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ART DEPARTMENT

Fine Arts Survey Grades 11 and 12

Fine Arts Survey is an elective class designed to develop an appreciation of the visual arts, dance, theatre, and classical music. Students study the work of noteworthy artists, composers, and choreographers. Through class activities and projects, they become familiar with various artistic forms, concepts, and philosophies. Students learn about video production and produce a school-based news program. Fine Arts Survey is open to juniors and seniors. Fee Required

Art I Grades 10, 11, and 12

Art Studio I is an introduction to visual art. Students explore various means of self-expression, aesthetic observation, creative problem solving, invention, and design. By studying the work of a number of different artists and by creating their own drawings, collages, and paintings, Art I students develop both their artistic skills and their unique visual language for communicating personal meaning. Art I is an elective open to sophomores, juniors, and seniors. Talent is not a prerequisite; interest and willingness to practice is. Fee Required

ART II Grades 11 and 12

Art Studio II is an individualized in-depth continuation of the work begun in Art I by self-disciplined, highly motivated art students. Prerequisite: Instructor approval. Fee Required.

ART III (Independent Study) Grade 12

Art Studio III (Independent Study) gives qualified students an opportunity to pursue mastery in drawing or painting by following an individualized advanced curriculum. They attend class with Art I & II students, but work independently. Prerequisite: Successful completion of Art II and Instructor approval. Fee Required.

AP STUDIO ART Grade 12

Advanced Placement Studio Art is a college level course for the highly skilled and prolific student artist. Factors determining student placement in AP Studio Art include teacher recommendation, previous success in art courses, portfolio review of at least 8 works, and student commitment to completion of an AP portfolio. Prior to the course, students will be required to complete 5 drawings to be turned in on the first day of class. During the course students will receive a sequential curriculum guided by the teacher to create a portfolio of approximately 30 pieces of artwork. In order to achieve such an extensive portfolio, the AP student must be an independent, motivated artist and committed to working an average of 7 – 10 hours per week outside of the classroom. Fee required.

Beginning Chorus

Grades 10, 11, and 12

Beginning Chorus is an elective offered to high school sophomores, juniors, and seniors who enjoy singing and who would like to learn more about choral technique and performance. Chorus members are introduced to vocal theory and music-reading, learn to compose melodies following the Kodaly method, and through dedicated practice and peer support, develop their talent and experience the joy of being a member of an active, loving musical group. The CHS chorus performs both liturgical and secular music. Students who elect the class are required to participate in all extra-curricular practices and performances. Fee Required

Intermediate Chorus

Grades 11 and 12

Students who elect Intermediate Chorus build on their developing talent and continue to nurture their love of choral music. Fee Required

Theater I

Grades 10, 11, and 12

Acting I brings theatre, literature, and the arts to life in the classroom. Students learn about the history of the theatre, its major playwrights, and actors. Pantomime, dramatic interpretation, monologues, duets, group acting, and script writing are all part of the course. There are exercises in characterization, voice projection, and relaxation. Students create their own drama in a multi-genre, multimedia research project.

Theater II

Grades 11 and 12

In Acting II, students become more directly involved in the production process of theatre. They become directors of costume, prop, and practice committees. Students write stage directions and run rehearsals. Acting II students have the opportunity to represent CHS at district rally. They work after school on a short play, which is performed in the ULL rally drama competition. Acting II students read the works of major playwrights and write critical analyses of their works. This advanced course is for students who wish to pursue acting or playwriting as a career.

Teacher permission required.

BUSINESS DEPARTMENT

Digital Graphics and Animation/SketchUp (1/2 credit)

Grade 9

In the Digital Graphics course, students will use graphics, images, and/or video to create content-oriented productions. The media used within these productions will be developed, edited, or otherwise manipulated by the students. Final products should reflect multimedia elements, basics of design theory, effective use of productivity tools, and the conveyance of content-rich information.

Digital Graphics and Animation (LVS)

Grade 11, 12

This course is an introduction to the fundamentals of digital design and animation. You will be introduced to the fundamentals of creating and editing graphics images. You will learn to work with both bitmap and vector graphics to develop eye-catching pictures that can be used in print, on the Web, in animations and videos, and in presentations. The lessons cover the basics of both computer animation and video, as well as how to incorporate the files in presentations and Web pages. The student should be comfortable with using Windows and the Internet.

Principles of General Business (1/2 Credit)

Grades 10, 11, and 12

This is a comprehensive program for introduction to business. The goal of Introduction to Business: Our Business and Economic World is to describe for students how the American business economy operates and to help them prepare to make decisions as consumers, wage earners, and citizens within that economy. The program combines explanations of business and economic concepts with practical applications of these concepts to the real world of the American business economy.

Computer Science (LVS)

Grades 10, 11, and 12

This is designed for students interested in studying the structure and power of a programming language. This course will use Java as the computer language in which object oriented programming and design will be introduced. A brief overview of the development, design and functionality of a computer will be included, but this is basically a course in problem solving. Logical solution structure in terms of program development will be emphasized. Topics such as data manipulation, decision statements, repetition, and array structure will be covered.

Computer Technology Applications (1/2 Credit)

Grade 9

Computer Technology Applications is a one-semester entry-level course introducing students to technology and personal/professional productivity software applications, and internet exploration. Through the study and hands-on use of technology applications, students will learn to make informed decisions about technologies and their applications. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the appropriate technology source for the task, synthesize knowledge, create a solution, and evaluate the results. The acquisition of information using search strategies and technology to access, analyze and evaluate acquired information. Students communicate information in different formats and to diverse audiences. A variety of technologies will be used.

