

St. Mary's Ryken

*A College Preparatory Catholic High School
Committed to Fostering the Xaverian Brothers' Values:*




compassion | simplicity
humility | trust | zeal

COURSE CATALOG

ACADEMIC YEAR 2018-19



22600 Camp Calvert Rd.
Leonardtown, MD 20650

301-475-2814
smrhs.org   

MISSION STATEMENT

St. Mary's Ryken is a Catholic, coeducational college preparatory school community operated under the Xaverian Brothers' sponsorship dedicated to academic excellence and individualized student growth.

PHILOSOPHY

St. Mary's Ryken draws inspiration from the Gospel and the Catholic faith as well as the charisms of its founders, the Sisters of Charity of Nazareth and the Xaverian Brothers. Central to the SMR philosophy is the mandate to teach as Jesus did, reaching out to all to achieve the Kingdom of God.

St. Mary's Ryken recognizes that each individual is unique and gifted with innate goodness. The SMR community encourages the respect for and appreciation of diversity, and nurtures a faith-filled view of existence. Christian service is an integral component of the SMR philosophy and practice. St. Mary's Ryken provides an integrated approach to the students' development as loyal, intelligent and self-directed persons.

This perspective on learning allows the students' intellectual growth to flourish in an environment not hampered by undue competitiveness. Students experience diverse and progressive opportunities in academics, fine arts, athletics, student activities and campus ministry. The challenge of the SMR education is to enable students to realize their potential, continue their academic journey, and assume responsibilities in their family, the civic community, and the professional world.

Imbued with the spirit of its founders, St. Mary's Ryken prepares young men and women to continue this work in a global interconnected new millennium. Our task as educators is not accomplished by ourselves. We share this mission and its various responsibilities with parents, who are the primary educators, with the community and with the Church.

SENIOR STATEMENT

In the Xaverian tradition, a demanding Catholic, college preparatory educational program is a hallmark of St. Mary's Ryken. As a center of growth and learning, St. Mary's Ryken strives to create an atmosphere in which all are committed to academic integrity and excellence as well as spiritual growth. Such an atmosphere instills in students the desire to learn for the sake of learning and increases their personal confidence as they experience success. Understanding the importance of developing the whole individual, a graduate of St. Mary's Ryken will:

- be a person of moral character, be able to nurture a relationship with God through prayer, be a steward for social justice, and possess an understanding of Catholic theology and tradition
- possess a deep intellectual curiosity with a passion for lifelong learning, have the competency for critical thinking and analysis in the humanities and the sciences, and be well prepared for post-secondary academic pursuits
- be a confident, self-assured young adult capable of developing enduring personal relationships, nurturing a spirit of harmony, being open to diversity and possessing global perspective, and being committed to making a difference in their community by their leadership

ADMINISTRATION

Mary Joy Hurlburt, President

M.A., Leadership in Teaching/Administration, Notre Dame of Maryland University

Dr. Glenn P. Wood II, Principal

Ed.D., Educational Leadership and Policy Studies, University of Maryland

Brad Chamberlain, Dean of Academics

M.Ed., Education Administration, Superintendent Certificate, Ohio University

Joseph Wysokinski, Dean of Students

M.A., Leadership in Education Administration and Supervision, Notre Dame of Maryland University

BJ Pumroy, Athletic Director

M.Ed., Sports Administration, Northwestern State University (La.)

Jason DeLucco, Educational Technology Systems Administrator

M.A., Leadership in Teaching, Notre Dame of Maryland University

ST. MARY'S RYKEN FACULTY 2017-18

Beth Allen, St. Mary's College of Maryland
Aisha Alston, M.S., Life Science, University of Maryland
Loretta Baylor, M.Ed., School Counseling, Bowie State University
Annette Bennett, B.S., Information Systems Management, University of Maryland University College
Leeanne Carr, M.A., Leadership in Teaching, Notre Dame of Maryland University
Justin Charlebois, Ph.D., Applied Linguistics, Lancaster University
Taylor Combs, B.A., English, St. Mary's College of Maryland
Julie Daley, M.S., Occupational Therapy, Tufts University
Stephanie Dameron, B.A., Interdisciplinary Studies: English and Special Education, Radford University
JoAnn Depperschmidt, M.S., Special Education, Catholic University
Mary Rose Depperschmidt, B.A., Theology, Catholic University
Gregory DeStefano, B.A., Philosophy, The Catholic University of America
Kelly Draksler, M.A.T., Secondary Social Studies Education, Towson University
Crystal Dunkin, M.A., Leadership in Teaching, Notre Dame of Maryland University
Catherine Dunn, M.F.A., Indiana University
Jason Early, B.S., History/Secondary Education, Towson University
Carol Edick, B.A., Upper Iowa University
Tara Everly, M.S., Clemson University
Daniel Garland, M.A., Theology, Franciscan University of Steubenville
Ursula Gensley, B.A., Education, Marcelino Champagnat University
David Hamilton, M.A., Student Affairs in Higher Education, Indiana University of Pennsylvania
David Hayes, M.S., Kinesiology; Athletic Training, Temple University
Christine Jaffurs, M.S., School Counseling, Johns Hopkins University
Bryan Kerns, B.S., Neuroscience, Christopher Newport University
Selva Kumar, M.S., Mathematics, Loyola College (Ind.)
Zachary Lesieur, M.A., Teaching, Notre Dame of Maryland University
Minyue Li, M.A., Chinese Study, Valparaiso University
Marcos Lindekugel, M.A., Software Engineering, University of Maryland
Melanie Maldonado, B.A., English and Spanish, University of Maryland
Dante Marmo, M.M., Music Education, West Chester University of Pennsylvania
Nathalie McDermott, University of Paris
Sue McEvoy, B.S., Microbiology, University of Maryland
Paula McGuigan, M.S., State University of New York Oswego
Tess Meizoso, MS, Biology, University of Arizona
Heather Nobary, M.S., School Counseling, McDaniel College
Kim Norris, St. Mary's College of Maryland
John Olon, M.A., St. John's College
Chris Palombi, B.A., Criminal Justice, Michigan State University
John Pennisi, M.A., English Literature, Washington College
Chris Perkinson, M.A., Organizational Management, Ashford University
Olivia Ray, M.S., Mathematics, Virginia Polytechnic Institute and State University
Marcy Ricciardi, M.S., Mathematics Education, Towson University
Beronica Sabella, M.A., Leadership in Teaching, Notre Dame of Maryland University
Ken Scheiber, M.A., Theology, Christendom College
Elizabeth Schuck, M.Ed., Leadership in Teaching, Notre Dame of Maryland University
Chris Shea, M.A., Pastoral Counseling/Theology, Washington Theological Union
Cheryl Shevchuk, M.Ed., Adult Education/Specialization ESL, Oregon State University
Tessa Silvestro, B.A. Theatre Design and Production, Towson University
Jonathan Smith, M.A., Secondary Mathematics Education, Western Governors University
Susan Spaulding, M.A., Latin, University of Florida Gainesville
Edward Szymkowiak, M.A.T., Secondary Math Education, SUNY Binghamton
Linda Szymkowiak, M.S., English Education, SUNY Binghamton

