A MESSAGE FROM THE HEAD OF SCHOOL

The CBA Course Catalog is designed to assist students and parents in the course selection process.

This process is an important part of a student’s progress towards academic success, educational fulfillment and readiness for college, the military and/or employment. Please take the time to review the course offerings and requirements with your son.

If you have any questions don’t hesitate to contact the Guidance Department or the Associate Principal.

Good luck and thank you.

Dr. James Schlegel

OUR MISSION

Christian Brothers Academy, a college preparatory school in the Lasallian tradition, provides young men in grades five through twelve with a balanced education through challenging academic and broad co-curricular programs in a safe, faith-filled environment. Sponsored by the Brothers of the Christian Schools, CBA is committed to meeting the needs of the individual, developing his full potential and guiding him toward his role as a successful member of society. The teachings of the Catholic Church, the traditions of the Brothers of the Christian Schools and the principles of American citizenship form the foundation of the school’s educational philosophy.

TABLE OF CONTENTS

Graduation Requirements ............ 3
Program Options ........................ 4
Course Descriptions:
   Art .................................. 5
   Business ............................ 6
   English ............................. 8
   JROTC ............................. 10
   Mathematics ........................ 11
   Music ................................ 14
   Physical Education .................. 15
   Science ................................ 16
   Social Studies ....................... 20
   Spanish ............................. 22
   Technology & Engineering ......... 23
   Theology ........................... 24

GUIDANCE COUNSELORS

David Doemel
Director of Guidance, Grades 9-10
doemeld@cbaalbany.org | ext. 109

Thomas Reinisch
Guidance, Grades 11-12
reinisch@cbaalbany.org | ext. 104

Marty McGraw
Guidance, Middle School
mcgrawm@cbaalbany.org | ext. 110

ADMINISTRATION

Dr. James Schlegel
Head of School
schlegel@cbaalbany.org | ext. 102

Charles Abba
Associate Principal
abba@cbaalbany.org | ext. 103

Robert Groelz
Assistant Principal for Students
groelzr@cbaalbany.org | ext. 144

Roger Powers
Assistant Principal for Middle School
powers@cbaalbany.org | ext. 107
GRADUATION REQUIREMENTS

In accordance with our academic requirements, all students are required to complete at least 25.5 credits (29.5 if the student is participating in the JROTC program) to be eligible for graduation.

In addition to completing the courses listed to the right, a student must also pass the five (5) NYS Regents exams listed in order to receive a CBA/NYS Regents Diploma.

In order for a student to earn an Advanced Regents Diploma, he must meet NYS Regents Diploma requirements listed to the right, as well as pass these additional NYS Regents exams:
- Geometry
- Algebra II
- Two (2) Science Exams
- Comprehensive Foreign Language Exam or five (5) credits in Technology, Art, or Business

CBA DIPLOMA

<table>
<thead>
<tr>
<th>Required Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Social Studies</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Science</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Health</td>
<td>.5</td>
</tr>
<tr>
<td>Leadership/JROTC</td>
<td>4*</td>
</tr>
<tr>
<td>Theology</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29.5</strong></td>
</tr>
</tbody>
</table>

Testing Required for a CBA Diploma
- Comprehensive English Exam
- Global History & Geography
- U.S. History & Government
- Algebra I
- One (1) Science Exam

*JROTC is not a CBA graduation requirement. However, if you are enrolled in the program, you need four (4) credits to graduate.

NYS REGENTS DIPLOMA

<table>
<thead>
<tr>
<th>Required Courses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Social Studies</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>1</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Health</td>
<td>.5</td>
</tr>
<tr>
<td>Electives</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

Testing Required for a NYS Regents Diploma
- Comprehensive English Exam
- Global History & Geography
- U.S. History & Government
- Algebra I
- One (1) Science Exam
PROGRAM OPTIONS
Academic achievement stands at the center of our mission. We challenge our students with a rigorous college-preparatory curriculum that engages them and makes them think. We offer Honors courses, as well as Advanced Placement and college credit courses to help them get a jump start on their college degrees.

Planning a program of study for each of the four years of high school is one of the many important decisions students must make. Students are encouraged to make their decisions using the advice of their parents, guidance counselors, and teachers.

ADVANCED PLACEMENT
Christian Brothers Academy provides its students with the opportunity to enroll in a range of College Board approved Advanced Placement courses. It is expected that students are interested in the course content and motivated to succeed. All AP students must take the AP exam at the conclusion of the course.

AP courses offered at CBA are:
- Biology
- Calculus AB
- Chemistry
- Computer Science Principles
- English Language & Composition
- English Literature & Composition
- Physics
- Statistics
- U.S. History
- World History

COLLEGE CREDIT COURSES
We offer College in the High School (CHS) courses through Hudson Valley Community College and University in the High School (UHS) courses through the University at Albany. CBA offers CHS/UHS courses in math, business, computer science, and social sciences.

All courses in the CHS/UHS program are college-level courses, and students are required to pay a reduced HVCC or University at Albany tuition for each class.

Advantages of enrolling in college credit courses:
- Students can earn both college and high school credit upon successful completion of the courses.
- Students have the opportunity to fulfill first-year courses for college graduation.
- The cost of a college education could be reduced depending on the college and the student's plans.

HONORS PROGRAM
Our Honors Program courses are available to qualified students in the middle and high school. Honors students in 8th grade are permitted to study 9th grade math and science. The high school program offers students the opportunity to take honors-level courses in all of the core disciplines (math, science, social studies, English, and foreign language) through a combination of Advanced Placement offerings and regularly scheduled courses.

