

ST. MARIA GORETTI HIGH SCHOOL COURSE DESCRIPTIONS 2012-2013

PHILOSOPHY OF ST. MARIA GORETTI HIGH SCHOOL

St. Maria Goretti High School is a Catholic, secondary, co-educational, college preparatory institution committed to the development of the whole person in a uniquely small and diverse environment that enables us to focus on the spiritual, intellectual, moral, emotional, creative, and physical needs of our students in the 21st Century. The primary mission is the development of the soul, mind and body of its students, staff and parent groups.

Being a college preparatory Catholic school, St. Maria Goretti High School emphasizes Christian moral development and academic excellence. In recognizing the unique giftedness of each student, the Goretti community provides an environment where students and teachers are challenged to reach their potential. Through the integration of worship, academics, extracurricular activities and community service, students are prepared to assume the positions of responsibility within their communities.

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ACADEMIC PROGRAM

Requirements

All students in order to graduate must pass all required courses and fulfill all academic requirements. The academic requirements are consistent with the State of Maryland's requirements for graduation.

Requirements are as follows:

English <i>Required courses</i>	4 credits Composition World Literature American Literature British Literature or AP American Literature & Composition
Math <i>Required courses</i>	4 credits Algebra I Geometry Algebra II
Science <i>Required courses</i>	3 credits Biology Chemistry
Social Studies <i>Required courses</i>	3 credits U.S. History Modern World History or AP European History
Religious Studies <i>Yearly retreats are required</i>	4 credits
Foreign Language	3 credits
Physical Education/Health <i>Required courses</i>	1 credits Freshman PE/Health
Fine Arts	1 credit
Electives	4 credits
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Total	27 credits

All students are required to complete 100 hours (25 hours per year) in the Community Service Program in order to graduate.

NOTE: Admittance to Honors and AP courses is subject to departmental approval and successful completion of the prior course in the academic sequence

RELIGIOUS STUDIES

Requirements – Four years of Religious Studies are a requirement for all students. (Credits are adjusted for transfer students.) In addition, the Service Learning requirement (a minimum of 25 service hours per academic year) is a pass/fail component of the Religion grade. (Refer to the Student/Parent Handbook for specific details of the Service Learning program.)

The Religious Studies curriculum follows the doctrinal framework established by the United States Conference of Catholic Bishops (as outlined in the *Doctrinal Elements of a Curriculum Framework for the Development of Catechetical Materials for Young People of High School Age*). The content and order of this framework offers a systematic approach to catechesis, and ensures that our students will receive a comprehensive and authentic presentation of the Catholic faith to engage their minds, hearts, and spirits.

**001 – Religion: Scripture (fall semester) CP
.5 Credit Year: 9 Required**

The purpose of this course is to give students a general knowledge and appreciation of the Christian Sacred Scriptures. Through their study of the Bible, they will come to encounter the living Word of God, Jesus Christ. In the course, they will learn about the Bible, authored by God through Inspiration, and its value to people throughout the world. If they have not been taught this earlier, they will learn how to read the Bible and will become familiar with the major sections of the Bible and the books included in each section. The students will pay particular attention to the Gospels, where they may grow to know and love Jesus Christ more personally.

**002 – Religion: Christology (spring semester) CP
.5 Credit Year: 9 Required**

The purpose of this course is to introduce students to the work and person of Jesus Christ, the living Word of God and the second person of the Trinity. In this course, students will understand that Jesus Christ is the ultimate Revelation to us from God. In learning about who He is, the students will also learn who He calls them to be.

**003 – Religion: Soteriology (fall semester) CP
.5 Credit Year: 10 Required**

The purpose of this course is to help students understand all that God has done for us through His Son, Jesus Christ. Through this course of study, students will learn that—for all eternity—God has planned for us to share eternal happiness with Him, which is accomplished through the redemption Christ won for us. Students will learn that they share in this redemption only in and through Jesus Christ. They will also be introduced to what it means to be a disciple of Christ and what life as a disciple entails.

**004 – Religion: Ecclesiology (spring semester) CP
.5 Credit Year: 10 Required**

The purpose of this course is to help the students understand that, in and through the Church, they encounter the living Jesus Christ. They will be introduced to the fact that the Church was founded by Christ through the Apostles and is sustained by Him through the Holy Spirit. The students will come to know that the Church is the living Body of Christ today. This Body has both divine and human elements. In this course, students will learn about the sacred nature of the Church within the context of events in the life of the Church.