Angelica Thompson, B.A., History, University of Maryland
Winifred Thompson, B.F.A., Studio Art, St. Mary's College of Maryland
Douglas Toti, M.S., Biology, Western Carolina University
Kristen VanFosson, B.S., Biology and Mathematics, Alleghany College
Jackson Webb, B.A., Anthropology, St. Mary's College of Maryland
Sarah Whorton, B.S., Biochemistry, Loyola Marymount University
Drew Wildes, M.S., Linguistics, Georgetown University
Amy Wogman, M.S., School Counseling, University of the Southwest, Hobbs, NM
Stephanie Wojt, M.A., Reading: Curriculum and Instruction, Grand Canyon University
Terry Wood, M.A., Education Technology Leadership, George Washington University
Gary Wynn Jr., B.S., Sociology and Bioenvironmental Engineering, Bowie State University
Luke Young, B.A., Philosophy, Pontifical University Regina Apostolorum, Rome

Calculating your Grade Point Average (GPA)

When calculating your GPA, you must remember that Quality Points are assigned to each letter grade. The type of class (College Prep, Honors, AP) you take will determine the number of quality points you receive for a particular course. Students receive weighted credit (extra points) for Honors and AP courses. GPA's are recalculated after each semester of high school. Thus, your cumulative GPA will change eight times throughout your high school career.

GPA Scale:

	A	B+	B	C+	C	D	F
AP	5.0	4.4	4.0	3.4	3	1.0	0.0
Honors	4.5	3.9	3.5	2.9	2.5	1.0	0.0
College Prep	4.0	3.4	3.0	2.4	2.0	1.0	0.0

To Calculate Your GPA

1. Determine quality points for each semester grade.
2. Multiply the quality point associated with each semester grade by the credit awarded for that semester grade (this credit amount will most likely be 0.5, but in some instances, may be 1.0).
3. Total all of the products calculated in Step 2.
4. Calculate the total credits to be included in the GPA Calculation. To do this, subtract the total number of credits associated with "Pass/Fail" grades from the total number of credits awarded. Pass/Fail credits include: a single credit awarded in the last semester of a student's senior year for cumulative Campus Ministry Service Hours (CMSH); and retroactive credits ("RAC credits"), which are listed with a student's first year grades (RAC credits represent high school level math and language credits earned in Middle School).
5. Divide the total calculated in Step 3 by the adjusted credit total calculated in Step 4.

Exception: Generally, grades in the Year (Y1) column on a student's transcript do not affect the GPA calculation. However, if an F has been recorded in one of the semester columns (resulting in zero semester credit) AND there is a passing grade in the Y1 column, a full credit will be assigned in the Y1 column to reflect a passing grade for a yearlong course. In this instance, the GPA calculation would be based on the Y1 grade only.

Unweighted GPA: Weighted GPA is reported on the student transcript. To calculate an unweighted GPA, follow the steps above using the College Prep scale only.

Academic and Enrollment Data 2017-18

Academic Year 2017-18

Full-time faculty	59
Full-time administrators	5
Full-time staff	32
Courses offered	164
AP courses currently offered	25
AP courses projected for 2018-19	26
Student/faculty ratio	12:1
Average class size	22

Affordability 2017-18

Annual tuition	\$15,000
Percent of students receiving financial aid	41%
merit scholarships	17%
Total financial aid awarded	\$1.3 mil

Enrollment 2017-18

Total students	702
Freshman class size	174
Percent of students from	
Calvert County	12%
Charles County	26%
Prince George's County	10%
St. Mary's County	50%
Other	2%
Percent of students who are Catholic	62%

Class of 2017

Performance on the SAT

The combined EBRW and Mathematics scores of 143 students (92% of the senior class) who took and reported their results on the new SAT averaged 1,141, versus a national (1,060) mean. The new SAT is now out of 1,600 points instead of 2,400, which was the maximum score on the pre-2016 SAT.

Performance on the ACT

In the Class of 2017, 86 students (55%) took the ACT. The mean Composite Score was 23.9 for SMR students versus state (23) and national (20.9) means.

Percent who are attending four-year colleges	79%
Percent who are attending two-year colleges	13%
Gap year/apprentice program/work/other	8%
College scholarships awarded	\$24.67 mil

Course Offerings 2018-19

Abbreviations, Notations, and Guidelines

CP – College Preparatory Course

H – Honors Course

HSPT – High School Placement Test

☑ These courses satisfy graduation requirements.

NCAA These courses are NCAA-approved core courses.

Note: In most cases, 0.5 credit is a semester course and 1 credit is a yearlong course.

Advanced Placement Guidelines: Advanced Placement courses are considered to be college level courses, thus they are quite challenging, and heavier than normal homework loads, assessments, and projects/papers are to be expected. Colleges and universities across the United States award credit based on AP exam scores, though these policies differ widely and students are encouraged to consult the academic policies of colleges and universities they are interested in attending when trying to discern how much credit they can earn based on AP exam scores.

St. Mary's Ryken recommends that students do not sign up for more than three Advanced Placement courses in a given school year. Students who choose to sign up for more than three AP courses should be aware of the increased workload and pressures this will create. Likewise, strong attendance is required for AP courses. Students who miss excessive numbers of school days will have their schedules changed in accordance with a realistic approach to grades and achievement in AP courses. For all AP courses, course and testing fees apply, students are required to sit for the exam, and summer work is assigned and graded.

AP Capstone: AP Capstone is comprised of two AP courses — AP Seminar and AP Research — and is designed to complement and enhance discipline-specific study in other AP courses. These courses provide unique research opportunities for current AP students. If a student earns a score of 3 or higher in AP Seminar and AP Research and on four additional AP Exams, he or she will be awarded the AP Capstone Diploma. If a student earns a score of 3 or higher in AP Seminar and AP Research, but not in the additional four AP Exams, he or she will be awarded the AP Seminar and Research Certificate.

Study Hall: Juniors and Seniors in good academic standing and progressing appropriately toward graduation may sign up for one study hall per semester. Students are not permitted to serve as an office or teacher aide in the same semester they have scheduled a study hall.

Course Offerings: For all courses, enrollment determines whether or not a course will be offered for the following year. Courses with low numbers of requests may be cancelled due to staffing and scheduling concerns.

Planning an Appropriate Schedule: St. Mary's Ryken ensures that our students meet and exceed the graduation requirements put forth by the Maryland State Department of Education as well as those endorsed by the University System of Maryland. Students considering attending out-of-state colleges and universities should check the admissions requirements of these schools when planning their schedules for the upcoming school year.