PREREQUISITES
Many courses have stated prerequisites which must be met before a student can be enrolled in that particular course. Prerequisites are determined through experience over several years and are established to aid students in selecting courses in which they have reasonable assurance of success.
ART

ART I
7100 | Grades: 9-12 | Credit: 1
This course is designed to fulfill the New York State Regents requirement for graduation. The emphasis is on the principles of art, developing the student's knowledge of art and the historical function of art. In addition, the emphasis is also on developing the student's ability to master skills and techniques through art materials. Projects for this course include Continuous Line Contour Drawing of a Harley Davidson Motorcycle, Plastic Tape Figure Cast Sculpture, Still Life Pencil Sketch, Album Cover Design, Shattered Value Drawing, One Point Perspective in the Style of Giorgio de Chirico, Medieval Illuminated Letter Designs, Paper Mache Picnic, Cubist Painting, and Handscape Surrealism.

ADVANCED ART: DRAWING & PAINTING
7300 | Grades: 10-12 | Elective Credit: 1
This course explores more advanced techniques of various artists such as O’Keeffe, Warhol, Seurat, and Van Gogh. Each student will work with a variety of materials. Projects included in this course are Continuous Line Contour Watercolor/Ink Landscape, Acrylic Nature Painting in the Style of Georgia O’Keeffe, Photo Negative Painting in the Style of Andy Warhol, George Seurat Pointillism Drawing with markers, Pen and Ink in the Style of Vincent Van Gogh, Scratchboard Drawing, Monochromatic Painting, Neo Pop Realism Pen and Ink Faces, Colored Pencil Abstract Architectural Design, Pastel Still Life, Pop Art Collage, Cut Paper Masterpiece, and painting in the style of the Surrealists.

ART II: SCULPTURE
7400 | Grades: 11-12 | Elective Credit: 1
This course explores the various forms and techniques of sculpture. Students work in the styles of several 20th century sculptors including Louise Nevelson and Henry Moore. Students also look at the works of various cultures, both ancient and present day. Projects for this course include Found Object Art, Contour Cardboard Reliefs, Ceremonial Masks, Carved Styrofoam Reliefs, Plaster Casting of a Famous Painting, 3D Box Sculptures, Figure Sculptures, 3D Creature Sculptures, Alexander Calder Freestanding Design, and Pop Art Sculpture.

MECHANICAL DRAWING
7501 | Grades: 11-12 | Elective Credit: 1
This course is designed to introduce basic drafting techniques. It also allows students to exercise their creative abilities. Students will learn about the care and use of equipment, orthographic projections, dimensioning, pattern development, and isometric and architectural drawing. Each student will have a week to work on the computer using an architectural program in order to design a house of their own.
BUSINESS

PRINCIPLES OF MARKETING (CHS)
7420 | Grades: 11-12 | Elective Credit: 0.5
This course will provide an introduction to marketing. Students will learn about consumer behavior and gain an understanding of targeting and positioning. Additionally, the elements of the marketing mix, including new product development, promotion, pricing, and distribution will be covered.

The course will culminate with the submission of a semester-long research project. As this is a college-level course, students should expect to submit high level work in an academically demanding environment.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of this course. Students taking Principles of Marketing will also be scheduled for Advertising.

ADVERTISING (CHS)
7420 | Grades: 11-12 | Elective Credit: 0.5
This course provides a basic understanding of advertising and the advertising industry and will expand upon concepts studied in Principles of Marketing. Advertising in radio, television, magazines, and newspapers will be studied. An integrated marketing communications approach will also be presented, and various communication/promotional efforts will be examined.

The course will culminate with the submission of a semester-long research project. As this is a college-level course, students should expect to submit high level work in an academically demanding environment.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of this course.

PRINCIPLES OF SPORTS MANAGEMENT
8501 | Grades 11-12 | Elective Credit: 1
This course will provide students with an overview of some important topics in Sports Management including management principles applied to sports management and current issues in college sports. Students will be expected to complete a variety of projects and engage in class discussion.

BUSINESS MATHEMATICS (CHS)
4420 | Grade: 12 | Credit: 0.5
This course reviews basic arithmetic and algebra skills through factoring trinomials and applies those skills to topics including ratio and proportion; percentages; simple interest; commercial discounts and purchases and present value. Income statement calculations and analysis will include sales, cost of goods sold, markup, and operating expenses.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.

BUSINESS STATISTICS (CHS)
4421 | Grade: 12 | Credit: 0.5
This course will discuss general statistical methods used in the collection, presentation, analysis, and interpretation of statistical data. This includes measures of central tendency; dispersion and skewness; probability theory; probability distributions (discrete and continuous); hypothesis testing, including “t” and “z” distributions; chi square analysis; and regression analysis, correlation, and ANOVA.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.
ACCOUNTING (UHS)
7401 | Grades: 11-12 | Credit: 1

This course includes a thorough introduction to the basic financial statements including the balance sheet, income statement, and statement of cash flows, with a focus on accounting information that is available to individuals outside an organization. The course provides an introduction to the concepts, terminology, and principles of financial accounting. Students learn about accounting as an information development and communication function that supports economic decision-making.

Accounting enables students to analyze financial statements; derive information for personal and organizational decisions from financial statements; and, better understand business entities.

This course is part of the University in the High School program. A student may earn college credit from the University at Albany upon successful completion of the course.

QUANTITATIVE BUSINESS APPLICATIONS (CHS)
4420, 4421 | Grade: 12 | Credit: 0.5

This course includes algebra-based calculations and analysis of business investment situations, including simple and compound interest, annuities (ordinary due, deferred, complex, perpetuity, and forborne), applications of present value and future value, and a conceptual discussion of business investments.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.
ENGLISH

ENGLISH I REGENTS
2101 | Grade: 9 | Credit: 1
The ninth grade curriculum is literature-based. Students explore short stories, poetry, novels, plays, and a variety of non-fiction works. Students are actively engaged in discussion and group activities. Writing assignments focus on response to and analysis of literature, personal reflection, research, and creative writing. Public speaking projects help students become more comfortable communicating their thoughts and experiences in front of an audience of peers and teachers.

ENGLISH I HONORS
2100 | Grade: 9 | Credit: 1
The ninth grade curriculum is literature-based. Students explore short stories, poetry, novels, plays, and a variety of non-fiction works. Students are actively engaged in discussion and group activities. Writing assignments focus on response to and analysis of literature, personal reflection, research, and creative writing. Public speaking projects help students become more comfortable communicating their thoughts and experiences in front of an audience of peers and teachers.