Independent Study in Technology Applications: Student Tech(1 Credit) Grades 11, 12

Independent Study in Technology Applications is an advanced level course designed to build upon concepts of technology applications introduced and developed in previous secondary technology courses. In addition to addressing basic concepts in greater depth, more advanced applications of technology are addressed in real-life contexts. Students will apply technology tools in the context of authentic situations, which may deal with specific technologies as well as situations and issues in other disciplines.

Students enrolled in *Independent Study in Technology Applications* are required to (1) pose hypotheses/questions related to a selected problem; (2) work with a mentor to determine problem to be solved and strategies to be implemented; (3) develop and apply advanced technology application skills in the solution of the problem; (4) analyze information for validity and relevance in the confirmation, testing, and solution of the hypotheses and questions; (5) produce documentation to illustrate the progress of the project including, but not limited to, journals, logs, videos, pictorial documentation, computer programs, multimedia products, and printed books; and (6) produce original work to solve the identified problem and publish the product in electronic media and print.

Prerequisite:

The prerequisite for this course is the completion of a high school technology course as identified in the Bulletin 741 Course of Study for Computer Education and **permission of the instructor** for *Independent Study in Technology Applications*.

Independent Study in Technology Applications: Adventures in Programming with C++

This class is an "Independent Study in Technology Applications," and may be taken at Grades 10-12. Prerequisites are completion of a high school technology course as identified in Bulletin 741 Course of Study for Computer Education and permission of the instructor/mentor. Independent Study in Technology Applications is a performance and production class with new problems and technology tasks each year. A student may repeat Independent Study in Technology Applications a maximum of two times.

This computer course is an introduction to Computer Programming using C++, which is a commonly used and very powerful computer programming language. Students will analyze a variety of problems and code solutions. Interdisciplinary projects, group work, and online activities will be incorporated. Students will benefit from the individualized nature of an online course in terms of time, work, and feedback. This is an excellent class for the first time programmer or a student with programming experience that would like to learn C++.

Web Mastering (1/2 Credit)

9th Grade

Web Mastering is an elective, half credit course, offered to sophomores, juniors, and seniors at Catholic High School. Concepts of Web communication will be studied and explored. Students will design, develop, and maintain the CHS Web page using appropriate current editors. Students will demonstrate technical knowledge of the equipment and the ability to use input devices and transfer methods. Security and privacy issues, trademarks, and other legal issues relating to the use of the Web will be studied.

Multimedia Productions

10th, 11th, and 12th

Multimedia Productions is a course that combines text, graphics, sound, animation, and video delivered by computer or other electronic means. The course focuses on the systematic design and development of effective, efficient, and appealing visual productions. Students' plan and design production sequences then use computer-based authoring/multimedia software to deliver the production. Current and emerging technologies, such as laserdiscs, CD technology, digitized audio, digitized still and motion video, and scanned images, and incorporated into multimedia projects. Finally, students design, develop, implement, and evaluate productions. Class sessions consist of discussions, collaborative activities, demonstrations, skills-building activities, peer evaluation, and time to work on projects.

ENGLISH DEPARTMENT

English I (Honors Level)

Grade 9

English I Honors focuses on advancing students into the in-depth study of great works of classic literature. Using an interactive classroom approach, students are encouraged to think independently and analytically about the text. The curriculum is diverse and stimulating, covering a variety of genres. Students are introduced to the works of Shakespeare and the epic drama as well as many classic poets and the works of Edgar Allan Poe. Much of the curriculum focuses heavily on improving writing skills, including grammar and mechanics, through the writing of formal critical analyses, narratives, poetry, and short fiction. This course prepares students with the fundamental foundation of strong writing skills and the deeper understanding of classic literature.

English I (College Prep)

Grade 9

English I is a literature based college preparatory course, covering a variety of genres of literature. Students will study the works of national and international authors including William Shakespeare and Edgar Allan Poe. Grammar and writing skills are reinforced through the literary experience. A strong emphasis is placed on reading for comprehension and vocabulary development as well. A multitude of strategies are used to stimulate the student's interest and understanding of the literature. Students are required to express and defend their opinions through projects, class discussion, and composition.

English I (Essentials)**Grade 9**

English I Essentials is a study of the many genres of literature. Students read the works of national and international authors including William Shakespeare and Edgar Allan Poe. Grammar and writing skills are reinforced through student writing. Since the student to teacher ratio is very low, students receive individualized instruction to help them improve all forms of communication skills. A strong emphasis is placed on reading for comprehension and vocabulary development. Multiple strategies are used to stimulate the student interest and understanding of the literature. Students are required to express and defend their opinions through projects, class discussion, and composition.

English II (Honors Level)**Grade 10**

English II Honors offers students the opportunity to focus on various genres of literature in the areas of the short story, poetry, novels, drama, and non-fiction. Honor students are presented with an opportunity to participate in enrichment activities, literature projects, essays, and critical thinking projects beyond those presented in the college prep classes. Grammar lessons are integrated into all areas of the English II Honors curriculum through regular writing activities. The English II Honors course provides students with a foundation in writing and a deeper understanding of literature.