THEOLOGY DEPARTMENT

4 credits required

1111 Theology 9A – Introduction to Religion (1 Semester) 0.5 Credit

PREREQUISITE: None. The purpose of this course is to help students understand the manner in which the Catholic Church relates to non-Catholic Christians as well as other religions of the world. ☑

1112 Theology 9B – Introduction to Catholicism (1 Semester) 0.5 Credit

PREREQUISITE: Theology 9A. Beginning with a survey of salvation history, this second-semester freshman course begins the study of Jesus, uncovering both his ministry and mission while encountering him as he taught, healed and ministered throughout Galilee. ☑

1211 Theology 10A – The Old Testament (1 Semester) 0.5 Credit

PREREQUISITE: Theology 9B. 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. ☑

1212 Theology 10B – The New Testament (1 Semester) 0.5 Credit

PREREQUISITE: Theology 10A. The purpose of this course is to help 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, not so much about events in the life of the Church, but about the sacred nature of the Church. ☑

1311 Theology 11A – Moral Theology (1 Semester) 0.5 Credit

PREREQUISITE: Theology 10B. This course introduces students to the unique way in which theology goes about answering the question of human flourishing. Moral Theology is not so much preoccupied with drafting ethical and legal codes, but rather with shedding light on those actions that respond to the deepest aspirations of the human heart. Beginning with the premise that human beings need to be related to God if they are to be truly happy, this class invites students to think about what it would mean to live a morally serious human life. ☑

1312 Theology 11B – Social Ethics (1 Semester) 0.5 Credit

PREREQUISITE: Theology 11A. This course is a basic introduction to the Catholic perspective on the common good. Readings will be chosen from St. Augustine, St. Thomas Aquinas, papal social encyclicals, the textbook and other sources. Areas of inquiry include the dignity of the human person, natural law and rights, the dialogue with political philosophy, social justice, law and public policy, and the role of the family. ☑

1411 Theology 12A – Sacraments as Privileged Encounters With God (1 Semester) 0.5 Credit

PREREQUISITE: Theology 11B. 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. Students will examine each of the sacraments so as to learn how they may encounter Christ throughout life. ☑

1412 Theology 12B – World Religions (1 Semester) 0.5 Credit

PREREQUISITE: Theology 12A. The purpose of this course is to help students understand the manner in which the Catholic Church relates to non-Catholic Christians as well as other religions of the world. ☑

1420 Honors Senior Theology 1 Credit

PREREQUISITE: A or B in Theology 11A. This course is the natural progression of the philosophical thought of man toward truth. In answering the fundamental questions of life – who am I and why am I here – philosophy culminates in a theology that is guided by the light of reason. In the Thomistic tradition, our class will begin with the great thinkers of philosophy and reason and then apply philosophical principles to theology. Students will engage in a direct and sustained confrontation with primary source selections from a variety of texts as well as excerpts from films and documentaries. Students will be expected to read carefully, keep a journal, participate fully in class discussions, and write an in-depth paper. ☑

1511 Introductory Catholic Teaching (1 Semester) 0.5 Credit

PREREQUISITE: Selection by the department chair. This course teaches the basics of Catholicism using the Nicene Creed as its foundation and incorporating Scripture stories of salvation and the Catechism as the basis for learning. ☑

1513 Apologetics (1 Semester) 0.5 Credit

PREREQUISITE: Theology 10B. This fall semester theology elective course teaches the art of giving logical defenses for the faith. The class will cover controversial or debatable topics, as well as familiarize students with both faith-based logic and clarity in group discussions. Topics include: Existence of God and Divinity of Jesus, Moral and Social Issues, Scriptural Accuracy/Interpretation, Historical Issues With the Catholic Church, and Church Doctrines.

ENGLISH DEPARTMENT

4 credits required

2110 Literature and Composition 1 Credit

PREREQUISITE: None. Literature and Composition is a broad program centering on English as a tool for communication. Ninth-grade students will study literature and master basic skills. The focus is based on world texts stemming from Greek, American, Japanese, British and African authors while including short and long fiction, poetry and dramatic performances. The emphasis is on understanding and appreciating literary texts. A review of basic skills includes mechanics, spelling, vocabulary and composition. **NCAA**

2120 (H) Literature and Composition 1 Credit

PREREQUISITE: HSPT. Honors Literature and Composition encompasses a broad range of literary readings, in-depth literary analysis, and additional research and writing assignments. Students are expected to have a strong background and interest in English grammar, reading and writing skills. **NCAA**

2210 American Literature and Composition 1 Credit

PREREQUISITE: 2110. American Literature and Composition continues mastery of skills and concepts introduced in 2110, with an emphasis on literature and writing. The sophomore literature program is a full year survey of American literature. During the year, each student will write creative and critical papers and one research paper. The course includes units on public speaking, communication skills, grammar review and vocabulary development. **NCAA**

2220 Pre-AP English Language and Literature 1 Credit

PREREQUISITE: A/B in 2120 or A in 2110 and department chair approval. This course is a pre-AP, 10th grade English course. It is an accelerated course designed to prepare students for success in their college-level AP Language and Literature courses. Focus will be on literary analysis, close reading, vocabulary, process writing and SAT preparation. This course is the prerequisite for subsequent AP English courses. **NCAA**

2330 AP English Language and Composition 1 Credit

PREREQUISITES: A/B in 2220; A in 2210. Advanced Placement English Language and Composition is a yearlong course designed to prepare students for the AP exam in May. As students read a variety of texts, both fiction and nonfiction, they will learn to apply analytical strategies in their writing and class discussions. This course is reading and writing intensive with a substantial workload; students must be well organized and disciplined in their studies and will be expected to manage in-class activities, outside readings and long-term assignments simultaneously. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

2310 Nonfiction: Composition and Argument 1 Credit

PREREQUISITE: 2210 or 2220. In this course, students will read and evaluate diverse nonfiction texts and presentations to gain a better understanding of what is communicated as well as how the message is conveyed. A variety of texts and media are analyzed. Response essays, along with more extensive papers, will help students refine their thinking and improve writing skills. Additionally, students will be coached in techniques for varying sentence structures and for making effective revisions and proofreading, all of which are critical to good performance on the SAT and in college. **NCAA**

2314 African-American Literature 1 Credit

PREREQUISITE: 2210 or 2220. This course is a survey of African-American literature from the 17th century through the present day. Students will study a range of genres including fiction, nonfiction, memoir, speeches, poetry, and drama. Selected authors may include but are not limited to: Harriett Beecher Stowe, Frederick Douglass, Zora Neale Hurston, Martin Luther King, Jr., Langston Hughes, James Baldwin, and Toni Morrison. Routine and thoughtful writing, vocabulary enrichment, and an extended research paper will be among the required elements of the class. ☑

2414 Religious Literature 1 Credit

PREREQUISITE: 2210 or 2220. The course is designed to read all genres of literature that explore our Christian traditions and the Catholic faith itself. Readings will include novels, short stories, poetry, drama, and some nonfiction. Authors read will include (but will not be limited to) the following: Pope John Paul II, Pope Francis, St. Augustine, T.S. Eliot, G.K. Chesterton, Willa Cather, Father Luigi Giussani, and Mary Oliver. Students will write a variety of essays and do some creative writing, as well. A summative written and oral project incorporating all of the readings will occur at the end of the semester. ☑

2410 British Literature 1 Credit

PREREQUISITE: 2210 or 2220. This course will encompass the splendor and grandeur of the English language in the context of the historical periods in which they were written. Selected literature includes “Beowulf,” “The Canterbury Tales” and medieval romances, as well as writings from the Renaissance, Victorian Enlightenment, Edwardian and Modernist eras. Authors include Charles Dickens, Arthur Conan Doyle, George Bernard Shaw, James Joyce and contemporary writers. Routine and thoughtful writing, vocabulary enrichment, and an extended research paper will be among the required elements of the class. ☑ **NCAA**

2430 AP English Literature 1 Credit

PREREQUISITES: A/B in 2330. This course is open to seniors. Advanced Placement English Literature is a college freshman-level course designed to prepare students for the AP exam in May. The course involves much reading, discussion and writing. The course focus involves close reading techniques that examine full-length literary selections including novels, plays and poems. Occasional practice analysis may include essays and short stories. A variety of time periods and authors from around the globe will be studied. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. ☑ **NCAA**

2510 Yearbook (1 Year) 1 Credit

PREREQUISITES: Juniors and seniors only. Students in this course are responsible for designing, writing, editing and publishing the SMR yearbook. Graphic design and photography are central elements of the course. **NOTE:** This course requires students to work after school.