The Honors course challenges students with additional reading and writing assignments and requires them to do a substantial amount of work outside of the classroom. Students in the Honors class must have the self-discipline and desire to challenge themselves intellectually.

ENGLISH II REGENTS
2201 | Grade: 10 | Credit: 1
This course consists of a thorough study of American literature including novels, essays, poetry, and plays. Writing assignments will include response to and analysis of literature, narrative, and expository essays. Building vocabulary is an essential part of the curriculum. In the Spring semester, students will conduct an exploration into college and career options. Students will be expected to be prepared for and fully engaged in class discussion. Collaborative learning will be an important component of classroom instruction.

ENGLISH II HONORS
2200 | Grade: 10 | Credit: 1
This course consists of a thorough study of American literature including novels, essays, poetry, and plays. Writing assignments will include response to and analysis of literature, narrative, and expository essays. Vocabulary will be developed authentically through advanced materials assigned for reading. Students will be expected to be prepared for and fully engaged in class discussion. Collaborative learning will be an important component of classroom instruction.

Students in the Honors class will be responsible for several independent literature and current events-based projects throughout the year, including several research papers. This course provides an introduction to rhetoric and the importance of reviewing multiple sources from a variety of outlets.

Guidelines for entry include successful completion of either English I with a class average no lower than 90% or successful completion of English IH with a class average no lower than 85%, and a recommendation from the English teacher.

ENGLISH III REGENTS
2301 | Grade: 11 | Credit: 1
Modern literature from a variety of authors and genres provides the focus for continued development of students’ reading, writing, and critical thinking skills in preparation for the rigors of college study. Class discussion and writing assignments will begin with responses to the assigned literature. Students are expected to be prepared for, and engaged in, class discussion. Students will write analytical, narrative, and expository essays, with an introduction to the research process in the fall. All grade 11 students
will take the NYS English Regents exam in June.

**AP ENGLISH LITERATURE & COMPOSITION**  
2400 | Grades: 11-12 | Credit: 1

AP English Literature & Composition is equivalent to an introductory English class for college freshmen. Students will read, analyze, and interpret imaginative literature: short fiction, novels, plays, and poetry. Students will develop their skills as readers and critical thinkers through close reading and active discussion of numerous texts.

Writing will be an integral part of the course, both in response to literature and in imaginative pieces in prose and poetry.

All students must take the AP English Literature and Composition Exam given in May. Juniors enrolled in the course will also take the NYS English Regents exam. Seniors will take a school final exam at the conclusion of the year.

*Guidelines for entry include a teacher recommendation and good academic standing.*

**AP ENGLISH LANGUAGE & COMPOSITION**  
2401 | Grades: 11-12 | Credit: 1

AP English Language & Composition is the equivalent of an introductory English class for college freshmen. The primary focus of this course will be reading and analyzing works of literature and nonfiction texts with the goal of identifying the author’s purpose and audience in crafting these writings. In turn, students will develop their own writing techniques for different purposes and audiences through the use of rhetoric: writing and speaking with the purpose/goal of persuading, informing, or motivating an audience regarding a particular topic or area of interest.

Students will examine various historical documents, such as the Declaration of Independence, the Federalist Papers, and presidential speeches and determine the writer’s purpose. Additionally, students will read, research, and ultimately write about and present topics of personal interest and world/current events using a rhetorical approach.

All students enrolled in the course must take the AP English Language and Composition Exam given in May. Juniors enrolled in the course will also take the NYS English Regents exam in June. Seniors will take a final school exam at the conclusion of the year.

*Guidelines for entry include a teacher recommendation and good academic standing.*

**ENGLISH IV**  
2403 | Grade: 12 | Credit: 1

This is a college prep English class. Primary objectives of the class include further developing students’ skills and confidence in writing effectively in various genres; reading thoughtfully and perceptively; listening with openness and understanding; speaking in and to a group; working collaboratively as well as independently; developing research skills using database, print, and online resources; thinking critically; and, directing and assessing their own learning.

The fall semester will focus on narrative nonfiction with students writing their own pieces involving personal narrative, research, and interviews. The spring semester will focus on reading and writing in response to modern and contemporary literature: short stories, novels, plays, and essays.
The Army Junior Reserve Officer Training Corps (JROTC) prepares high school students for leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. This includes activities both inside and outside of the classroom, such as service learning projects, opportunities to acquire the knowledge, discipline, and a sense of responsibility that is necessary in order to take charge of one’s future. The result is responsible cadets who are sure of themselves, can think on their own, and can express their ideas and opinions clearly and concisely.

CBA’s JROTC program is proud to have military instructors, all of whom have over 20 years of service in the active Army. These instructors have served in every corner of the world, from Korea to Europe, to the Middle East, providing a level of leadership experience unique to a school of our size.

JROTC 9
9100 | Credit: 1
The mission of Leadership Education and Training (LET I) is to motivate first-year JROTC Cadets to be better citizens. To accomplish this purpose, the text discusses citizenship, leadership, and a number of topics designed to help the cadets succeed in high school and after graduation. Cadets wear uniforms every day. Extra or co-curricular activities include: Color Guard, Drill Team and Rifle Team competition, Service Learning Projects, and participation in local community events.

JROTC 10
9200 | Credit: 1
The second year of Leadership Education and Training is split into units including: Techniques of Communication, Leadership, Cadet Challenge, Leadership Lab, First Aid, Map Reading, History, Your American Citizenship, Career Opportunities, and Role of the U.S. Army. The wearing of the uniform and extracurricular activities are the same as LET I.

JROTC 11
9300 | Credit: 1
The third year of Leadership Education and Training provides additional leadership situations. In this year, students will not only be more involved as teachers and leaders within the Cadet brigade, but they will also do more independent studies in the areas of communication, leadership, financial management, history, career opportunities, college preparation, and technology awareness. The wearing of the uniform and the extracurricular activities are the same as LET I.