**005 – Religion: Sacramentology (fall semester) CP
.5 Credit Year: 11 Required**

The purpose of this course is to help students understand that they can encounter Christ today in a full and real way in and through the sacraments, and especially through the Eucharist. Students will examine each

expected to write well-developed paragraphs and essays. A research paper of at least five pages will be required, focusing on the skills presented as part of the *MLA* research format. Vocabulary, grammar, and public speaking are incorporated into the class studies as well as various means of responding to literature. A final objective of this course is to challenge students to develop their writing skills while utilizing modern technology.

123 - World Literature

1 credit

Year: 10

CP

Required

This course will introduce a variety of literary works with emphasis on ideas, values, and literary techniques that illustrate the life, times, and culture of various countries. Students will learn how to approach literature independently as they read, write, and discuss in their exploration of universal themes. What similar values and challenges do other people explore in their literature? The course will integrate literary analysis, grammar, vocabulary, and composition, including a five+ page research paper.

144 - World Literature

1 credit

Year: 10

Honors

Elective

This course explores literature from various cultures other than our own. Universal themes, similarities and differences between our cultures, and the challenges we face in common are discovered through the study of literature of other times and places. Students will learn to approach literature independently using literary analysis and criticism in discussions, research, and communication documents. Grammar and vocabulary are essential parts of the course. Honors level students will complete most reading outside of the classroom. The use of database resources and independent reading will build skills for advanced study and researched writing.

122 - American Literature

1 credit

Year: 11, 12

CP

Required

This junior-level course will introduce American literature and its chronological development. The writings of significant American authors and genres are examined from both cultural and historical perspectives. Students will employ critical thinking, writing, and speaking skills in their analysis of literature. Further development in literary analysis and vocabulary are emphasized, and writing assignments will be utilized as a means of analyzing literary styles of selected works. Students will refine research skills, culminating in a research paper of at least ten pages. In preparation for the SATs, students will practice writing to prompts, develop strategies for critical reading, and utilize proper grammar and sentence structure within their work.

121 - American Literature

1 credit

Year: 11, 12

Honors

Elective

The focus of literature course is to study the development of American literature from oral tradition through the modern era as well as instructional strategies and tips for SATs and other standardized testing. To prepare for SATs, students will practice writing to prompts, develop strategies for critical reading, and utilize proper grammar and sentence structure within their work. In literature the emphasis will center on the historical and cultural influences on genres and authors through a chronological perspective. Students will employ critical thinking, writing, and speaking skills in their analysis of literary works. Further development of skills and strategies, vocabulary, and critical essays analyzing literary works of selected periods are integral parts of the class work. Students will refine research skills by completing a research paper of 12+ pages.

132 - British Literature

1 credit

Year: 12

CP

Required

This course serves as an overview of British literature from historical and literary perspectives. Special attention is given to the Arthurian legend, Shakespearean works, and selected writings of important authors from other literary periods. Research projects of at least ten pages and further development of vocabulary and essay writing are incorporated.

131 - British Literature

1 credit

Year: 12

Honors

Elective

This course emphasizes the great literary works of British writers from a historical perspective. The works of Chaucer, Donne, the metaphysical poets, Romantic writers, and Victorian authors will be stressed. Other works of the Elizabethan age, including Shakespearean plays and sonnets, will be presented in the curriculum. Research projects and vocabulary are incorporated into this course.

148 - AP English Language and Composition**.5 credit-year long Year: 11, 12****AP****Elective**

***NOTE:** This course will be taken in addition to an American literature course on the 11th grade level and either a British Literature or AP English Literature course on the 12th grade level.

The overarching objective of this course is to enable students to write effectively and confidently in their college courses across the curriculum and in their professional and personal lives. The course will emphasize expository, analytical, and argumentative writing in preparation for academic and professional communication, as well as personal and reflective writing which fosters facility in any context. Since the expository, analytical, and argumentative writing required in college is based on reading, students will be taught to critically read primary and secondary sources, to synthesize the material into their own writing, and to cite sources using conventions recommended by professional organizations such as the Modern Language Association (MLA).

150 - AP English Literature & Composition**1 Credit Year:12****AP****Elective**

This senior level course is designed for students who illustrate the ability and interest to master an advanced course in writing, literary analysis and critique, and higher level thinking skills. Because the course's focus will involve in depth discussion and written analysis of literary works from a variety of classical and modern selections recommended by the Advanced Placement Curriculum guidelines, students will be expected to complete reading outside of the classroom and to write essays that analyze the author's works. It may be taken in lieu of the senior level British Literature course for completion of academic requirements for graduation.