2513 Journalism (1 Semester) 0.5 Credit

PREREQUISITE: None. The students enrolled in this course are responsible for the quarterly publication of the SMR newspaper, Knight News. Students in this course must demonstrate an interest in becoming better writers, as well as the ability to manage deadlines, revisions, and newspaper layout and design. This course will examine all aspects of journalism and professional writing and teach skills such as gathering, analyzing, confirming and presenting information about current events and issues, both at home and abroad. Their work will be published in the quarterly issues. This course is offered both fall and spring semesters.

2514 Creative Writing (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. This course is an English elective designed for students interested in creating samples of writing for their portfolio derived from various genres. It is a reading and workshop introduction to the fundamental working models (poetry, stories, drama) of creative writing, based in a broad survey of literary approaches and viewed from the standpoint of the writer. Students will read and analyze a wide range of modern and contemporary literary texts while the principal work of the class will be writing: first, writing to help see and understand the effective forms and techniques encountered in reading and, thereafter, writing to adapt those same forms and techniques in the student's own creative work. There will be both analytical and creative writing assignments, and the major means of assessment will be a portfolio of written work. The SMR literary magazine, **Knight Visions will be produced as an element of this class. NCAA**

4534 AP Seminar 1 Credit

PREREQUISITES: Strong performance in Honors/AP level English and History courses; sophomores and above in the Scholars Programs or who will take four or more other AP courses to qualify for the AP Capstone Diploma. **This is the first of two AP Capstone courses designed to equip students with the independent research, collaborative teamwork and communication skills increasingly valued in colleges and beyond.** Students will explore the complexities of academic and real-world topics using an inquiry framework. Practice with evaluating and understanding texts across multiple media will lead students toward the development of their own perspectives and then communicating these perspectives in various formats, including oral and visual presentations and essays. Ultimately, the aim of the course is to empower students to analyze and appraise information with accuracy and precision in order to craft and communicate evidence-based arguments. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

MATHEMATICS DEPARTMENT

4 credits required

Please note: SMR students are required to take four years of math; they should be enrolled in at least one math-related course every semester.

3010 Pre-Algebra 1 Credit

PREREQUISITE: HSPT and Dean of Academics approval. This course reinforces mathematical skills with an emphasis on algebraic concepts. Students will study fractions, decimals, percentages, positive and negative integers, rational numbers, ratios, proportions and algebraic equations. Students will develop and expand problem solving skills (creatively and analytically) in order to solve word problems. This course prepares students for success in Algebra I. ☑

3110 Algebra I 1 Credit

PREREQUISITE: HSPT. Students are introduced to the basic structures and techniques used in algebra. Emphasis is placed on learning algebraic concepts and skills, including sets, variables, equations, inequalities, graphing, polynomials, factoring, functions, open sentences in two variables, rational/irrational numbers and quadratic equations. A graphing calculator is required. ☑ **NCAA**

3120 (H) Algebra I 1 Credit

PREREQUISITE: HSPT and SMR Math Validation Test. This course is designed to challenge highly qualified students who have a solid background in algebra. This course may be taken in conjunction with Honors Geometry for those students who have indicated an interest and talent in the fields of math and/or science. A graphing calculator is required. ☑ **NCAA**

3210 Geometry 1 Credit

PREREQUISITE: 3110. This course examines the properties and relationships of plane figures. The concepts of deductive reasoning, congruence, similarity, polygons, area and perimeter, as well as the use of postulates and theorems in logical reasoning and proof design are introduced and studied. ☑ **NCAA**

3220 (H) Geometry 1 Credit

PREREQUISITE: A/B in 3120. This course explores Euclidean and analytic geometry. The concepts of deductive and inductive reasoning, as well as congruence, similarity, polygons, properties of plane figures and proportions are fully investigated. More advanced topics include triangle trigonometry, constructions and conceptual relevance to real life applications. ☑ **NCAA**

3310 Algebra II 1 Credit

PREREQUISITES: 3110 and 3210. This course builds on the concepts introduced in Algebra I. Topics include concepts and skills involving operations with real and imaginary numbers; simplifying polynomial and rational expressions; matrix algebra; solving linear, quadratic, exponential and logarithmic equations; and identifying relations and functions. More advanced topics include an introduction to sequences, series and trigonometry. A graphing calculator is required for this class. ☑ **NCAA**

3320 (H) Algebra II 1 Credit

PREREQUISITES: A/B in both 3120 and 3220. This course is designed for highly motivated students who have excelled in honors math courses. Topics include concepts and skills involving operations with real and imaginary numbers; simplifying polynomial and rational expressions; matrix algebra; solving linear, quadratic, polynomial, exponential and logarithmic equations; and identifying

relations and functions. More advanced topics include an introduction to sequences, series, statistics, probability and trigonometry. A graphing calculator is required for this class. Summer assignments are required. **☑NCAA**

3311 CP Trigonometry (1 Semester) 0.5 Credit

PREREQUISITE: 3310. This course enriches the study of trigonometric functions, their definitions, relationships, graphs and inverses. Additional topics include vectors, direction and magnitude, and parametric equations. Summer assignments are required. **☑NCAA**

3321 (H) Trigonometry (1 Semester) 0.5 Credit

PREREQUISITE: A/B in 3320. This course is designed to prepare students to be successful in AP Calculus. A comprehensive treatment of trigonometry includes the six trig functions, the definitions and relationships between them, their graphs and inverses, solving triangle and vector problems, verifying identities and solving trig equations. Additional topics include exponential and logarithmic functions, matrices, conic sections, polar coordinates, parametric equations and complex numbers. This course is taken during the same year as (H) Pre-Calculus. Summer assignments are required. **☑NCAA**

3312 CP Pre-Calculus (1 Semester) 0.5 Credit

PREREQUISITE: 3311. This course is designed to prepare students to be successful in Calculus. The curriculum includes introducing exponential and logarithmic functions, polar coordinates and complex numbers and conics. Additional topics include sequences and series. **☑NCAA**

3322 (H) Pre-Calculus (1 Semester) 0.5 Credit

PREREQUISITE: A/B in 3321. This course prepares students to be successful in AP Calculus. The curriculum includes solving and graphing exponential and logarithmic functions, introduction to polar coordinates, analyzing rational functions, polynomial functions with complex numbers, and graphing and analyzing conic sections. Additional topics include introduction into limits and sequences and series. A graphing calculator is required for this class. This course is to be taken the same year as (H) Trigonometry. This course can be taken as a dual enrollment course with the College of Southern Maryland. **☑NCAA**

3430 (H) Calculus 1 Credit

PREREQUISITE: 3312 or 3322. This course is an introduction to calculus. Topics include limits, differentiation techniques (derivatives) and their applications, and an introduction to integration techniques. This course can be taken as a dual enrollment course with the College of Southern Maryland. Summer assignments are required. **☑NCAA**

3530 AP Statistics 1 Credit

PREREQUISITE: A or B in 3320. This course introduces students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. The five broad themes include: explaining data; observing patterns and departures from patterns; planning measurements; anticipating patterns by producing models using probability and simulation; and statistical inference guiding selection of appropriate models. AP course and testing fees apply; students are required to sit for the exam; summer work is required. **☑NCAA**