JROTC 12
9400 | Credit: 1
The fourth-year cadets are responsible for the daily Cadet administration and perform as commanders and staff officers. They act as assistant instructors in some subject areas for other JROTC classes. They continue to develop their leadership skills and plan special unit events such as the Military Ball, parades, and the annual Awards Banquet, as well as several Leadership camps. The wearing of the uniform and the extracurricular activities are the same as LET I.
MATHEMATICS

ALGEBRA I REGENTS
4153 | Grades: 8-9 | Credit: 1
This one-year Regents-level course follows the standards set forth by the New York State Education Department. The curriculum focuses on algebraic problem solving, understanding linear, quadratic, exponential, and rational functions, and statistics.

Algebra I satisfies one of the three-year Mathematics requirements for a Regents Diploma and prepares students for the Algebra I NYS Regents exam.

8th grade students may take Algebra I Regents if they have an average no lower than 85% in our CBA Math 7/8H or 90% in an 8th grade Math class, along with a teacher recommendation.

MATH 10
4252 | Grade: 10 | Credit: 1
This is a one-year course that provides students with an additional semester of instruction in Algebra and the opportunity to take the NYS Algebra I Regents exam in January. The second semester of the course is an introduction to selected concepts in Geometry.

GEOMETRY
4251 | Grades: 10-11 | Credit: 1
This course is a one-year Regents-level course that follows the standards set forth by the New York State Education Department. The curriculum includes topics such as geometric relationships, constructions, rigid motions, proofs, and coordinate geometry.

A school-level final exam is taken at the end of the course. Geometry satisfies year two of the NYS three-year Mathematics requirements for a diploma.

Guidelines for entry include successful completion of the Algebra I or Math 10 course, a passing grade on the Algebra I Regents exam and a teacher recommendation.
GEOMETRY HONORS
4291 | Grades: 9-11 | Credit: 1

This course is a one-year Honors-level course that follows the standards set forth by the New York State Education Department. The curriculum includes topics such as geometric relationships, constructions, rigid motions, proofs, and coordinate geometry. The Honors course includes more complex problem solving and an enriched curriculum.

The NYS Geometry Regents exam is taken at the end of the course. Geometry satisfies year two of the NYS three-year Mathematics requirements for a diploma.

Guidelines for entry include successful completion of Algebra I with a class average no lower than 85%, a score of no lower than 85% on the Algebra I Regents exam, and a teacher recommendation.

ALGEBRA II
4334 | Grades: 11-12 | Credit: 1

Students in this course will study advanced algebra topics at a deeper level. Topics include: factoring, rational and irrational expressions and equations, complex numbers, quadratic equations, functions, laws of exponents, statistics, and regression equations.

Upon completion of this course, students must take a school exam.

Guidelines for entry include successful completion of Algebra I and Geometry.

ALGEBRA II HONORS
4335 | Grades: 10-11 | Credit: 1

Students in this course will study advanced algebra topics and the essential topics of trigonometry from the perspective of both the right triangle and the unit circle. Topics include: absolute value, relations and functions, transformations, exponential functions, logarithmic functions, regression, mathematical sequences, probability and statistics, and trigonometric functions, graphs, applications, and identities and equations.

Upon completion of this course, students must take the NYS Regents exam which leads to an Advanced Regents Diploma.

Guidelines for entry include successful completion of Algebra I and Geometry, a passing score on both Regents exams and a teacher recommendation.

PRE-CALCULUS
4403 | Grades: 11-12 | Credit: 1

Pre-Calculus is designed to prepare the students for a college-level calculus course. The course will have a strong emphasis on the analysis of functions, the applications of trigonometry, and solving real-life word problems. The final semester of Pre-Calculus will focus on the fundamentals of introductory calculus including limits, definition of derivative rules, and curve sketching.

Guidelines for entry include successful completion of Algebra II Honors with a Regents score no lower than 80% or a teacher recommendation.

AP CALCULUS AB
4400 | Grades: 11-12 | Credit: 1

AP Calculus AB is a college-level course in differential and integral calculus, the equivalent of the first semester at most universities. This course is designed to prepare students for the AP Calculus AB exam and provide them with a well-rounded foundation to aide them with subsequent math courses. Particular emphasis will be placed on key concepts and core calculus techniques and the real-life implementation of these ideas and methods. A graphing calculator is required for the course. The recommended model is the TI-84+. Students will take the AP Calculus exam at the end of the course.

Guidelines for entry include successful completion of Pre-Calculus and having attained an av-
AP Statistics
4410 | Grades: 11-12 | Credit: 1
AP Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will work on projects involving hands-on gathering and analysis of real world data. Ideas and computations presented in this course have immediate links and connections to actual events. Computers and calculators will allow students to focus deeply on the concepts involved in statistics. Students will take the AP Statistics exam at the end of the course.

Guidelines for entry include successful completion of Pre-Calculus.

BUSINESS MATHEMATICS (CHS)
4420 | Grade: 12 | Credit: 0.5
This course reviews basic arithmetic and algebra skills through factoring trinomials and applies those skills to topics including ratio and proportion; percentages; simple interest; commercial discounts and purchases and present value. Income statement calculations and analysis will include sales, cost of goods sold, mark-up, and operating expenses.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.

BUSINESS STATISTICS (CHS)
4421 | Grade: 12 | Credit: 0.5
This course will discuss general statistical methods used in the collection, presentation, analysis, and interpretation of statistical data. This includes measures of central tendency; dispersion and skewness; probability theory; probability distributions (discrete and continuous); hypothesis testing, including “t” and “z” distributions; chi square analysis; and regression analysis, correlation, and ANOVA.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.

QUANTITATIVE BUSINESS APPLICATIONS (CHS)
4420, 4421 | Grade: 12 | Credit: 0.5
This course includes algebra-based calculations and analysis of business investment situations, including simple and compound interest, annuities (ordinary due, deferred, complex, perpetuity, and forborne), applications of present value and future value, and a conceptual discussion of business investments.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.