146 - Creative Writing**.5 credit Year: 11, 12****CP****Elective**

This course is designed to provide skill development and an outlet for potential and blossoming writers. The students will develop writing style, polish final drafts, and create a writing portfolio. The course will include presentations by writing professionals, a study of various masters, and daily writing exercises/activities. The workshop format will emphasize quality and creativity. Writers will be expected to meet deadlines, write every day, and support other writers with feedback and constructive criticism. A portfolio of works in progress and completed pieces will be an important part of the course evaluation. **Students must submit a writing sample for evaluation prior to admittance to the course.**

153 – Shakespeare I**.5 credit Year: 11, 12****Honors****Elective**

This course will present an in-depth examination of several plays, including some of Shakespeare's most famous histories, tragedies, and comedies. A focus will center on women's roles in Elizabethan society. Students will employ critical thinking, writing, and speaking skills in their analysis of literature. Emphasis is placed on character development, theme, plot development, and dramatic devices. Critical essays by Shakespearean scholars are central to the course perspective. Essay writing and analysis of dramatic techniques will serve as student evaluation and assessment.

154 - Shakespeare II**.5 credit Year: 11, 12****Honors****Elective**

Continuing the exploration of Shakespeare's skills as a dramatist, students will analyze the Bard's flair for comedy and his development of Aristotle's definition of tragedy. The students will analyze the universality of Shakespeare's major themes through exposure to modern interpretations of these works utilizing such media videos and live performances. Critical analysis through essay writing will illustrate students' mastery and development of critical thinking skills.

160 - Public Speaking**.5 credit Year: 11, 12****CP****Elective**

This course will focus on oral communication as a skill needed in the 21st century. Students will learn techniques, including breathing, body language, posture, stance, appearance, and audience consideration. Oral presentation in front of the class will be in various formats: informative, interpretative, persuasive, and others.

SOCIAL STUDIES

Requirements – All students are required to take and receive a passing grade in U.S. History and World History. Students in grades 10-12 may take AP US History or AP European History to fulfill these course requirements if not previously met. Beginning in 2012-13, all freshmen will take either the U.S. History Honors or CP course.

222 – U.S. History

1 Credit

Year: 9

CP

Required

This course focuses on the development of American government, economy, and society and the role the U.S. has played in world affairs from colonial times to the present. Current events enable the students to be informed about the contemporary scene.

221 – U.S. History

1 Credit

Year: 9

H

Elective

Designed for the serious history student, the course covers United States history, taking an in-depth look at the events from colonial times to the present. Students will be required to use primary sources, write research papers and participate in seminar-type discussions.

212 – Modern World History

1 Credit

Year: 10

CP

Required

This course focuses on the cultural and political history of the nations of the world beginning with the Industrial Revolution. Media and computer programs supplement the course text. Research and writing skills are taught during the course.

288 - AP European History

1 Credit

Year: 10, 11, 12

AP

Elective

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. Without this knowledge, we would lack the context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop an understanding of some of the principal themes in modern European history, an ability to analyze historical evidence and historical interpretation, and an ability to express historical understanding in writing.

207 – AP U. S. History

1 Credit

Year: 10, 11, 12

AP

Elective

This advanced placement course is designed for the highly capable and motivated student. By structure and content, this course is comparable to college-level United States history classes. The course covers United States history from exploration, discovery and settlement to present day. Students will explore the political, social, diplomatic, economic and cultural history of the United States.

The course is designed to increase students' knowledge and understanding of issues, controversies and complexity of United States history as well as prepare them to take the AP examination in early May. Research projects as well as document-based questions and essays will be assigned on a regular basis.

232 – Introduction to American Government

1 Credit

Year: 10, 11, 12

CP

Elective

This survey course addresses the functions of local, state and federal government in the United States and the role of citizen participation in each. This course also includes the basic provisions and principles of the Constitution and its growth through amendments. Legislative and executive roles and Supreme Court decisions are researched and discussed. Various enrichment materials, such as historical documents, newspapers and current event reports enable the student to understand how our government continues to develop. Students are expected to understand the basic MLA procedures for writing a research paper.

FOREIGN LANGUAGE

Requirements – At least three consecutive high school credits in one foreign language are required of all students.

Electives in Modern Language – Third and Fourth level courses are available in Latin, French and Spanish. These are Honors/AP courses and prepare students for advanced placement at institutions of higher learning.

Independent Study Courses – These may be taken at any level with the approval of an instructor and the Department Chair. Upper-level students have the option of on-line college credit courses.

Advanced Placement of Ninth-Graders – Students who have had French or Spanish in eighth grade as a FLES or sequential (not a FLEX or exploratory) course may be placed in a level II course. Placement tests are available through the Guidance Office.