3534 AP Calculus AB 1 Credit

PREREQUISITE: A/B in 3321 and 3322. This course is a rigorous college-level introduction to calculus. The syllabus from The College Board AB Calculus course guidelines is followed. Topics include limits, differentiation techniques (derivatives) and their applications, integration techniques and

their applications. All students taking this course are expected to take the AP Calculus exam (AB version) in May; AP exam fees apply. Summer work is required. **NCAA**

3535 AP Calculus BC 1 Credit

PREREQUISITE: A/B in 3534. This course continues the work begun in AP Calculus AB. Additional topics include the study of conic sections, polar coordinates, vector functions, parametric functions, more advanced methods of integration, and infinite series. All students are required to take the AP Calculus exam (BC version) in May; AP exam fees apply. Summer work is required. **NCAA**

3413 Probability and Statistics (1 Semester) 0.5 Credit

PREREQUISITE: 3310. This is an elective course introducing combinations, permutations, independent and dependent events, probability and odds, frequency distribution and data analysis and their applications in real life. **NCAA**

3514 Accounting I (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. This elective course teaches students about preparing company financial statements at an introductory level. Topics include accounting terminology, concepts and procedures in recording, summarizing and analyzing accounting spreadsheets. Students planning to major in accounting, business or finance in college will get an introduction to key accounting concepts in this course.

3516 Personal Finance (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. Personal Finance is designed to help students understand the impact of individual choices on occupational goals and earnings potential. Topics of note will include income, money management, spending and credit, as well as saving and investing. Students will design household budgets; simulate use of checking and saving accounts; demonstrate knowledge of finance, debt and credit management; and evaluate and understand insurance and taxes. This course will provide a foundation for making informed personal financial decisions.

3517 Introduction to Business Math (1 Semester) 0.5 Credit

PREREQUISITES: 3210 or 3220. This course is an introduction to the core subject areas of business. Topics will include the economy, owning and operating a business, marketing, human resources, finance, career planning, credit and money management.

3520 (H) MATLAB (1 Semester) 0.5 Credit

PREREQUISITES: A in 3322. MATLAB is an integrated technical computing environment that combines numeric computation, advanced graphics and visualization, and a high-level programming language. MATLAB is widely popular in engineering, scientific and applied mathematical communities to perform numerical calculations and for its graphical capabilities. It provides a mathematical library for matrix operations, the solution of differential equations, data analysis and signal processing. **Students must provide their own laptop to run the MATLAB software and they must purchase the MATLAB software.** **NCAA**

HISTORY DEPARTMENT

4 credits required

Note: Summer assignments are assigned and graded in all courses.

4110 Ancient and Medieval History 1 Credit

PREREQUISITE: None. This is an in-depth survey of world history to A.D. 1500. Social and cultural history of the world's great civilizations is emphasized as well as their political and economic history. Geography of the world, writing and oral presentations are included. Students are expected to do readings and research beyond the textbook. **NCAA**

4120 Pre-AP World History 1 Credit

PREREQUISITE: HSPT. This ninth-grade, honors-level course focuses on the origins of humanity through present day. This course is the prerequisite for AP World History and the subsequent AP history courses. **NCAA**

4210 Modern World History 1 Credit

PREREQUISITE: 4110 or 4120. This is an in-depth survey of world history from 1500 to the present. Social and cultural history of the world's great civilizations is emphasized as well as their political and economic history. Geography, writing and oral presentations are included. Students are expected to do readings and research beyond the textbook. **NCAA**

4230 AP World History 1 Credit

PREREQUISITE: 4120. This course explores global patterns in the world's history from 10,000 BCE to the present. Students will compare movements and revolutions in history and assess their commonalities, connections, uniqueness, and how they served universal human needs. Students will construct arguments for three different types of essays: change over time, comparison/contrast, and analysis using documents. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4310 US History 1 Credit

PREREQUISITE: 4210 or 4230. This course is a study of our nation's history from the colonial period to modern day. It is designed to not only enhance students' conceptual and factual knowledge, but serve as a means of understanding ourselves as Americans and our nation's place in history. Emphasis will be placed on development of higher-level thinking and analysis skills, writing and research skills, and analysis of primary sources. The course includes long-range research projects and outside readings. **NCAA**

4330 AP US History 1 Credit

PREREQUISITE: 4230. This course is an in-depth look at the people, politics and social movements of our country through the extensive use of documents, outside reading assignments and student research. Emphasis will be placed on increasing the student's techniques of evaluating, refuting, comparing, contrasting, analyzing, documenting and supporting ideas verbally and in writing. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4410 American Government 1 Credit

PREREQUISITE: 4310 or 4330. Students will pursue a deeper understanding of the institutions of American government. Students will compare systems of government in the world today and analyze

the history and changing interpretations of the Constitution and the current state of the legislative, executive and judiciary branches of government. Students will investigate the principle of judicial review and how it affects the civil rights and liberties of all citizens. Students will prepare to assume the responsibilities of citizenship in a global society. **NCAA**

4430 AP American Government 1 Credit

PREREQUISITE: 4330. This course is designed to enable students to develop a critical perspective of government and politics in the United States. The nature of the American political system, its development over the past two centuries, and how it works today are examined. Both general concepts and specific case studies are stressed. Emphasis will be placed on the techniques of evaluating, analyzing and documenting supporting ideas. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4130 AP Human Geography 1 Credit

PREREQUISITE: None. In this rigorous college level course, students are introduced to the systematic study of patterns and processes that have shaped human understanding, and the use and subsequent alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. Students will interpret maps and analyze geospatial data, understand and explain the implications of associations and networks among phenomena in places, recognize and interpret the relationships among patterns and processes at different scales of analysis, define regions and evaluate the regionalization process, and analyze changing interconnections among places. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

SOCIAL SCIENCE DEPARTMENT

4130 AP Human Geography 1 Credit

PREREQUISITE: None. In this rigorous college level course, students are introduced to the systematic study of patterns and processes that have shaped human understanding, and the use and subsequent alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. Students will interpret maps and analyze geospatial data, understand and explain the implications of associations and networks among phenomena in places, recognize and interpret the relationships among patterns and processes at different scales of analysis, define regions and evaluate the regionalization process, and analyze changing interconnections among places. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4513 Logic/Critical Thinking (1 Semester) 0.5 Credit

PREREQUISITE: None. This spring semester course is an introduction to the basic concepts, principles and methods of argument analysis and evaluation, including deductive versus inductive reasoning, validity, soundness, truth tables, deductive proof, Venn diagrams, and probability and statistical reasoning. The curriculum may also include Aristotelian logic, algorithms, informal fallacies, and causal reasoning and scientific method. **NCAA**

4530 AP Psychology 1 Credit

PREREQUISITE: Juniors and seniors only. This elective course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students will be exposed to the psychological facts, principles and phenomena associated with each of the major subfields within psychology, as well as learn about the methods psychologists use in their science and practice. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4531 AP Macroeconomics (1 Semester) 0.5 Credit

PREREQUISITE: 3110 or 3120. This fall course provides a study of the principles of economics that apply to an economic system as a whole, with particular emphasis on the study of national income and price determination, as well as a familiarity with economic performance measures, economic growth and international economics. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4532 AP Microeconomics (1 Semester) 0.5 Credit