ACCOUNTING (UHS)
7401 | Grades: 11-12 | Credit: 1
This course includes a thorough introduction to the basic financial statements including the balance sheet, income statement, and statement of cash flows, with a focus on accounting information that is available to individuals outside an organization. The course provides an introduction to the concepts, terminology, and principles of financial accounting. Students learn about accounting as an information development and communication function that supports economic decision-making.

Accounting enables students to analyze financial statements; derive information for personal and organizational decisions from financial statements; and, better understand business entities.

This course is part of the University in the High School program. A student may earn college credit from the University at Albany upon successful completion of the course.
MUSIC

CONCERT BAND
7004 | Grades: 9-12 | Credit: 0.5
The Concert Band is an entry-level band. It is designed to foster the development of the skills required to play traditional band instruments. The concert band is open to all CBA students.

SYMPHONIC BAND
7000 | Grades: 9-12 | Credit: 0.5
The Symphonic Band is geared toward entry-level players up to NYSSMA Level III. This group rehearses three times during the six day cycle and performs at our bi-annual music department concerts as well as at Open House, and some school functions. Audition required.

WIND ENSEMBLE
7001 | Grades: 9-12 | Credit: 0.5
This band is an audition-based group, which plays at a higher level than any other ensemble. Composed primarily of high school students, this band plays at numerous school functions and concerts. It rehearses three times during the six day cycle. Audition required.

JAZZ ENSEMBLE
7002 | Grades: 9-12 | Credit: 0.5
Jazz Band is an audition-based ensemble. The students explore jazz music and improvisation, and they preform at all music concerts. Audition required.

MUSIC THEORY I
7305 | Grades: 11-12 | Credit: 1
This basic theory course will offer interested students an overview of college-level theory and ear training with some music history and accompanying listening examples.

Guidelines for entry include the ability to read music and teacher approval.
PHYSICAL EDUCATION

PHYSICAL EDUCATION
8200, 8400 | Grades: 9-12 | Credit: 0.5

The Christian Brothers Academy Physical Education Program is designed to assist the student in developing his full potential. Each student is encouraged to develop a bridge between recreation and healthy living habits which will be a lifetime foundation for self-fulfillment and achievement; for caring and gaining a responsible place in society. Students are taught to value personal qualities of self-control, discipline, good sportsmanship, rules and regulations, and respect for others in life situations. Our goal is that each student possess a personal sense of self-confidence, social graces, pride toward life and self, and the desire to pursue excellence in his endeavors.

STRENGTH TRAINING
8500 | Grades: 10-12 | Credit: 1

Weight training is an exercise that uses progressive resistance movements to build strength using free weights or machines. This weight lifting class will help improve an individual’s muscular strength and muscular endurance. This course is designed to use weightlifting to develop a positive mental and physical self and identify the positive effects of physical fitness. The focus of this course will be on safely building muscle, endurance, and flexibility with proper lifting technique. Preference will be given to students participating in two or more interscholastic sports.
SCIENCE

EARTH SCIENCE REGENTS
5121 | Grades: 8-10 | Credit: 1

Earth Science is a laboratory science course that explores origins and the connections between physical, chemical, and biological processes of the earth system. Students experience the content of Earth Science through inquiry-based laboratory investigations and focus on topics associated with matter, energy, crystal dynamics, cosmic evolution and structure, cycles, geochemical processes, and the expanded time scales needed to understand events in the earth system.

Earth Science provides the knowledge, skills, and habits of mind needed for problem solving and ethical decision making about scientific and technological issues. Embedded standards for inquiry and technology & engineering are taught in the context of the content standards for the universe, energy in the earth system, cycles in the earth system, and geologic history.

In addition, the Honors course also includes reading and writing assignments that will encourage and require a greater depth of understanding of Earth Science concepts; Honors lab activities and extensions that will require more sophisticated math, geometry, trigonometry, and algebra to help convey scientific information; and, mandatory projects that will reflect the depth of understanding expected of Honors students.

Students will take the NYS Earth Science Regents exam at the end of the course.

EARTH SCIENCE HONORS
5181 | Grades: 8-10 | Credit: 1

Instruction focuses on the eight basic topics from the State Syllabus, ranging from the activities of living things to identifying and defining interrelationships among organisms. Themes describing unity and diversity of organisms are further developed into the structure and function of anatomy and the transmission of traits from generation to generation. Evolution and ecology describe patterns of the origins of organisms as well as their interdependencies.

As part of this course, the students must complete 1,200 minutes of laboratory work and must have a complete file of their satisfactory written reports for each lab. Students will take the NYS Regents exam at the end of the course.

Guidelines for entry include successful completion of Earth Science.

LIVING ENVIRONMENT BIOLOGY REGENTS
5211 | Grade: 8-10 | Credit: 1

Instruction focuses on the eight basic topics from the State Syllabus, ranging from the activities of living things to identifying and defining interrelationships among organisms. Themes describing unity and diversity of organisms are further developed into the structure and function of anatomy and the transmission of traits from generation to generation. Evolution and ecology describe patterns of the origins of organisms as well as their interdependencies.

Students will take the NYS Living Environment Biology Regents exam at the end of the course.

LIVING ENVIRONMENT BIOLOGY HONORS
5210 | Grades: 8-10 | Credit: 1

Instruction focuses on the eight basic topics from the State Syllabus, ranging from the activities of living things to identifying and defining interrelationships among organisms. Themes describing unity and diversity of organisms are further developed into the structure and function of anatomy and the transmission of traits from generation to generation. Evolution and ecology describe patterns of the origins of organisms as well as their interdependencies.

As part of this course, the students must complete 1,200 minutes of laboratory work and must have a complete file of their satisfactory written reports for each lab. Students will take the NYS Regents exam at the end of the course.

Guidelines for entry include successful completion of Living Environment Biology.
interrelationships among organisms. Areas of concentration include: research skills, scientific inquiry, biochemical aspects of modern biology, cells genetics, evolution, ecology, human anatomy, and physiology.