English II (College Prep)**Grade 10**

English II is a course offering the combination of literature and grammar in an integrated setting. The course exposes students to a variety of short stories, poetry, dramas, and novels. Students experience activities involving reading, writing, oral, and multimedia projects. Grammar lessons are integrated into writing lessons. Students are also involved in one major research project learning about a famous person or historical event. The writing process is reviewed and encouraged throughout the school year with various assignments and cross curricula activities.

English II (Essentials)**Grade 10**

English II Essentials is a course offering the combination of literature and grammar in an integrated setting. The course exposes students to a variety of short stories, poetry, dramas, and novels. Students experience activities involving reading, writing, oral, and multimedia projects. Grammar and writing skills are reinforced through student writing. Since the student to teacher ratio is very low, students receive individualized instruction to help them improve all forms of communication skills. A strong emphasis is placed on reading for comprehension and vocabulary development. Students are also involved in one major research project about literature. The writing process is reviewed and encouraged throughout the school year with various assignments and cross curricular activities.

English III (Honors)

Grade 11

English III Honors is an in-depth study of American literature. This course actively develops various thinking skills, which improve the depth and breadth of the diverse range of written assignments. Various creative multi-learning projects solidify the correlation from the written literature to relevant language art skills. These skills are developed through guided in-class and independent literary responses, essays, poetry forms, and a formal multi-media research project and paper. Students engage in the expansion of each assignment focusing on the criteria expected in the college realm.

English III (College Prep)

Grade 11

English III is a literature based college preparatory course, chronologically designed to study the literature of American authors and their historical context. Junior English begins with Native American literature and culminates with contemporary American writers. Covered genres range from poetry, short story, and a novel. Intensive units on Edgar Allan Poe, Edgar Lee Masters, and Transcendentalist authors are special features of the English III syllabus. Various creative learning projects form connections from the written literature to accessible language art skills. Related writing experiences of essays, poetry forms, and a formal research paper along with applicable grammar skills, technology, oral expression activities, and critical thinking projects are integrated into the English III program to structure a thorough college preparatory curriculum.

AP English Literature and Composition

Grade 12

As is required by the AP designation, this course provides a college-level curriculum in a high school setting. This course description is based on curricular requirements set by the College Board. Students will embark on an intensive study of representative authors from British and American selections written in several genres, covering the sixteenth century to contemporary times. Works are selected for their need for careful, deliberate reading that yields multiple meanings. The course teaches students to write an interpretation of a piece of literature that is based on a careful observation of textual details, considering the work's structure, style, and themes; the social and historical values it reflects and embodies; and elements such as the use of figurative language, imagery, symbolism, and tone. Students will have frequent opportunity to write formal extended analyses and timed in-class responses. Writing will involve writing to understand, explain, and evaluate. Writing lessons will focus on the writing process, development of a wide-ranging vocabulary, ability to use a variety of sentence structures, logical organization and coherence skills, attention to detail and support, and effective use of rhetoric. Students will be required to take the AP exam in May.

English IV (Honors Level)

Grade 12

English IV Honors is a survey course of the literature of Great Britain. Students read a wide variety of genres including a summer novel, an in-class novel, a Shakespearean drama, an epic, and representative era poetry with a focus on the classics. The study of literature takes on greater depth at this level as students make comparative analyses of literary works. Students receive intense college preparatory practice in writing, both in the classroom setting and as independent assignments. Writing modes include timed writings, the personal narrative, persuasion, and creative writing exploration. Additionally, emphasis is placed on research and technology integration paired with ethical use practices and correct documentation.

English IV (College Prep)

Grade 12

English IV is a literature based college preparatory course designed around the literature of Great Britain and its historical context. As their summer requirement, students read a novel and study it in deeper context on their return in the fall. Throughout the year, students continue to read a wide variety of genres of British literature ranging from the epic, sonnets, a Shakespearean drama, and various poetry types. Students prepare for college level writing through skills review of usage and mechanics problems using diagnostic measures to determine areas in need of emphasis. Writing as a process is stressed as students create essays about literature, a personal narrative, a persuasive paper, and research based reports.

Creative Writing (1/2 Credit)

Grades 11 and 12

Creative writing is an elective class for juniors and seniors who enjoy writing or for those students who want to refine their writing skills as preparation for college. The class is designed as an in-class lab guiding students to utilize steps in the writing process with an emphasis on peer conferencing. Writing projects include the four basic types of writing along with various creative genres such as the vignette and both traditional and non-traditional poetry forms. Grades in this class are compiled from assignments and projects. Semester and final exams are a portfolio of the student's work.

Publications I

Grades 11 and 12

Publications I, an elective class for juniors and seniors, provides an excellent opportunity for students interested in mixing technology with business acumen. Students will be responsible for selling advertisements for the school's yearbook, preparing budgets, designing advertisements, interviewing students, and taking photographs. Students will use computer programs including Microsoft Word, Excel, Corel Photo Paint, Last Name First, and Adobe Pagemaker. They will also learn the basic terminology involved with publishing, plus they will learn the basics of layout design.

Prerequisite: students must have a driver's license in order to leave campus. In special circumstances, the yearbook advisor can override that prerequisite.

Publications II

Grades 11 and 12

Publications II, an elective class for seniors, provides an opportunity for students having taken Publications I to enrich their knowledge of the fundamentals of yearbook. Students will be responsible for selling advertisements for the school's yearbook, preparing budgets, designing advertisements, interviewing students, and taking photographs.