PREREQUISITE: 3110 or 3120. This spring course provides an understanding of economics as they apply to the functions of the individual decision makers, both consumers and producers, within the larger economic system. Primary emphasis is on the nature and functions of product markets, including the study of factor markets and the role of government in promoting efficiency and equity in economy. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

4534 AP Seminar 1 Credit

PREREQUISITES: Strong performance in Honors/AP level English and History courses; sophomores and above in the Scholars Programs or who will take four or more other AP courses to qualify for the AP Capstone Diploma. **This is the first of two AP Capstone courses designed to equip students with the independent research, collaborative teamwork and communication skills increasingly valued in colleges and beyond.** Students will explore the complexities of academic and real-world topics

using an inquiry framework. Practice with evaluating and understanding texts across multiple media will lead students toward the development of their own perspectives and then communicating these perspectives in various formats, including oral and visual presentations and essays. Ultimately the aim of the course is to empower students to analyze and appraise information with accuracy and precision in order to craft and communicate evidence-based arguments. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

4525 AP Research 1 Credit (coming in 2019)

PREREQUISITE: B or better in 4534. **This is the second of two AP Capstone courses designed to equip students with the independent research, collaborative teamwork and communication skills increasingly valued in colleges and beyond.** This course allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, students further the skills they acquired in AP Seminar by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000-5,000 words (accompanied by a performance, product, or exhibit where applicable) and a presentation with an oral defense.

4514 Speech/Public Speaking 0.5 Credit

PREREQUISITE: None. This elective will provide students with the techniques and skills needed to successfully address a group. Students will not only learn the necessary skills for successful public speaking, they will also learn about different types of speeches and how to prepare each type. This course will benefit all students, especially those pursuing careers in law, politics, medicine, education, and business.

5517 Intro to Philosophy (1 semester) 0.5 Credit

PREREQUISITE: None. Philosophy is an excellent field of subject for any career. You will be exposed to some of the greatest thinkers of mankind and learn from the ideas that have shaped our civilization. You will learn the tools necessary to be successful in whatever field you choose. Philosophy will give you a solid foundation to be a good person, to make wise decisions in life and to understand the principles of many other subject matters. For the Christian, it is the first step to pursuing a degree in Theology. This course will focus on giving students the fundamentals to take any collegiate level philosophy course with ease.

SCIENCE DEPARTMENT

3 credits required

5010 Integrated Science 1 Credit

PREREQUISITE: HSPT and Dean of Academics approval. This course is taught in conjunction with Pre-Algebra. Freshmen will be introduced to the core concepts in inquiry, the physical sciences, the life sciences, and the earth-space sciences. Topics include such areas as force and motion, properties of matter, chemical reactions, cell biology, body systems, ecosystems and space science. **NCAA**

5110 Conceptual Physics With an Algebra Base 1 Credit

PREREQUISITE: HSPT. This course presents physics from a conceptual point of view. The requirements are knowledge of basic mathematical principles and general science principles. This course will include many hands-on activities, and there is a large laboratory component to this course. Topics include mechanics, electricity, heat, light and waves. **NCAA**

5120 (H) Conceptual Physics With an Algebra Base 1 Credit

PREREQUISITE: HSPT and SMR Math Validation Test. This course covers the major topics in physics from a conceptual point of view. The requirements are knowledge of basic mathematical principles and general science principles. Laboratory participation and reports are required and constitute a major portion of the course grade. Topics include mechanics, electricity, heat, light and waves. **NCAA**

5210 Chemistry 1 Credit

PREREQUISITES: 5110 and 3110. This is a laboratory course developed for college preparatory students, covering the major topics in general chemistry, including organization of the periodic table, stoichiometry, phases of matter, solutions, chemical formulas and chemical reactions. Laboratory participation and reports are required and constitute a major portion of the course grade. **NCAA**

5220 (H) Chemistry 1 Credit

PREREQUISITES: A/B in 5120 and A/B in 3120; A in 5310; or ninth-grade placement in 3120. This is a laboratory course offering complete coverage of the major topics in general chemistry, including organization of matter, stoichiometry, phases of matter, solutions and chemical reactions. Concept development and mathematical formulation of chemical principles are emphasized equally. Laboratory participation and reports are required and constitute a major portion of the course grade. **NCAA**

5310 Biology 1 Credit

PREREQUISITE: 5210. This course encompasses the following topics: cell theory, evolution, genetics, homeostasis, animal physiology and the human body system. Included are the structures, function, growth, origin, evolution and distribution of living things. Classifications and descriptions of organisms, their functions, how species come into existence, and the interactions they have with each other and with the natural environment are also incorporated. **NCAA**

5320 (H) Biology 1 Credit

PREREQUISITE: A/B in 5220; A in 5210. This course offers complete coverage of the major topics in biology from cell theory to DNA technology. Hands-on lab work and in-class demonstrations show the relationship between textbook biology and applications in the real world. **NCAA**

5420 (H) Intro to Human Anatomy 1 Credit

PREREQUISITES: 5310; juniors and seniors only. This course will give students a working knowledge of the structure and functions of the human body. The emphasis will be on anatomy, but physiological functions will be included in class discussions and demonstrations. This class is designed for students who wish to pursue a health career and will be taking anatomy/physiology in college. **NCAA**

5423 (H) Intro to Microbiology (1 Semester) 0.5 Credit

PREREQUISITES: A/B in 5320; A in 5310; Honors Biology can be taken concurrently; juniors and seniors only.

This honors science elective will introduce the world of unicellular organisms, focusing on the relationship between humans and microorganisms, as well as the impacts of microbial disease, genetic engineering and biotechnology. **NCAA**

5424 (H) Organic and Biochemistry (1 Semester) 0.5 Credit

PREREQUISITES: A/B in 5320; A in 5310; Honors Biology can be taken concurrently; juniors and seniors only.

This honors science elective is an introduction to molecules in living organisms. The organic chemistry unit will focus on the characteristics of compounds that contain carbon, including the structure of a compound and its related function. The biochemistry unit will focus on compounds found in living organisms such as carbohydrates, proteins, lipids and nucleic acids. **NCAA**

5425 (H) Physics 1 Credit

PREREQUISITES: A/B 5220; A/B in 3320; or A in 3310. This class should be taken concurrently with Trigonometry and PreCalculus; juniors and seniors only. This is an algebra-based laboratory course covering the major topics in general physics. Concept development and mathematical formulation of classical physical principles are emphasized equally. Laboratory participation and reports are required and constitute a major portion of the course grade. Topics include mechanics, thermodynamics, fluids, waves, electricity and optics. **NCAA**

5530 AP Environmental Science 1 Credit

PREREQUISITES: A/B in 5320; A in 5310; Honors Biology can be taken concurrently; juniors and seniors only.