As part of this course, the students must complete 1,200 minutes of laboratory work and must have a complete file of their satisfactory written reports for each lab.

The Honors course is designed for the science-oriented student who may be considering a career in science. The Honors curriculum covers concepts in greater depth and detail. The course involves advanced readings in order to strengthen reading and comprehension across the curriculum and to better prepare students for future AP courses and the SAT exam. This class will also prepare students for the NYS Regents exam.

Guidelines for entry include successful completion of Life Science 7 or 7H with teacher recommendation; Successful completion of the Earth Science Regents with a class average 90% (or higher) and a teacher recommendation; Successful completion of Earth Science Honors with a class average of 85% (or higher) and a teacher recommendation.

**CHEMISTRY**

**5321 | Grades: 11-12 | Credit: 1**

This course is designed for third-year science students and will provide instruction on topics including, but not limited to, matter and energy, atomic structure, bonding, periodic tables, and acids and bases. The course, while examining fewer topics than the NYS Regents curriculum, will examine topics and concepts in depth. Laboratory methods and skills will be learned in order to expand the student’s understanding of Chemistry.

A comprehensive school exam will be administered at the end of the course. This is not a NYS Regents course.

Guidelines for entry include successful completion of Earth Science, Biology, and Algebra I.

**CHEMISTRY HONORS**

**5399 | Grades: 10-11 | Credit: 1**

The Chemistry curriculum includes the following topics: matter and energy, atomic structure, bonding, periodic table, mathematics of chemistry, kinetics and equilibrium, acids and bases, redox and electro-chemistry, organic chemistry, application of chemical principles, and nuclear chemistry.

During the year, students develop skills in measurement, handling chemicals safely, and collecting and organizing data/evidence. They are encouraged to think critically, weigh the evidence, and extend their problem solving abilities. The Honors level course includes all additional materials in the NYS Syllabus.

In addition, students will perform more demanding laboratory experiments requiring applications of chemical mathematics principles and equation writing skills. Students must complete a satisfactory lab report for each laboratory investigation. A complete laboratory folder is necessary in order for the student to take the required NYS Chemistry Regents exam at the end of the school year.

**AP BIOLOGY**

**5205 | Grades: 11-12 | Credit: 1**

AP Biology is an introduction to college biology that focuses on the following areas: the molecular basis of life and cells, principles and theories of evolution, and organism and population biology. Laboratory experiences are a vital part of this course. Students will take the AP Biology exam at the end of the course.

This course is recommended for those who are considering a career in the biological or medical sciences.

Guidelines for entry include successful completion of Biology Regents and Chemistry Regents.
Guidelines for entry include successful completion of Earth Science, Biology, Algebra I and Geometry, and a recommendation from the student’s Earth Science or Biology teacher.

It is strongly suggested that the student has either completed Algebra II or be enrolled in Algebra II.

**AP CHEMISTRY**  
5426 | Grades: 11-12 | Credit: 1  
AP Chemistry is an introduction to college Chemistry that focuses on many areas including the behavior of gases, chemical bonding, kinetics, and equilibrium. Laboratory experiments are a vital part of this course and students are expected to write detailed reports. Students will take the AP Chemistry exam at the end of the course.

This course is recommended for students who have completed the Honors Chemistry course and are interested in majoring in science or pre-med in college.

**FORENSIC SCIENCE**  
5403 | Grades: 11-12 | Credit: 1  
Forensics is a two-semester, interdisciplinary science and technology course. Students will learn how to observe, collect, analyze, and evaluate evidence found at crime scenes and discuss the scientific principles behind various types. Some topics include: fingerprint analysis, ballistics, DNA fingerprinting, blood spatter, and toxicology. The course will utilize a variety of instructional techniques including class discussions, projects, and labs.

**PHYSICS**  
5400 | Grades: 11-12 | Credit: 1  
This survey course in Physics is designed to explore, develop, and apply the basic fundamental concepts of Physics as they relate to everyday life. The course does not cover as much breadth and depth as the Regents Physics course. Topics to be covered include, but are not limited to, mechanics, projectile motion, electricity, work power, and energy. The final assessment will be a school exam.

**PHYSICS REGENTS**  
5406 | Grades: 11-12 | Credit: 1  
Physics encompasses five core areas and six optional topics. The five core areas are: mechanics, energy, electricity and magnetism, wave phenomena, and modern physics. The optional topics include: motion in a plane, internal energy, electromagnetic applications, geometric optics, solid state physics, and nuclear energy.

During the year students will master skills, develop positive science attitudes, and extend their problem solving abilities. Activities and problems are chosen to foster critical thinking as the students collect evidence and weigh that evidence. The rapid development of scientific knowledge in our physical world demands that adults be able to make informed decisions on the problems and issues facing our society. Students will develop scientific literacy by becoming knowledgeable about the physical world and developing positive attitudes to solve problems in physics.

This course has a laboratory requirement since Physics is best learned when using an investigative approach. Satisfactory laboratory reports must be written by the student for investigation. Students must complete all lab requirements in order to be eligible to take the required NYS Regents exam.

Guidelines for entry include successful completion of Algebra I, Geometry, Algebra II (or currently enrolled in) and two years of science.

**AP PHYSICS**  
5410 | Grades: 11-12 | Credit: 1  
This AP Physics course has been developed by the College Board to provide an academically rigorous survey of physics, equivalent to an introductory 1-semester algebra-based physics course at the university level.

Topics include kinematics, Newton’s laws, ener-
Energy, momentum, rotational dynamics, periodic motion, electrostatics, and elementary circuit analysis. Students learn the material not only through traditional lectures, but also through a problem-based approach involving laboratories and virtual experiments.

Students will take the AP Physics exam at the end of the course.

*Guidelines for entry include successful completion of Algebra II and Honors Chemistry.*
SOCIAL STUDIES

GLOBAL STUDIES I REGENTS
3101 | Grade: 9 | Credit: 1
This course is the first year of a two-year sequence in Global Studies. It is a study of the cultures and history of Africa, East Asia, the Middle East, and Latin America. The course begins with early civilizations in Mesopotamia, Egypt, India, and China. The emphasis is on the growth of these civilizations and their relationship to the culture of Western Europe.