Students will continue to use the computer programs mentioned under Publications I, but they will design intermediate and advanced layouts, using more complicated graphic elements. They will also fill senior positions on the yearbook staff, requiring them to mentor Publications I students and monitor their progress.

Journalism

11th and 12th Grade

This course is proposed for juniors and seniors who are interested in collecting information, writing about it, editing content, and publishing this work in a school newspaper. The primary objective of the course is that students write in multiple non-fiction genres. A secondary objective is that students understand publication strategies for written work. A final objective of the course is that students publish two issues of a school-based newspaper.

Speech I (All Levels)

9-12

Speech I is a half credit elective open to grades 9-12. The course focuses on communication skills for public speaking and for interpersonal relationships. Students will deliver multiple types of speeches to large and small groups. The course will also address organizational techniques, listening skills, resume writing, interview strategies, group dynamics, and the fundamental of debate and parliamentary procedure. Grades will be accrued from performance assessment, writing, participation, and cooperative learning.

Media Literacy

11th and 12th Grade

Print media, broadcast media, advertising and public relations and their role in American society. The course looks at the role the media plays in establishing cultural and social attitudes and values. The course will also address legal and ethical issues of the media such as libel, invasion of privacy, and obscenity.

(Teacher approval required)

FOREIGN LANGUAGE

Spanish I

Grades 10, 11, and 12

Spanish I introduces students to the Hispanic world of the past and present. A cultural introduction includes learning all of the countries and capitals of the Spanish-speaking world. Emphasis is placed on learning correct pronunciation and listening skills. Students are also expected to read and write in Spanish using the vocabulary and grammar concepts learned during the year.

Spanish II

Grades 11 and 12

Spanish II further develops the skills introduced in Spanish I. Students will learn additional verb tenses and expand their Spanish vocabulary. Students will continue to learn about the culture of the Hispanic world, both present and past. Students are expected to write and converse in Spanish. It is recommended that the student has at least a C average in Spanish I.

Prerequisite: Spanish I

Spanish III (Honors Level)

Grade 12

Spanish III honors provides more practice in all verb tenses and moods. Students will learn idioms to enrich their Spanish vocabulary. Primary emphasis will be placed upon conversational skills in real-life situations. Students will also be introduced to popular works of Spanish literature.

Prerequisite: Spanish II with at least a B average.

French I

Grades 10 and 11

French I includes all the basic skills of learning a language: listening, speaking, reading, and writing. Vocabulary and grammar are taught in the context of real life situations. Culture is integrated throughout the course as a means to gain insight and appreciation of the francophone countries.

French II

Grades 11 and 12

French II increases the usage of the same skills taught in French I. More emphasis is placed on reading comprehension and writing paragraphs. Students are also encouraged to use the vocabulary in real life conversations and oral presentations. Culture continues to be an integrated part of this course. It is recommended that the student have at least a C average in French I.

Prerequisite: French I

French III (Honors Level)

Grade 12

This course is an in depth study of grammar, vocabulary, and composition. Most of the class is taught in the target language, and the students are also expected to speak in the target language. Some French literature is introduced at this level.

Prerequisite: French II with at least a B average.

Latin I (LVS)

Grades 10, 11, 12

This course is an introduction to the study of the Latin language and ancient Roman culture. In this course students will learn the elements of grammar typically covered in first year Latin including case usage and the present, imperfect and perfect tenses. Students will also use a variety of resources to learn about certain aspects of Ancient Rome. All students in this course will be required to take the National Latin Exam in March. This course would be appropriate for any hard-working, self-motivated student with strong grammar skills.

Latin II (LVS)

Grades 11, 12

Latin II is a continuation of the study of the Latin language. By the end of this course, students should be able to read simple passages by ancient authors. Grammar topics in this course include the future, pluperfect and perfect tenses, comparative and superlative forms of adjectives and adverbs, demonstrative, relative and interrogative pronouns, participles, indirect statements, the passive voice, deponent verbs and an introduction to the subjunctive mood. In addition to grammatical topics, students will study various aspects of ancient Roman history, religion and daily life. All students in this course will be required to take the National Latin Exam in March.

Prerequisite: Latin I

MATHEMATICS DEPARTMENT

Algebra I (Advanced Honors and Honors)

Grades 8 and 9

This honors level mathematics class is a rigorous, fast paced study of Algebra I, designed for students to complete the text in one year. General topics covered will include axioms of algebra, real numbers and real numbers operations, solving equations, polynomials, factoring, fractions, functions and graphs, systems of linear equations, inequalities, rational and irrational numbers, quadratic functions, and the quadratic formula. Students in the class will study theory and applications in detail, especially “word problems,” and will cover such specialized topics as probability, statistics, and set theory. A research project is required. Nightly homework will be assigned, and some technology applications will be included.

Algebra I (College Prep)

Grade 9

This course is designed to be a standards-based course covering high school Algebra I including theory, skills, and problem solving. General topics covered will include real numbers and calculations with them, linear equations, linear functions, and linear inequalities, as well as systems of linear equations. Exponential functions, quadratic functions are also studied. Special attention is paid to rational numbers, rational equations, and radicals. The course places emphasis on problem solving and modeling, with some use of technology to approach various topics. There is, however, a strong emphasis on traditional algebra skills and techniques rather than on calculators. Nightly homework will be assigned, and some technology applications will be included.