FRENCH

311 – French I

CP

1 Credit

Year: 9, 10, 11

This course is an introduction to basic structures, everyday vocabulary in a cultural context, a study of present and past tense verb forms and a cultural study of France and Francophone countries. Objectives are to achieve communicative proficiency at the novice level in the five areas of foreign language study competency: listening, speaking, reading, writing and culture. Cooperative games and multimedia materials will be used for the practice of pronunciation and comprehension.

312 – French II

CP

1 Credit

Year: 9, 10, 11

This course reviews material covered in French I and adds new structures, vocabulary and verb tenses in a cultural context. Objectives are to achieve communicative proficiency at the intermediate level in the five foreign language competency areas. Composition skills will be introduced. The course will be supplemented with videos in French and multimedia activities.

310 – French II

H

1 Credit

Year: 9, 10, 11

French II Honors adds new structures, expands vocabulary, and introduces verb tenses in cultural context. The objective is to achieve proficiency at the intermediate level in the five foreign language competency areas. The pace is faster than at the CP level and additional literary as well as audio visual materials are used.

316 – French III

CP

1 Credit

Year: 10, 11, 12

This course will build on skills learned in French I & II; grammatical structures will be expanded. Idiomatic and conversational skills will be practiced and refined. A variety of materials will be used, including video and multimedia.

313 – French III

H

1 Credit

Year: 10, 11, 12

This course will build on skills learned in French I & II; grammatical structures will be expanded. Idiomatic and conversational skills will be practiced and refined. French history and literature will be examined using a variety of materials, including videos and multimedia.

314 – French IV

H

1 Credit

Year: 11, 12

It is highly recommended that all college-bound students take four years of one consecutive language. The focus of this course is to familiarize students with milestones of literature, situating these works in their historical context. More advanced grammatical structures will be taught. A variety of materials will be used including videos and multimedia.

SPANISH

321 – Spanish I CP

1 Credit **Year: 9, 10, 11**

This course is an introduction to basic language structures and skills including listening, speaking, reading, writing and culture. The cultures of Spain, Mexico and the Hispanic world are introduced. Objectives are to achieve communicative proficiency at the novice level. The course will be supplemented with multimedia materials and videos, including “Quién sera?”.

322 – Spanish II CP

1 Credit **Year: 9, 10, 11**

In this course, students will add new structures to those learned in Spanish I and vocabulary will be added in an authentic cultural context. The focus of cultural studies will be on Mexico with attention to Spain and other Spanish speaking countries. Objectives are to achieve communicative proficiency at the intermediate level in the five areas of foreign language competency: listening, speaking, reading, writing and culture. Composition skills will be introduced at this level. The course will be supplemented with videos and multimedia in Spanish, including the video “El Relicario.”

330 – Spanish II H

1 Credit **Year: 9, 10, 11**

This course is similar to Spanish II-CP with the addition of enrichment activities and a faster pace for the advanced Spanish student. The emphasis in this course is to learn new grammatical concepts and increase the student’s oral proficiency in Spanish. Spanish and Latin American culture will also be studied by using multimedia materials, including the video “El Relicario”.

333 – Spanish III CP

1 Credit **Year: 10, 11, 12**

This is a continuation of the first two years of Spanish. This course sharpens listening, speaking, reading and writing skills through activities that are based on pedagogically proven methods of foreign language instruction. Grammar is introduced and practiced in innovative and interesting ways with a variety of learning styles in mind. Culture is integrated throughout the course to help the student focus on the Spanish speaking world, its people, geographical locations and histories.

323 – Spanish III H

1 Credit **Year: 10, 11, 12**

The purpose of this course is to refine conversational skills and language structures that were studied in Spanish II and cover additional grammar, including all verb tenses. The objective is to achieve communicative proficiency at the intermediate-high level with a focus on reading and writing. Multimedia materials will be employed in the study of Spanish language and culture, including the video “Clara Perspectiva.”

324 – Spanish IV H

1 Credit **Year: 11, 12**

This is a higher level Spanish course to help students increase their ability to express themselves in both spoken and written Spanish. Students will review all the grammatical tenses that they have studied so far and use them to create authentic dialogues in the target language for use during class discussions. Authentic materials such as magazine articles, newspaper articles, websites and videos will be used throughout the year. There is also a cultural component to this course which will enable students to have a better understanding of the Spanish and Hispanic cultures.

329 – Spanish AP (331 – AP Span Lab) AP

1.5 Credit **Year: 11, 12**

The main objective of this course is to prepare for the AP Spanish Language Examination offered by the College Board Testing Program. Students will build a strong foundation and confidence for taking the advanced placement exam. The course will be supplemented with multimedia materials including the video “Nuevos Destinos.” Students who complete the AP Spanish Language course will accomplish the following::

1. Improve listening comprehension.
2. Demonstrate proficiency in reading Spanish narratives and literary texts with good overall comprehension.