Guidelines for entry include successful completion of Social Studies 8 and completion and passing of 8th grade.

GLOBAL STUDIES I HONORS
3100 | Grade: 9 | Credit: 1
This course is the first year of a two-year sequence in Global Studies. It is a study of the cultures and history of Africa, East Asia, the Middle East, and Latin America. The course begins with early civilizations in Mesopotamia, Egypt, India, and China. The curriculum then expands into the Classical and Medieval Eras with an emphasis on the interaction, and at times, isolation of peoples throughout history. The chronology of the course begins with the Neolithic Revolution (circa 9000 BC) and finishes during the Age of Exploration (circa 1500 AD).

Guidelines for entry include successful completion of Social Studies 8 with a history average of 90% (or higher) and a teacher recommendation.

GLOBAL STUDIES II REGENTS
3201 | Grade: 10 | Credit: 1
The Global Studies II course is the second year of the required two-year sequence. The course continues to examine the relationship of societies across the world from the Age of Exploration to the present era and covers the 16th, 17th, 18th, 19th, 20th, and 21st centuries in depth in order to explain issues in the modern world.

In the Regents class, a wide variety of important concepts are reviewed in order to enable the student to succeed on the NYS Regents exam and at the same time cultivate an appreciation of the discipline of Social Studies.

Guidelines for entry include successful completion and passing of Global Studies I.

AP WORLD HISTORY
3400 | Grades: 10-12 | Credit: 1
The AP World History course is designed to provide students with the analytical skills necessary to deal critically with the problems and materials in modern World History. The course is rigorous in the sense that it covers the “big picture” of all of World History. The course is divided into five main periods of history, each followed by one large exam per marking period.

Students are required to sit for both the AP Exam and the NYS Global History Regents exam.

Guidelines for entry include successful completion of Global Studies I Honors or successful completion of Global Studies I Regents with a class average no lower than 90%, a teacher recommendation, and approval of department chair and Associate Principal.

US HISTORY REGENTS
3301 | Grade: 11 | Credit: 1
This course provides students with an overview of American history as well as preparation for the NYS Regents examination. All major periods, events, and themes are covered from Colonial America through the Modern Era.

Students will be given the NYS US History Regents at the conclusion of the course.

Guidelines for entry include successful completion of Global History and Geography I-II or AP World History.

AP US HISTORY
3300 | Grades: 11-12 | Credit: 1
The AP US History course is designed to pro-
vide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials in United States history. The program prepares students for intermediate and advanced college history courses by making demands upon them equivalent to those made by a full-year introductory college course. The course should develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format.

Juniors will be given the NYS US History Regents at the end of the course. All students will take the AP US History exam at the end of the course.

*Guidelines for entry include successful completion of AP World History or Global Studies I and II with a class average no lower than 90%, a teacher recommendation, and approval of department chair and Associate Principal.*

**GOVERNMENT**

3401 | Grade: 12 | Credit: 0.5

This course covers the function of the US Government including the election process, and the influence the media has on government. The learning process is facilitated by a lecture and class discussion approach.

**ECONOMICS**

3401 | Grade: 12 | Credit: 0.5

Economics is the discussion of choice, cost, and benefit as it relates to individuals and society as a whole. This course highlights the structure of the free market system of the United States and the reasons for the success of the system as well as its shortcomings.

**POLITICAL SCIENCE (CHS)**

3408 | Grades 11-12: | Credit: 1

This course is designed to provide a general introduction to political thought and the practice of politics. Emphasis is placed on the exploration of the different political ideas, institutions, and systems on the state, national, and international levels.

This course is part of the College in the High School program. A student may earn college credit from Hudson Valley Community College upon successful completion of the course.
SPANISH

SPANISH I
6101 | Grade: 9-10 | Credit: 1
This course begins the New York State plan for second language study. The emphasis in this course is on listening comprehension, basic pronunciation patterns, oral expression, elementary grammar, and culture.

SPANISH II
6201 | Grades: 9-11 | Credit: 1
This course continues the emphasis on listening and speaking skills. The students practice reading for comprehension. There is a continued study of basic grammatical structures and culture.

Guidelines for entry include successful completion of Spanish I or a Placement Exam.

SPANISH III
6301 | Grades: 11-12 | Credit: 1
This is an intermediate course, which completes the three-year sequence of the New York State plan for second language study. It aims to build the student’s oral and written proficiency, as well as to enhance reading and listening skills. Students will expand their vocabulary and will refine their knowledge of the grammatical structures needed to speak and write well in Spanish. They will also explore multiple cultural experiences and traditions from various Spanish-speaking countries.

SPANISH IV (UHS)
6450 | Grades: 11-12 | Credit: 1
The main objective of Spanish IV is to continue to develop skill in the four areas of listening, speaking, reading, and writing in the Spanish language. The student’s ability to communicate in and comprehend Spanish will develop along with their knowledge of the vocabulary and grammatical structures of the language. Acquisition and mastery of these skills are enhanced through cultural awareness.

This course is part of the University in the High School program. A student may earn college credit from the University at Albany upon successful completion of the course.

Guidelines for entry include successful completion of Spanish III Honors and a teacher recommendation.

SPANISH V (UHS)
6500 | Grade: 12 | Credit: 1
The main objective of this course is to continue to develop skills in the four areas of speaking, listening, reading, and writing in the Spanish language. Students’ ability to communicate in and comprehend Spanish will develop along with the knowledge of the vocabulary and grammatical structures of the language. Acquisition and mastery of these skills are enhanced through cultural awareness.

This course is part of the University in the High School program. A student may earn college credit from the University at Albany upon successful completion of the course.