Algebra I (Essentials)

Grade 9

The essentials course in Algebra I is designed to aid those students who have experienced serious difficulty with mathematics, as evidenced by poor computational skills, weak conceptual understanding, low standardized tests scores, and/or extremely low grades in a regular classroom. The class is designed to present the Algebra I material at a slower pace, with abundant practice, and less emphasis on “theory.” General topics covered will include real numbers and calculations with them, linear equations, linear functions, and linear inequalities, as well as systems of linear equations. Exponential functions and quadratic functions are also studied. Special attention is paid to polynomials, rational numbers, rational equations, and radicals. Nightly homework will be assigned, and some technology applications will be included.

Geometry (Advanced Honors and Honors)

Grades 9 and 10

This honors level mathematics class is a rigorous study of traditional Geometry and is designed for students to complete the text in one year. General topics covered will include postulates, deductive reasoning, linear/planar properties, congruent triangles, polygons, geometric inequalities, similarity, right triangles/trigonometry, circles, loci, area, volume, coordinate geometry, and transformations. Students in the class will study theory and applications in great detail, with two column deductive proof emphasized. The course also devotes extensive time to discussion of non-Euclidean geometry and a reading and discussion of Edward Abbott's Classic Science Fiction novelette *Flatland*. A research project is required. Nightly homework will be assigned, and some technology applications will be included.

Geometry (College Prep)

Grade 10

Regular level Geometry is intended to be a challenging, thorough, and multi-faceted course in various aspects of Geometry. The course covers the traditional concepts of Euclidean Geometry, including proofs, analysis of figures, and applications. Individual topics covered include reasoning, proof, parallel and perpendicular lines, congruent triangles, polygons, transformations, similarity, right triangles/trigonometry, circles, area, and volume. There is emphasis throughout the text on proof, algebraic applications of the concepts learned, and problem solving. Nightly homework will be assigned, and students will experience some technology applications.

Geometry (Essentials)

Grade 10

Geometry Essentials is intended for students who are not achieving at expected grade level in mathematics as evidenced by low grades in regular mathematics classes, low standardized scores, and/or low understanding of mathematical concepts and skills (especially arithmetic and algebraic computation skills). The course covers the traditional concepts of Euclidean Geometry, including some proofs, analysis of figures, and applications, but is done at a slower pace with much repetition and reinforcement. A major difference of this class and REGULAR class is the idea of “showing” something true rather than formally “proving” it true. Several concepts and skills covered in the regular course are omitted in the class. Each chapter in the text has an “Algebra Review” section, all of which will be covered in this class. Nightly homework will be assigned, and some technology applications will be included.

Algebra II (Advanced Honors and Honors)

Grades 10 and 11

This course is designed as an intensive, rigorous and quickly paced study of Algebra II with emphasis on applications (word problems). It will include some topics normally associated with Advanced Mathematics, which will be beneficial in that course, college entrance examinations, and Calculus. The class begins with a very fast paced review of materials from Algebra I emphasizing theory, word problems, and graphing techniques. This is followed by study of irrational and complex numbers, quadratic functions, variation, polynomial theory, analytic geometry, and finally exponential and logarithmic functions. The course ends with a study of sequences and series, matrices, determinants, and topics from probability and statistics. A research project is required. Nightly homework will be assigned, and some technology applications, especially use of the graphing calculator, will be covered (TI-83/TI-84 recommended).

Algebra II (College Prep)

Grade 11

Catholic High is a college-prep school, and this course is designed for students intending to begin university studies immediately upon graduation. It opens with a review of basic concepts from Algebra I but covers them in a more advanced style with added detail, rigor, and complexity. Included among these topics are polynomials, inequalities, linear equations, functions, factoring, rational expressions, and various types of word problems. In the second phase of the course, new materials are presented which include irrational and complex numbers, alternate methods of solving equations (completing the square, the quadratic formula), variations, analytic geometry, and logarithmic/exponential functions. If time permits, the year ends with the study of sequences and series, matrices, determinants, probability, and statistics. Nightly homework will be assigned, and students will experience some technology applications. A graphing calculator will be needed in the second part of the class (TI-83/TI-84 recommended).

Algebra III (College Algebra)

Grade 12

This course is designed for students on the basic level with technical emphasis and is designed to serve the students and prepare them as well as possible for the future. Included in the topics are reading and using table and graphs, using the graphing calculator, linear equations, functions, operations with numbers, fractions and signed numbers, operations with variables, rational expressions and irrationals, solving equations and inequalities; exponential and logarithmic functions, sample spaces and events, simple probabilities and probability of independent and dependent events, histograms, stem-leaf/box-whisker plots, statistical averages, basic geometry review of figures, lines, angles and triangles; basic geometry review of area, circles, dimensions, volume; basic review of ration proportion, percent, variation similarity, introduction to trigonometry, ACT review.

Calculus (Advanced Placement)

Grade 12

Calculus at Catholic High is **highly** recommended for ANY student planning to enter an engineering, computer, or science field in his or her college studies. It is the standard senior level mathematics class for students in the accelerated math program, but it may also be taken simultaneous with Advanced Math as an elective for honors students not in the accelerated program. CHS Calculus is an AP class and closely follows the national AP syllabus. Students are **eligible** to take the AP exam in May for college credit. Topics include limits, differentiation, and integration of polynomial, rational, trigonometric, and transcendental functions. There will be extensive use of the graphing calculator throughout the course (TI-83/TI-84 recommended). A research project is required. (Approval of department chairperson or instructor required.)