3. Master the ability to write in Spanish on topics of general interest.
4. Attain a speaking proficiency that allows them to communicate facts and ideas, discuss topics of current interest and have immediate recall of a broad range of vocabulary in order to speak with a level of fluency..

LATIN

301 – Latin I

CP

1 Credit

Year: 9,10,11,12

Latin I

In the first year course, students will learn the fundamentals of Latin grammar through chapter exercises and simple translations of Latin to English and English to Latin. The focus in the first year will be the conjugation of Latin verbs in the indicative mood for both the active and passive voices, the declension of nouns and adjectives, and the basic syntax of phrases and clauses, as well as the development of vocabulary and elementary reading skills. In addition, students will be introduced to ancient Greco-Roman civilization through studies of its history, religion, and culture. The text for this course will be *Latin for the New Millenium 1*.

303 – Latin II

H

1 Credit

Year: 10, 11, 12

In the second year of Latin, students continue their study of Latin grammar and syntactical constructions such as indirect discourse and indirect questions. Students will expand their knowledge of the Latin verb to include the subjunctive mood and will continue to develop an active Latin vocabulary. As students complete their study of the fundamentals of Latin grammar, the emphasis of the course will shift toward Latin literature and the translation of selections from Cornelius Nepos's *Life of Atticus*. The text for this course will be *Latin for the New Millenium 2*.

304 - Latin III

H

1 Credit

Year: 11, 12

The third year of Latin marks a transition for students as the course moves toward a translation focus. Students will complete the translation of the *Life of Atticus* selections from the second-year text while continuing to reinforce grammar and vocabulary skills. Students then will move into translating selections from Ovid. The goal is to help students transition to reading original, unadapted Latin texts. The texts for the course will be *Ovid: A Legamus Transitional Reader*.

306 - Latin IV

1 Credit

Year: 11, 12

H

The fourth year of Latin focuses on translation and literary analysis of ancient texts, specifically Vergil's Aeneid. Students will translate selections from the epic poem and develop an understanding of the elements of Latin poetry, including meter, scansion, and literary devices. The course will focus in particular on Books I, II, IV, VI, X, and XII of the Aeneid in Latin and knowledge of the entire poem in English. The text for the course is tentatively A Vergil Workbook: Second Edition

MATHEMATICS

Requirements – Four years of mathematics are required for graduation. Public colleges in the State of Maryland require completion of Algebra I, Geometry and Algebra II. It is required that a TI-83 or TI-84 calculator be purchased by every incoming freshman.

412 – Algebra I

CP

1 Credit

Year: 9, 10

Required

A course designed for students with average mathematical ability. Students receive instruction in symbols and set theory, signed numbers, solving equations and inequalities, linear equations, graphing on the number line and the coordinate plane, solving and factoring quadratic equations.

- 411 – Algebra I** **H**
1 Credit **Year: 9, 10** **Elective**
 Designed for students with superior mathematical ability, this course covers set theory, open sentences, number axioms, solving equations and inequalities, polynomials and factoring, graphing, linear equations and functions, rational and irrational numbers, variations, and quadratic equations and inequalities.
- 422 – Geometry** **CP**
1 Credit **Year: 9, 10, 11** **Required**
 This course is designed for the students of average math ability who have successfully completed Algebra I. Topics covered include basic geometric terms, investigating geometric figures, triangle relationships, parallel and perpendicular lines, quadrilaterals, similarity, circles and right triangle trigonometry.
- 421 – Geometry** **H**
1 Credit **Year: 9, 10, 11** **Elective**
 This course is designed to show the structure of a mathematical system to use logical reasoning and to provide an excellent background for further mathematical studies. Topics included are inductive reasoning, deduction and proof, parallels and perpendiculars, congruent triangles, circles, angles, construction and loci, coordinate Geometry, area and volume, and right-triangle trigonometry.
- 432 – Algebra II** **CP**
1 Credit **Year: 10, 11, 12** **Required**
 This course is for the student with average mathematical ability. Topics include different methods of problem solving, linear and quadratic functions and their graphs, translation and symmetry of graphs, systems of equations, radical equations and an introduction to complex numbers.
- 431 – Algebra II** **H**
1 Credit **Year: 9, 10, 11** **Elective**
 This course is designed for the student with superior mathematical ability and intended to provide an excellent background for students who wish to take Pre-Calculus and Calculus. This course covers algebraic axioms and proof, set theory, equations and inequalities, graphing, relations and functions, polynomials and factoring, formulas, and logarithmic functions, Cramer’s Rule and trigonometry.
- 436 – Algebra III** **CP**
1 Credit **Year: 11, 12** **Elective**
 This course is designed for students who have successfully completed Algebra II as an alternative to pre-calculus. Topics covered will include: review of Algebra II concepts, trigonometry, polynomial functions, rational functions, logarithmic functions, exponential functions, sequences and series.
- 435 – Pre-Calculus** **CP**
1 Credit **Year: 11, 12** **Elective**
 A course designed for students with above average mathematical ability. Topics covered include linear and quadratic functions, polynomial functions, applications of the graphs of these functions, solving inequalities in one and two variables, exponential and logarithmic functions and their applications, analytic geometry, sequences and series, matrices and their applications, analytic geometry, sequences and series, matrices and their applications.
- 434 – Pre-Calculus** **H**
1 Credit **Year: 11, 12** **Elective**
 Designed for the student with superior mathematical ability, this course provides a firm background for Calculus. Topics include functions and their graphs, trigonometric and circular functions, polar coordinates, vectors and their applications, determinants, sequences and series, exponential and logarithmic functions, conic sections, statistics and probability and limits.