Guidelines for entry include successful completion of Spanish IV and teacher recommendation.
TECHNOLOGY & ENGINEERING

Project Lead the Way (PLTW) is a program that provides challenging and innovative curriculum for use by schools in the areas of science, technology, engineering and math. According to PLTW, it exists “…to prepare students for the global economy through its world class curriculum, high quality professional development and an engaged network of educators, students, universities and professionals. The hands on project based program engages students on multiple levels, exposes them to areas of study that they typically do not pursue…”

CONCEPTS IN ENGINEERING
5413 | Grades: 9-12 | Credit: 1
The days of a pocket-protector wearing tech neek as an engineer are gone. Future engineers need a diversity of soft and hard skills to be successful engineers of the future. This class will use project-based team learning to explore the seven critical skills required of future engineers. These skills include communication, problem solving, teamwork, leadership, management, creativity, and curiosity.

INTRODUCTION TO ENGINEERING DESIGN (IED)
5416 | Grades: 9-12 | Credit: 1
This course is a part of Project Lead The Way (PLTW). Students will learn about the engineering design process and apply math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems.

Guidelines for entry include successful completion of Algebra I and/or Concepts In Engineering.

PRINCIPLES OF ENGINEERING
5415 | Grades: 10-12 | Credit: 1
This course is a part of Project Lead The Way (PLTW). Students learn about the engineering design process and apply math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems.

Guidelines for entry include successful completion of Introduction to Engineering Design.

AP COMPUTER SCIENCE PRINCIPLES
7504 | Grades: 11-12 | Credit: 1
This course is a college board-approved implementation of AP Computer Science Principles (CSP) offered through Project Lead the Way (PLTW). The curriculum fosters computational thinking skills, generates excitement about computing careers, and introduces professional tools that encourage creativity and collaboration. It teaches the fundamentals of programming and enables students to gain beginning-level fluency in reading and writing code. Projects and case studies include app development, web design, cybersecurity, visualization of data, and modeling and simulation. Students will take the AP Computer Science exam at the end of the course.

Guidelines for entry include successful completion of Introduction to Engineering Design and a teacher recommendation.

Project Lead the Way (PLTW) is a program that provides challenging and innovative curriculum for use by schools in the areas of science, technology, engineering and math. According to PLTW, it exists “…to prepare students for the global economy through its world class curriculum, high quality professional development and an engaged network of educators, students, universities and professionals. The hands on project based program engages students on multiple levels, exposes them to areas of study that they typically do not pursue…”

CONCEPTS IN ENGINEERING
5413 | Grades: 9-12 | Credit: 1
The days of a pocket-protector wearing tech neek as an engineer are gone. Future engineers need a diversity of soft and hard skills to be successful engineers of the future. This class will use project-based team learning to explore the seven critical skills required of future engineers. These skills include communication, problem solving, teamwork, leadership, management, creativity, and curiosity.

INTRODUCTION TO ENGINEERING DESIGN (IED)
5416 | Grades: 9-12 | Credit: 1
This course is a part of Project Lead The Way (PLTW). Students will learn about the engineering design process and apply math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems.

Guidelines for entry include successful completion of Algebra I and/or Concepts In Engineering.

PRINCIPLES OF ENGINEERING
5415 | Grades: 10-12 | Credit: 1
This course is a part of Project Lead The Way (PLTW). Students learn about the engineering design process and apply math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems.

Guidelines for entry include successful completion of Introduction to Engineering Design.

AP COMPUTER SCIENCE PRINCIPLES
7504 | Grades: 11-12 | Credit: 1
This course is a college board-approved implementation of AP Computer Science Principles (CSP) offered through Project Lead the Way (PLTW). The curriculum fosters computational thinking skills, generates excitement about computing careers, and introduces professional tools that encourage creativity and collaboration. It teaches the fundamentals of programming and enables students to gain beginning-level fluency in reading and writing code. Projects and case studies include app development, web design, cybersecurity, visualization of data, and modeling and simulation. Students will take the AP Computer Science exam at the end of the course.

Guidelines for entry include successful completion of Introduction to Engineering Design and a teacher recommendation.
THEOLOGY

THEOLOGY I
1100 | Grade: 9 | Credit: 1

This course provides the student with an in-depth study of the Hebrew Scriptures and an introduction to the Christian Scriptures and lives of saints and other persons of heroic virtue. These examples are intended to provide students with role models who put other people’s needs before their own.

Concepts to be covered include the Word of God, Revelation, Salvation History, Covenant, Mass, the Rosary, and Stations of the Cross. Additionally, students are provided an overview of the life of St. John Baptist de La Salle, the Liturgical Year of the Church, and various prayer forms for personal and communal use.

THEOLOGY II
1200 | Grade: 10 | Credit: 1

The objective of this course is to foster appreciation of the meaning of the Sacraments, prayer, worship, and faith throughout the history of the Catholic Faith. Activities include: delving into the nature of the Sacraments; exploring the meaning and role of liturgy and Para liturgies in celebrating the Sacraments; participating or observing several Eucharistic liturgies and communal ceremonies of Reconciliation; discussing the role of Sacraments, prayer, and worship in our own spiritual lives and how they compare with other religions; and, defining faith and evaluating its effects on individuals.

THEOLOGY III
1300 | Grade: 11 | Credit: 1

This course is intended to help students understand the Christian vision of morality, with Jesus as our model. Activities include: understanding the steps in the decision-making process; acquiring a foundation from which to reach decisions on contemporary moral issues and confronting them in the light of Christian values; exploring possible influences on decision-making such as survival, need, group affiliation, peer pressure, law, and conscience; developing positive attitudes about oneself, life, other persons, and things that stem from the Christian interpretation of life; and, studying current events as related to morality.

THEOLOGY IV
1400 | Grade: 12 | Credit: 1

This course is designed to provide an analysis of the social teachings of the Catholic Church as they pertain to many contemporary issues of social justice. Activities include: participating in student-led seminars; discussing current events and issues in social justice; examining several teaching documents and letters issued by the Catholic Church, especially the U.S. Conference of Catholic Bishops; and, exploring the meaning of the 7 Themes of Catholic social teaching.