Advanced Math (Advanced Honors and Honors)

Grade 12

Advanced Math Honors is for students who have completed honors courses at previous levels and who have a commitment to learning and achieving in mathematics at a high level. This course is designed in three parts. First, it provides a college level course in trigonometry with extensive applications included. Second, it gives a thorough study of probability and statistics. Third, it provides an intensive review of advanced topics from Algebra II including conic sections, logarithms, advanced algebra, sequence and series, matrices, and determinants. . A research project is required. Nightly homework will be assigned, and technology applications, especially the use of the graphing calculator, will be extensive (TI-83/TI-84 recommended).

Advanced Math (College Prep)

Grade 12

This course is designed for students who have completed Algebra I, Algebra II, and Geometry. It is highly recommended for all students planning to undertake university studies. It is designed as a thorough and intensive course in pre-calculus mathematics and is intended for those who in all likelihood will take either College Algebra, "Survey of Calculus," "Business Calculus," or a similar course. As such, emphasis is on improving and/or perfecting algebraic skills and knowledge rather than on an intensive trigonometry course. Topics covered include real and complex numbers, equations and inequalities, functions and their graphs, sequences and series, exponents and logarithms, matrices, trigonometry, statistics, and, if time permits, conic sections. Nightly homework will be assigned, and students will experience some technology applications. A graphing calculator will be needed in the class (TI-83/TI-84 recommended).

Business Math

Grade 12

Business Math is a one-year course offered as an elective in the senior year and is NOT a college prep class. Any student planning to begin college or university studies should take Advanced Math or other such course if possible. Business Math includes a comprehensive review of arithmetic fundamentals. Topics covered include money, pay, commission, Budgeting, borrowing/saving, investing, taxes, insurance, business finance, business statistics, and graph. Students are allowed to use their calculators throughout the course, except on exercises designed to test/review/improve calculation skills. There are a large number of application problems. The class is designed as a math course, but the instructor will take time to "explain" the financial and business concepts in the text.

PHYSICAL EDUCATION DEPARTMENT

Health and Physical Education I

Grade 9

Fall & Spring

This course is required for all ninth grade students. It covers the state requirements, which include volleyball, basketball, softball, and flag football along with a variety of other activities. The students will also learn about current health topics from the textbook.

Health and Physical Education II

Grade 10

Fall & Spring

This course is required for all tenth grade students. It covers the state minimum requirements, which include archery, basketball, volleyball, tennis and physical fitness along with a variety of other activities. The students will also learn about current health topics from the textbook.

Fall Athletic PE I

9th – 12th Grades

Fall (Football, Basketball & Volleyball)

Fall athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation. The students will also learn about current health topics from the textbook.

Fall Athletic PE II

10th – 12th Grades

Fall (Football, Basketball & Volleyball)

Fall athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation. The students will also learn about current health topics from the textbook.

Fall Athletic PE III

11th – 12th Grades

Fall (Football, Basketball & Volleyball)

Fall athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation.

Fall Athletic PE IV

12th Grade

Fall (Football, Basketball & Volleyball)

Fall athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation.

Spring Athletic PE I
9th – 12th Grades

Spring (Baseball & Softball)

Spring athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation. The students will also learn about current health topics from the textbook.

Spring Athletic PE II
10th – 12th Grades

Spring (Baseball & Softball)

Spring athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation. The students will also learn about current health topics from the textbook.

Spring Athletic PE III
11th – 12th Grades

Spring (Baseball & Softball)

Spring athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation.

Spring Athletic PE IV
12th Grade

Spring (Baseball & Softball)

Spring athletic PE is a half semester course offered to team members and managers in grades 9-12. The class focuses on strength and conditioning, skills and techniques, game study, and game preparation.

RELIGION DEPARTMENT

Religion I

Grade 9

In ninth grade religion, the text *Jesus of History, Christ of Faith* reveals the origin of the Gospels, history, politics, and methods used by Jesus to teach his people. Students obtain an understanding of how the Gospels were written, the origin/meaning of Passover, and the history of the Ten Commandments. *Celebrating Sacraments* clarifies the meaning, symbolism, and value of the sacraments for the students. This book gives the students an in-depth look at each individual sacrament. Projects include a retreat, class Mass and a LaSallian Service Project.

Religion II

Grade 10

The sophomore religion class is divided into three sections using three separate texts. *Your Life in Christ* Ave Maria Press studies morality, covering moral decisions, freedom, conscience formation, the Beatitudes and the Ten Commandments. In the second semester, students will study Salvation History using *The Hebrew Scriptures* St. Mary Press covering creation to the Messiah. Students will study Catholic social teaching in *Living Justice and Peace* St. Mary Press, centering on the Corporal and Spiritual Works of Mercy. Additional activities include Mass, retreat, Sacrament of Reconciliation and videos *Maximillian Kolbe*, and *Sex, Love, and Relationships*.

Religion III

Grade 11

This course teaches history of the Catholic Church. It focuses on major eras in Catholic Church history and outstanding events and individuals in each era. The textbook used is *The Catholic Church: Journey, Wisdom and Mission* by Koch. Students also study the origins, development, theories, practices, and beliefs of the major world religions as they come to appreciate diversity and the uniqueness of their own faith. The textbook used is *Religions of the World* by Wilkins. Community work with the needy and spiritual growth are part of the course.