442 – AP Calculus AB (447 – Calc AB Lab) **AP**
1.5 Credit **Year: 12** **Elective**

This course is designed for students with superior mathematical ability. Topics covered include: limits, graphing functions, extrema and concavity, differential and integral calculus, the Mean Value Theorem, the Fundamental Theorem of Calculus, area, volume, Riemann sums, and Euler's Method.

445 – AP Calculus BC (446 – Calc BC Lab) **AP**
1.5 Credit **Year: 12** **Elective**

This course is designed for students with superior mathematical ability. Topics covered include: limits, graphing functions, extrema and concavity, differential and integral calculus, the Mean Value Theorem, The Fundamental Theorem of Calculus, area, volume, Riemann sums, analysis of planar curves in parametric form, polar and vector form, vector functions, Euler's Method, L'Hôpital's Rule, polynomial series, convergence and divergence, and Taylor's series.

440 – Statistics **H**
1 Credit **Year: 12** **Elective**

This is a course to complete the fourth year of mathematics, preferably for seniors. Topics covered include probability, measures of central tendency, confidence intervals, hypothesis testing, correlation and nonparametric tests.

SCIENCE

Requirements – Students are required to take three years of science. Biology and Chemistry are required courses. Some incoming freshmen will be placed in Physical Science based on their previous school record and their scores on the Goretti Entrance Exam.

512 – Introduction to the Physical Sciences **CP**
1 Credit **Year: 9** **Elective**

This course gives all students a fundamental knowledge of physical science and presents insight into the means by which scientific knowledge is acquired. Topics include: mechanics, energy, the structure of matter, chemical and nuclear reactions, magnetism and electricity. This course provides a foundation for future chemistry and physics courses. Lab work is integrated into the course.

522 – Biology **CP**
1 Credit **Year: 9, 10** **Required**

This course includes the study of the cell, molecules that make up living systems, patterns of heredity, evolution of plant and animal life, taxonomy, ecology and environmental science. The course provides appropriate lab work. Basic writing skills are essential in order for students to complete required lab reports.

521 – Biology **H**
1 Credit **Year: 9, 10** **Elective**

This course is designed for highly motivated students with a high aptitude in science and excellent writing skills and. Topics include those covered in Biology CP. Topics will be discussed in greater detail and from more of a molecular approach. The course provides appropriate lab work.

520 – AP Biology (519 – AP BIO Lab) **AP**
1.5 Credit **Year: 11, 12** **Elective**

This course incorporates lecture and laboratory work in an intensive examination of biochemistry, cell biology, energetics, classical and molecular genetics, comparative animal & plant anatomy and physiology, evolution, ecology and taxonomy. Students will be required to take the AP exam in May. There will be a lab fee for this course.

532 – Chemistry **CP**
1 Credit **Year: 10, 11** **Required**

This course is designed for students who seek a general knowledge of chemistry. This course includes: a study of atomic structure, the mole concept, chemical bonding, the periodic table, the chemical composition of substances and their properties, names and formulas of compounds, types of chemical reactions, balancing chemical equations, stoichiometry, gas laws and solutions concentration problems. Lab work is integral to the course.