Environmental Science is a multidisciplinary science, and this course provides students with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and man-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

5534 AP Chemistry 1 Credit

PREREQUISITES: A/B in 5220. AP Chemistry is a laboratory course designed to be the equivalent of a general first-year college chemistry course. Emphasis is placed on concept development and mathematical formulation of chemical principles. Laboratory participation and laboratory reports constitute a significant portion of the course grade. Students in this course must have a strong background in science and mathematics as well as the ability to work well independently and in groups. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

5535 AP Biology 1 Credit

PREREQUISITES: A/B in 5220 and 5320. AP Biology covers material outlined as preparation for the AP Biology exam. It reflects the comprehensive “general biology” course given in college. This course requires a strong background in biology, chemistry and general mathematical calculations, and is designed for students who wish to pursue a career in the sciences. In-depth labs and lab write-ups are a major component. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

5436 AP Physics C Mechanics 1 Credit

PREREQUISITE: A/B in 3322/5425. Advanced Placement Physics C Mechanics is a laboratory course designed to be the equivalent of one semester of a first-year college physics course in a science or an engineering curriculum. Emphasis is placed on concept development and mathematical formulation of physical principles. Topics from classical mechanics including kinematics, dynamics, energy, rotation, and gravitation will be covered. Laboratory participation and laboratory reports constitute a significant portion of the course grade. Students in this course must have a strong background in science and mathematics as calculus will be used freely in formulating principles and solving problems. AP course and testing fees apply; students are required to sit for the AP Physics C Mechanics exam; summer work is assigned and graded. **NCAA**

5536 AP Physics C Electricity and Magnetism 1 Credit

PREREQUISITE: A/B in 3534 and 5425/5436. Advanced Placement Physics C Electricity and Magnetism is a laboratory course designed to be the equivalent of one semester of a first-year college physics course in a science or an engineering curriculum. Emphasis is placed on concept development and mathematical formulation of physical principles. Topics from electromagnetic theory including electricity, magnetism, and time-dependent circuits will be covered. Laboratory participation and laboratory reports constitute a significant portion of the course grade. Students in this course must have a strong background in science and mathematics as calculus will be used freely in formulating principles and solving problems. AP course and testing fees apply; students are required to sit for the AP Physics C Electricity and Magnetism exam; summer work is assigned and graded. **NCAA**

5510 Science Lab Aide 1 Credit

PREREQUISITE: Department chair approval required and successful completion of an upper-level chemistry and/or physics class. This is a graded unweighted yearlong science elective. Student will assist science teachers in assorted duties, which may include: gathering and organizing equipment, setting up labs, preparing solutions, cleaning and restocking glassware and filing.

5513 Oceanography (1 Semester) 0.5 Credit

PREREQUISITE: None. This science elective will encompass physical and chemical oceanography, in addition to a historical evaluation of events. Highlights include the study of the origin, evolution and extent of the oceans; waves, currents and tides, and plant and animal life of the sea; the nature and topography of the oceans; and the relationship between oceans and weather and climate. **NCAA**

5514 Marine Biology (1 Semester) 0.5 Credit

PREREQUISITE: 5513. This science elective is an introduction to organisms living in the saltwater ecosystem. Topics include marine ecosystems and organisms, incorporating physiology, behavior and ecology. Emphasis will be placed on marine environmental issues and the adaptive and evolutionary mechanism of organisms that allow them to occupy marine habitats. By the end of the course, students will be able to classify marine life based upon distinguishing characteristics and adaptations such as

taxonomic groups, identify 50 species of marine organisms, describe the major anatomical and physiological adaptations, and describe major marine communities and habitats.

5515 Independent Science Research 1 Credit

PREREQUISITE: Department chair approval. This course is designed for the serious science student interested in independent science research or experimentation. The student must be interviewed to be accepted into this course, and during that time the student must identify an area of study and possible course of action. Once accepted, the student will meet with an advising teacher at least twice (during X-Hour) and must agree to a minimum of supervised hours. The student and teacher will sign a contract for academic expectations and grading. Participation in the St. Mary's County Science and Engineering Fair is required as well as a summative report at the end of the year. Research in consecutive years must show significant progress. **NCAA**

5516 Forensic Science (1 Semester) 0.5 Credit

PREREQUISITES: 5210 or 5220 and 5310 or 5320; 5310 may be taken concurrently. This science elective is designed as an introduction to the science of analyzing crime scenes and solving crimes. Case studies will be used to introduce topics and provide background information. Procedures and practices for forensic sciences will be studied and explored experimentally. Topics include fingerprinting, DNA fingerprinting, forgery, counterfeiting, blood typing and analysis. **NCAA**

5540 (H) Principles of Biomedical Science 1 Credit

PREREQUISITE: Placement in the Scholars Biomedical Science Program. **This is the first of four Project Lead the Way biomedical courses.** In this introductory course of the Scholars Biomedical Science Program, students will explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students will examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine and research processes while allowing them to design their own experiments to solve problems. **NCAA**

5544 (H) Introduction to Engineering Design 1 Credit

PREREQUISITES: Placement in Scholars STEM Engineering Program. **This is the first of four Project Lead the Way engineering courses.** This course is designed to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. Students will investigate solutions to proposed problems and learn how to document their work and communicate solutions.

5545 (H) Principles of Engineering 1 Credit

PREREQUISITES: 5544; placement in Scholars STEM Engineering Program. **This is the second of four Project Lead the Way engineering courses.** Through problems that engage and challenge, students will explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students will develop skills in problem solving, research and design while learning strategies for design process documentation, collaboration and presentation. **NCAA**

5546 (H) Human Body Systems 1 Credit

PREREQUISITES: 5540; Placement in Scholars Biomedical Science Program. **This is the second of four Project Lead the Way biomedical courses.** Students will examine the interactions of human body systems as they explore identity, power, movement, protection and homeostasis in the body. Exploring science in action, students will build organs and tissues on a skeletal manikin; use data acquisition

software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

5547 (H) Medical Interventions 1 Credit

PREREQUISITES: 5546; Placement in Scholars Biomedical Science Program. **This is the third of four Project Lead the Way biomedical courses.** This course allows students to investigate the variety of interventions involved in the prevention, diagnosis, and treatment of disease as they follow the lives of a fictitious family. A “How-To” manual for maintaining overall health and homeostasis in the body, the course will explore how to prevent and fight infection, how to screen and evaluate the code in our DNA, how to prevent, diagnose, and treat cancer, and how to prevail when the organs of the body begin to fail. Through these scenarios students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Lifestyle choices and preventive measures are emphasized throughout the course as well as the important role that scientific thinking and engineering design play in the development of interventions of the future.

5548 (H) Aerospace Engineering 1 Credit

PREREQUISITES: 5545; placement in Scholars STEM Engineering Program. **This is the third of four Project Lead the Way engineering courses.** This course deepens the skills and knowledge of an engineering student within the context of atmospheric and space flight. Students explore the fundamentals of flight in air and space as they bring the concepts to life by designing and testing components related to flight such as an airfoil, propulsion system, and a rocket. They learn orbital mechanics concepts and apply aerospace concepts to alternative applications such as a wind turbine and parachute.

