.

### Participation in Government

Prerequisite: Successful completion of U.S. History 11

Grade: 12

1/2 unit of credit

This course provides students with opportunities to become engaged in the political process by acquiring the knowledge and practicing skills necessary for active citizenship. Students will examine the foundations of the U.S. government through the lens of the U.S. Constitution. Students will also examine and discuss current events throughout the course. Areas of study



include: Principles of American Government, Congress & the Legislation Process, Political & Civic Participation, and more.

## Psychology

Grades: 10-12

1/2 unit of credit

This is an introduction to psychology and surveys the major principles. Some of the topics that will be studied include: the history of psychology, human development, personality, abnormal behavior, feelings and emotions, learning and memory, altered states of awareness, and sleep and dream studies.

## Historical Topics Through Film

Grades: 10-12

1 unit of credit

Since Thomas Edison patented America's first motion picture camera in 1891, the depiction of various historical topics through film has become a large part of our culture. For many people, watching a theatrical film on a particular historical topic is their only way of learning history – no matter how accurate the film. The films viewed in this course are theatrical films rather than documentaries, so they are reenactments of historical events not necessarily a documentary record.

This course treats films as texts deserving the same skills of critical thinking and analysis as other sources used within a history course. The course is designed to reveal that some films are valid historical sources offering a glimpse into the social, political, and cultural historical moment in which it was created. Some films are affected by poetic license, the agenda of the filmmaker and other factors that compromise their validity as historical sources.

This course is not intended to be a “eat popcorn and watch movies” course – The goal of this course is to learn further about specific historical topics by analyzing theatrical films.

## **TECHNOLOGY DEPARTMENT**

### **Auto CAD**

Prerequisite: DDP

Grades: 9-12

1/2 unit of credit

This course teaches students the operation and creative use of computer-aided design. To learn CAD, students must operate software that develops drawings and computer graphics. The software is relatively easy to use with its pull-down menus and descriptive icons. It will prepare the student for the natural transition to the next level of CAD.

### **Advanced CAD**

Prerequisite: CAD

Grades: 10-12

1/2 unit of credit

A ½ unit course that explores the complex functions and abilities of CAD. In this course students will use pro-desktop to draw and design 3 dimensional objects. Students will get a feel for the engineering fields.

### **Architectural Drawing**

Prerequisite: DDP

Grades: 10-12

1/2 unit of credit

The Architectural Drawing course will explore the most common types of drawings that are used in the design and planning of constructing structures. This course is planned to develop an understanding of the principles of design and the skills needed to produce quality drawings that communicate the design clearly for presentation and construction.

### **Construction Systems**

Prerequisite: Materials Processing, DDP

Grades: 8-12

1/2 unit of credit

A course providing instruction in the construction aspects of production. Topics have been specifically tailored to construction of a structure on a site. They include planning, sources of capital, and building foundations, superstructures, floors, walls, ceilings, and roofs.

### **Design Drafting Program (DDP)**

Grades: 8-12

1 unit of credit

An introduction for Windows combines drafting instruction with in instruction on how to use Auto CAD to perform basic drafting procedures. Students work on hands-on activities to strengthen their Auto CAD skills.

### **Materials Processing**

Grades: 9-12

1/2 unit of credit

A course providing a broad, generic view of the way humans convert materials. The course focuses on processing of a variety of materials such as wood, metal, plastic, ceramics and composites through techniques of forming, separating, combining, and conditioning.

## Residential Structures

Prerequisite: Materials Processing, DDP

Grades: 9-12

1/2 unit of credit

A study of the many systems and skills involved in constructing non-high rise residential buildings. Course content includes resources, such as: materials, supplies, and finances; processes, such as: planning framing, roofing, and insulating; and outputs and effects, such as: quality assurance, environmental impact, and economic consequences.

## Pre Engineering

Prerequisite: CAD, DDP

Grades: 10-12

1/2 unit of credit

This course is designed to introduce the students to a basic understanding of what they may encounter in a college-level engineering program. The students will use the knowledge and skills they learned in DDP, CAD, materials processing, construction systems, math and science to solve problems and develop solutions.

## Agricultural Technology

Grades: 9-12

1/2 unit of credit

This course provides instruction in the foundations of the various segments of the agricultural industry. Agricultural career opportunities will be emphasized. Animal science, plant and land science, and agricultural mechanics skills will be the focus of the curriculum.