531 – Chemistry **H**
1 Credit **Year: 10, 11** **Elective**

This course is designed specifically to prepare those students who plan to major in science or engineering in college. This course includes: a study of atomic structure, electromagnetic radiation, chemical bonding, hybridization, resonance, the chemical composition of substances and their properties, nomenclature, formulas of compounds, the periodic table, types of chemical reactions, stoichiometry, gas laws, redox reactions, acid-base chemistry, pH, titration and solution concentration problems. Lab work is integral to the course.

530 – AP Chemistry (529 – AP CHEM Lab) **AP**
1.5 Credit **Year: 11, 12** **Elective**

This course is a college level treatment of the following topics: Atomic structure and theory, chemical bonding, nuclear chemistry, gas laws, kinetic-molecular theory of gases, solids and liquids, solution chemistry, chemical reaction types, stoichiometry, equilibrium, kinetics, thermodynamics, the periodic table and organic chemistry. Appropriate laboratory work is included.

542 – Physics **CP**
1 Credit **Year: 11, 12** **Elective**

The aim of this course is to introduce students to the basic concepts of both theoretical and applied physics. Topics include: mechanics, and various types of energy including heat, sound, light, optics, electricity, and magnetism. Lab work is an integral part of this course.

541 – Physics **H**
1 Credit **Year: 11, 12** **Elective**

This course is strongly recommended for all students who plan on a scientific career. This course is an in-depth, mathematical study of Newtonian physics, thermodynamics, waves, electromagnetic radiation, nuclear and modern physics. Complex problem-solving skills and scientific creativity are stressed. Lab work is an integral part of the course.

551 – Human Anatomy/Physiology **H**
1 Credit **Year: 11, 12** **Elective**

This course is designed to examine human anatomy and physiology by reviewing the structure and function of individual organ systems, their interactions and interdependence. Topics include: integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, digestive, excretory, respiratory & reproductive systems. Additional topics include special senses, cell biology, histology and pathology. Lab work includes fetal pig dissection. Students must be able to access online resources.

598 – Environmental Science **CP**
1 Credit **Year: 11, 12** **Elective**

This course is designed to focus students in the physical, chemical and biological systems that shape our environment. Scientific concepts, principles and practices will allow students to analyze environmental systems and issues both natural and human induced. An important goal of the course is not only to understand environmental problems but offer possible solutions as well. Students will become familiar with environmental impact, the tools of the science and resources to reverse and/or improve environmental problems impacting the quality of water, air and land.

FINE ARTS

Requirements: Introduction to Art and Introduction to Music are required semester classes for the sophomore level.

618 – Introduction to Art **CP**
.5 Credit **Year: 10** **Required**

This is a beginning studio course for sophomores. This course introduces the elements and principles of design by using creative problem solving and it explores different media in both the 2 and 3D format.

All following electives have the prerequisite of receiving credit in Introductory to Art or the equivalent of that course.

651 – 2-D Design**.5 Credit****Year: 11, 12****CP****Elective**

This is a graphic oriented studio art class that helps students explore the fundamentals of design. The concepts that will be stressed are line, shape, color, texture and the principles of design, balance, harmony, repetition, emphasis and contrast. The students will explore space on a two dimensional plane and how to achieve artistic unity. The students will be exposed to many media including printmaking and will also have time to work with our Mac graphic design computer system.

652 – 3-D Design**.5 Credit****Year: 11, 12****CP****Elective**

This is a sculpture studio course that works with the fundamental design principles as they apply to work in the 3 dimensions. The student will work in the traditional sculpture media as well as some of the more contemporary areas. The class will also involve creative problem solving and some group activity.

653 – Painting**.5 Credit****Year: 11, 12****CP****Elective**

This course explores the different styles of painting. Using acrylic paint the student will first learn color theory and how to achieve depth. The student will also learn some of the more contemporary ideas of flattened space and multiple vantage points. The student will work with a variety of other media including watercolor, computer and mono-printing.

657 – Drawing**.5 Credit****Year: 11, 12****CP****Elective**

This is a beginning studio class in drawing that explores line and mass. The students will work with a variety of drawing media to learn the basics of composition, design, gesture, value and proportion.

655 – Ceramics**.5 Credit****Year: 11, 12****CP****Elective**

This course introduces the techniques and vocabulary of hand building clay. The students will create some useful and some sculptural work.

658 – Digital Photography**.5 Credit****Year: 11, 12****CP****Elective**

In this course, students will learn how to use digital cameras to explore various subjects. The production of quality images will be stressed along with the technical knowledge to manipulate images on computers. Each student will produce photographs that will be used in public exhibits, the production of books, and in web designs.

A mandatory course fee of \$25 is assessed upon enrollment in this course to offset material expenses. Students must have their own digital cameras (no phone/iPod cameras).