Religion IV

Grade 12

Religion IV is a study of apologetics, common objections to the Catholic faith and the proper Catholic response to each. Through the text entitled *Being Catholic*, seniors review Church teachings on the Creed, the sacraments, and morality. The single, married, and ordained states of life are studied. Classmates work together to plan retreats and school-wide prayer services, as well as to prepare the spiritual environment of the school for each liturgical season. In addition, seniors participate in a senior pilgrimage to New Orleans to visit shrines and experience the rich heritage of the Catholic faith.

SCIENCE DEPARTMENT

Physical Science (Honors Level)

Grade 9

Honors Physical Science covers essentially the same content as Physical Science. However, it differs in four main areas – approaches, assessment, enrichment, and pace. Also there are more required assignments (such as Science/Social Studies Fair Project, scientific investigations, and outside readings). Classroom lecture, demonstrations, and laboratory experiences will be used.

Physical Science (College Prep)

Grade 9

Physical Science is designed to continue instruction in the area of physical science begun in elementary grades four through six. It seeks to prepare students for later courses in chemistry and physics as they continue their secondary education. Selected topics include those from the areas of chemistry and physics. An understanding of the metric system and basic math skills is expected. Topics covered will include the study of matter, its structure and changes, the Periodic Table, chemical formulas, equations, organic chemistry, motion, energy, and waves. Basic chemical and physical laboratory procedures and techniques will be introduced.

Astronomy (LVS)

Grades 10, 11, and 12

Astronomy online is an introductory course in physical astronomy. Students use the principles of physics and mathematics to investigate planetary systems, stars and stellar evolution, galaxies and cosmology. Students engage in online research and investigations that includes the development of modern astronomy from a historical perspective, a complete survey of the tools used in astronomy research, and current events related to astronomy. The course work will include textbook assignments, Internet activities, online laboratory simulations and webquest projects and night sky fieldwork.

Biology I (Honors Level)

Grade 10

Honors Biology I covers the same content as Biology I; however, it differs in four main areas- approaches, assessment, enrichment, and pace. Also, there are more required assignments, such as a Science/Social Studies Fair Project, scientific investigations, and outside readings. Classroom lecture, demonstrations, and laboratory experiences will be used.

Prerequisite: Physical Science

Biology I (College Prep)

Grade 10

Biology I is designed to continue instruction in the area of Biology begun in Life Science (7th grade). It seeks to prepare students for later biology courses, such as Biology II or freshman level Biology college courses, as they continue their secondary education. This course is divided into ten units-biological themes, cells, genetics, evolution, microorganisms, plants, invertebrates, vertebrates, ecology, and the human body. The unit on the human body is treated somewhat lightly because it is covered quite extensively in Biology II. Classroom lectures, demonstrations, and laboratory experiments are a major part of this course.

Prerequisite: Physical Science

Biology (Advanced Placement)

Biology AP follows the currently recommended outline published by the College Board. It is a college-level course taken at the high school setting. This AP course will encompass the following in detail: biochemical and cellular basis of life, cell organization, energy transformation, nutrient procurement, transport and processing, genetics, evolution, ecology, animal behavior, and botany. Dissections may be performed, but are not a major component of this course. Biology II AP is designed for the student who plans to major in biology, chemistry, medicine, veterinary medicine, dentistry, nursing or other health career. Laboratory experiments will be a large portion of the class, and additional laboratory time may be required. Students are greatly encouraged to take the College Board's Advanced Placement Exam in Biology at the end of the year.

Prerequisite: Biology I and Chemistry (with a B or better)
(Juniors enrolled in Chemistry with teacher recommendation)

Chemistry (Honors Level)

Grade 11

Honors Chemistry covers the same content as Chemistry; however, it differs in four main areas-approaches, assessment, enrichment, and pace. Also, there are more required assignments, such as a Science/Social Studies Fair Project, scientific investigations, and outside readings. Classroom lecture, demonstrations, individual and group research, and laboratory experiences will be used. This course will include research projects and presentations. This course is recommended for students who plan to attend college.

Prerequisite: Biology I

Chemistry

Grade 11

Chemistry is designed to provide a general introductory chemistry course to high school students who are not in the honors program at CHS. Classical and contemporary topics in entry-level chemistry are covered with emphasis on understanding the concepts and being able to perform computations involving mathematics not exceeding skills developed up to and including Algebra II. This will be accomplished using textbooks, demonstrations, and hands-on experiences. Major topics covered are the classification of matter, properly measuring parameters associated with chemistry, atomic structure and periodicity as reflected in the periodic table, chemical bonding and bond types, chemical formulas and compounds, chemical equations and reactions, elementary stoichiometry, behavior of gases and the classical gas laws, solutions and suspensions, acids and bases, titration and pH, chemical reaction kinetics and chemical equilibrium, oxidation-reduction reactions, and an introduction to the nomenclature of organic compounds. This course is recommended for students who plan to attend college.

Prerequisite: Biology I

Physics (Honors Level)

Grade 12

Honors Physics covers the same content as Physics; however, it differs in four main areas—approaches, assessment, enrichment, and pace. Also, there are more required assignments, such as a Science/Social Studies Fair Project, scientific investigations, and outside readings. In addition, more mathematical applications are stressed. Classroom lecture, demonstrations, individual and group research, and laboratory experiences will be used. This course will include research projects and presentations. This course is recommended for students who plan to attend college.