656 – Art Appreciation**.5 Credit****Year: 11, 12****H****Elective**

An honors level course that introduces aesthetics, discusses the issues facing art and artists today and works with the vocabulary of the elements and principles of design. The course looks in depth into some of the areas of Art History, and some of the most leading artists. In addition to slides, videos and discussions the students take field trips to the major museums, galleries and meet with working artists. One form of evaluation will be a thesis paper on the Art period of choice, the favorite artists from that period and a creative visual that corresponds to the topic.

MUSIC**627 – Introduction to Music****.5 Credit****Year: 9-12****CP****Required**

This innovative course introduces students to a wide variety of different musical styles and techniques. Topics covered include: Elements of music (basics, how to listen, rhythm, melody, harmony, and participatory conducting and computer composing segments); classical music (the Greeks through Modern Music, instruments of Europe, influences of

classical music to contemporary music, film composers)' Evolution of Jazz (origins, improvisation, great musicians, listening), and World Music (non-European systems, instruments of the world, build your own instruments). The class will be supplemented with professional musicians and experienced educators through our "Music in Action" series. This provides students with a unique opportunity to witness live performances in an intimate surrounding and discuss music with those who make it.

646 – Choir/Choral Performance **CP**
.5 Credit-all year **Year: 9-12** **Elective**

This course will help students develop the musical tools necessary to sing in harmony, while also learning proper vocal techniques. The choir will sing both religious and secular music, and be expected to perform for school functions, including religious services and school concerts. Concerts, dress rehearsals and certain designated events are considered to be an integral part of the course and attendance is mandatory.

647 – Dance & Choreography **CP**
1 Credit **Year: 9-12** **P. E. Elective**

Students will begin with a warm-up, proceed to center work that includes jumps, turns and combinations crossing the floor. Classes will focus on alignment, vocabulary and style. Combinations will be given on a regular basis. Students will work towards at least one performance. The choreography class involves students using the steps and movements mastered in technique class to create their own compositions. This class encourages creativity and makes students aware of themes and variations to present a finished piece which they themselves have created.

643 – Musical Theory and Practice **CP**
.5 Credit **Year: 11, 12** **Elective**

A study of the notation, theory and performance practices in music, with an emphasis on classical harmony and structure. Those students familiar only with popular or contemporary music will find that these studies in harmony, rhythm and form apply equally to all musical styles. Sight-singing, dictation and analysis will especially compliment those students wishing to perform and /or compose. These studies will also benefit those student-listeners who wish to expand their listening skills and musical appreciation. A text will accompany this course.

644 – Musical Theory and Practice II **CP**
.5 Credit **Year: 11, 12** **Elective**

This course is a continuation of the studies which began in the first semester, with a year-end in school concert of student performances and compositions.

649 – Musical Theater **CP**
.5 Credit-all year **Year: 9-12** **Elective**

Students will study the history of the American musical theater, from the earliest Broadway revues to the post - WW2 explosion of theatrical styles, including current shows. An integral portion of time is dedicated to a survey of acting and production techniques, encompassing elocution, preparing for an audition, and improvisation. Students will then participate in a public year-end cabaret show featuring solos and ensemble work.

PHYSICAL EDUCATION/HEALTH

Requirements – 1 credit for graduation. Freshman PE/Health is required.

720 – PE/Health **CP**
1 Credit **Year: 9** **Required**

PE: The physical fitness of the student is enhanced by a well-rounded physical education program which provides a variety of experiences to develop cardiovascular fitness, muscle endurance, flexibility and strength. Instruction in sports skills, rules and games strategy is also emphasized.

Health: The goal of health is to familiarize the students with the many health concerns facing them in today's society. Emphasis is placed on prevention and responsibility of each individual to make intelligent and informed decisions concerning their lifestyle.

750 - Life Skills**.5 Credit-all year****Year: 11, 12****CP****Elective**

(for all PE electives): The goal of life skills will be to expand the base of knowledge received in health freshman year. Students will investigate current health topics pertinent to their individuality. Emphasis is placed on prevention and responsibility of each individual to make intelligent and informed decisions concerning their lifestyle.

751 – PE**.5 Credit-all year****Year: 11, 12****CP****Elective**

Physical education is a well-rounded program with emphasis placed on team sports, individual sports and rhythmic activities. Physical fitness assessment testing will be administered a minimum of one time during the year.

752 – Weight Training**.5 Credit-all year****Year: 11, 12****CP****Elective**

This course is designed for the beginning weight lifter. Proper lifting and proper spotting techniques are emphasized. Students will also be exposed to various conditioning programs including cardiovascular training and circuit training. The goal of the class is to improve cardiovascular endurance and muscular strength.