Prerequisite: Biology I

Physics

Grade 12

Physics is designed to continue instruction in physics begun in Physical Science. Five basic categories of secondary physics are covered in this course—mechanics, states of matter, waves of light, electricity, and modern physics. In addition to the textbook, the concepts will be reinforced via laboratory activities, demonstrations, and hands-on activities. This course will include research projects and presentations. This course is recommended for students who plan to attend college.

Prerequisite: Biology I

Environmental Science

Grades 11 and 12

Environmental Science is an elective course that is designed to arouse the level of awareness of the students about the necessity to be stewards of the earth so that we may continue to live ever-improving lives. Topics covered in this course include ecology, communities and populations, resource management, agro ecology, pollution, and energy. Included in each topic will be a consideration of environmental ethics, politics, and economics. This course will include research projects and presentations.

Prerequisite: Biology I

Earth Science

Grades 11 and 12

Earth Science is an elective course designed to continue instruction begun in eighth grade science. Earth Science is the study of the earth, its structure, composition, environment, and place in the universe. Units of study include structure of a dynamic earth, forces that attack the surface, forces that raise the surface, the ocean, earth and the universe, atmospheric science, and earth's history. Prerequisite: Biology I

SOCIAL STUDIES DEPARTMENT

World Geography (Honors)

Grade 9

The course is designed to include more in depth coverage of the traditional themes of geography as well as physical, cultural, political, and economic features of counties and regions around the world. Students are expected to complete one research project each quarter.

World Geography (College Prep)

Grade 9

Geography is the study of the earth and ways people live and work on it. The geography course presents a perspective of the general features of world geography including physical and cultural factors. The course is taught using a regional as well as a topical approach. It begins with a study of the five basic themes of geography and proceeds with an application of these themes in the studied locations.

Civics (Honors)

Grade 10

The course is a comprehensive study of the workings of the government of the United States and of state and local government. It begins with the basic principles of the U.S. government and an overview of the Constitution. The legislative, executive, and judicial branches are covered as well as public policy, economic policy, and the political process. Current events are emphasized, and students are required to complete a research project each quarter.

Civics (College Prep)

Grade 10

Civics is designed to help students better understand the workings of the government of the United States and of the states. Beginning with the basic principles and foundations on which our government is built and an overview of the Constitution, it then examines the structure of the legislative, executive, and the judicial branches. Also introduced are the political process and public policies. Throughout the course, special emphasis is placed on the rights and responsibilities of citizenship.

American History (AP)

Grade 11

American History (AP) is an in depth, college-level survey of the history of the United States from colonial times to present-day. Historical research and working with primary sources are emphasized. At the end of the course, students will be required to take the AP Test in order to earn credit for a college history course. The test is multiple choice and essay writing based on analysis of historical documents. A college-level textbook will be used, and students may be asked to purchase additional study books/guides to prepare for the class and the AP Test.

American History (College Prep)

Grade 11

The course provides students with a comprehensive overview of the history of the United States. Following a brief review of events from the pre-colonial era through Reconstruction, the course focuses on post-Reconstruction and the twentieth century. Special emphasis is given to late twentieth century events. Throughout the course, social and political history are blended with the major goals of promoting respect for the nation's rich cultural diversity and strengthening students' critical thinking skills, study skills, and map skills.

Current Issues in America (1/2 Credit)

Grade 12

This one semester elective course is for seniors who are interested in conducting research and participating in discussion/debate on a wide variety of domestic and global social/political/economic issues including family, technology, violence, deficit/debt, privacy, drug abuse, immigration, civil liberties, poverty, terrorism, aging, crime/juvenile justice/gun control/death penalty.

World History (AP)

Grade 12

The course is for seniors who would like the challenge of a rigorous college level survey course. The curriculum covers prehistory through modern times and includes extensive reading and writing on related historical topics. Students are prepared for and are expected to take the AP exam upon completion of the class.

World History (College Prep)

Grade 12

The course is offered for seniors who need a fourth social studies credit. It provides students with an in depth approach to the development of modern civilization from the Renaissance through the twentieth century. Emphasis is on western civilization beginning with Renaissance Europe through the Reformation, the Enlightenment, the age of revolutions, the rise of modern states, the world wars, the cold war, and the collapse of Communism. One research project per quarter is required.

American History (Honors) and World History (Honors) will no longer be offered. They are being replaced by AP courses.

Psychology (1/2 Credit)**Grades 11 and 12**

Psychology is an elective course for juniors and seniors that introduce students to the information they need to learn about psychology, themselves, and others. Students will become aware of how psychology applies to their lives. Emphasis is given to both the healthy personality and the abnormal or dysfunctional personality. Topics to be covered include motivation and emotion, learning and memory, intelligence and creativity, altered states of consciousness, the stages of human development, personality theory, stress and conflict, adjustment to a healthy personality, psychological disorders, and treatment and therapy.

European History (Advanced Placement)**Grade 12**

European History (AP) is an in depth, college-level survey of the history of Europe from the later Middle Ages (14th century) to present-day. Historical research and working with primary sources are emphasized. At the end of the course, students will be required to take the AP test in order to earn credit for a college history course. The test is multiple choice and essay writing based on analysis of historical documents. A College-level textbook will be used, and student may be asked to purchase additional study books/guides to prepare for the class and the AP test.