WORLD LANGUAGES

3 sequential credits required

6115 French I 1 Credit

PREREQUISITE: None. This course is designed for students who have no previous exposure to French. Students are introduced to French pronunciation, basic vocabulary and fundamental sentence structures in the French language. Students acquire basic skills in listening, speaking, reading and writing in the target language. French customs, culture and everyday life in French-speaking countries are also highlighted. **NCAA**

6215 French II 1 Credit

PREREQUISITE: 6115. French II is a continued study of the language and culture of the French-speaking world. This course emphasizes the development of listening, speaking, reading and writing skills in the target language. Grammar skills will be expanded on and students will be able to apply their vocabulary skills from French I. Application of those skills through multimedia and increasingly independent work will be a strong point of the course. Summer work is assigned and graded. **NCAA**

6225 (H) French II 1 Credit

PREREQUISITE: B+ or better in 6115 or teacher recommendation. This course is designed to help students wishing to pursue their study of the French language and culture in advanced French courses, including Honors French III and AP French. French II is the continued study of the language and culture of the French-speaking world. This course emphasizes the development of listening, speaking, reading and writing skills in the target language. Grammar skills will be expanded on and students will be able to apply their vocabulary skills from French I. Application of those skills through multimedia and increasingly independent work will be a strong point of the course. This course operates at an accelerated pace. Independent learning and summer work are required. **NCAA**

6315 French III 1 Credit

PREREQUISITE: 6215 or 6225. This course continues to develop listening, speaking, reading and writing skills while learning new verb tenses, more in-depth vocabulary, writing short essays, reading articles and working with multimedia. Students will also develop their understanding of the products and practices of French and Francophone cultures. Summer work is assigned and graded. **NCAA**

6325 (H) French III 1 Credit

PREREQUISITE: A in 6215 or B+ or better in 6225. This course is a third-year French language course designed for highly motivated students who plan to continue to AP French. There is a continued emphasis on oral communication, vocabulary and grammar acquisition as well as cultural understanding. This course operates at an accelerated pace. Independent learning and summer work are required. **NCAA**

6435 AP French 1 Credit

PREREQUISITE: B+ or better in 6325. Students will prepare for and take the AP French Language and Culture exam. They will use a variety of sources (audio, literature, newspapers, videos, essays and journals) to enable them to perform well in the reading, writing, listening and speaking sections of the exam. The course involves a major investment of time and effort to prepare for the exam. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

6110 Spanish I 1 Credit

PREREQUISITE: None. This first-year course in Spanish language is based on the study of the building blocks of the language. This course encourages students to use vocabulary, language structures and grammar and to apply these concepts through interactive work, skits, presentations, interviews and story creation. This course also exposes students to Hispanic culture through readings, video presentations and projects. **NCAA**

6210 Spanish II 1 Credit

PREREQUISITE: 6110. Spanish II is a great way to expand your knowledge of the language, culture and history of the Spanish-speaking world. Through a variety of independent work incorporating technology and multimedia, students will gain proficiency in Spanish in four key areas: listening, speaking, reading and writing. Vocabulary from previous years of Spanish will be used in expanded grammar learning so students will be able to express themselves more fully and creatively in Spanish. Summer work is assigned and graded. **NCAA**

6220 (H) Spanish II 1 Credit

PREREQUISITE: B+ or better in 6110. Students will learn theme-based vocabulary and will integrate that vocabulary with grammatical concepts in real-life situations through writing stories, creating projects, giving formal and informal presentations, and through image descriptions. This course will be taught at a faster pace than the college prep level and will include additional grammatical topics, vocabulary themes and reading passages. This course is offered in preparation for AP Spanish. Summer work is assigned and graded. **NCAA**

6310 Spanish III 1 Credit

PREREQUISITE: 6210 or 6220. This course expands vocabulary and refines structural usages of grammar, all while making connections to Latin American and Spanish cultures. Oral communication is emphasized through group conversations, role-play, video projects and presentations, with the goal of improving students' abilities to more confidently and clearly express their ideas and opinions in Spanish. A focus is also placed on written communication, allowing students to use vocabulary and grammar studied in class to write short stories and essays. Summer work is assigned and graded. **NCAA**

6320 (H) Spanish III 1 Credit

PREREQUISITE: A in 6210 or B+ or better in 6220. This course is designed to help students prepare for AP Spanish. Emphasis will be on impromptu speaking, expanded reading, timed writing, and detailed listening to further students' proficiency. Advanced grammar and specific vocabulary will be introduced. Application of those skills through multimedia and increasingly independent work will be a major emphasis of the course. Summer work is assigned and graded. **NCAA**

6521 (H) Spanish Culture and Conversation (Fall semester) 0.5 Credit

PREREQUISITE: B+ or better in 6310, 6320 or 6430. Spanish Culture and Conversation will focus on the exploration of different cultures within the Spanish-speaking world. Take a virtual trip to countries through Central America, South America and Europe, exploring their everyday life, cultural celebrations, belief structures and history. Students will participate in a Hispanic Heritage Month showcase as a project for the course. Conversing about cultural topics and interpersonal communication will be a major focus of the course. **NCAA**

6522 (H) Spanish Arts Survey and Current Events (Spring semester) 0.5 Credit

PREREQUISITE: B+ or better in 6310, 6320 or 6430. Spanish Arts Survey and Current Events will seek to expand students' world views through comparative studies of all types of arts and current events in the Spanish-speaking world today. Literature and art will come alive in this course, and students will receive support in expanding vocabulary as it relates to our arts and events. Reading, writing, listening and speaking skills will be expanded through this multimedia course. ☑

6430 AP Spanish Language and Culture 1 Credit

PREREQUISITE: B+ or better in 6320 or A/B in both Spanish electives (6521, 6522). The AP Spanish Languages and Culture course, which is designed around themes, takes a holistic approach to language proficiency. The students will use a variety of sources (audio, literature, newspapers, videos, essays and journals) to enable them to perform well in the reading, writing, listening and speaking sections of the exam. They are expected to apply learned language structures in context through meaningful conversation. Approximately 90 to 95 percent of the instruction and student participation is required to be in the target language. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. ☑**NCAA**

6114 Latin I 1 Credit

PREREQUISITE: None. This first-year program introduces the forms, syntax and vocabulary of the Latin language in a systematic fashion. Through the study of Latin, students will also be able to master the grammar/syntax principles in the English language. Students will discover the influence of Latin on the modern world and read about the culture and civilization of Rome. ☑**NCAA**

6214 Latin II 1 Credit

PREREQUISITE: 6114. This course continues to stress the basic skills of the Latin language: declensions, conjugations and expansion of vocabulary in both Latin and English. Greater emphasis is placed on the reading and translation of Latin into English, especially works from the late Roman Empire and medieval authors. Summer work is assigned and graded. ☑**NCAA**

6224 (H) Latin II 1 Credit

PREREQUISITE: B+ or better in 6114. This course continues to stress the basic skills of the Latin language: declensions, conjugations and expansion of vocabulary in both Latin and English. Greater emphasis is placed on the reading and translation of Latin into English, especially important mythological stories and works from the late Roman Empire and medieval authors. Summer work is assigned and graded. ☑**NCAA**

6314 Latin III 1 Credit

PREREQUISITE: 6214. This course will stress further skills of syntax and grammar and emphasize the translation of Latin literature into English. Samples of Cicero and other Golden Age prose authors will be considered. Summer work is assigned and graded. ☑**NCAA**

6324 (H) Latin III 1 Credit

PREREQUISITE: A in 6214 or B+ or better in 6224. This course will cover sophisticated levels of syntax and grammar and emphasize the translation of Latin literature into English. Samples of Ovid and other Golden Age prose and poetry authors will be considered. Coursework will include preparation for AP Latin. Summer work is required. ☑**NCAA**

6434 AP Latin 1 Credit

PREREQUISITE: B+ or better in 6324. This course will use a variety of methods to read and evaluate “The Aeneid” of Virgil and the “de Bello Gallico” of Julius Caesar. In addition to close translation and advanced grammar, students will learn to analyze and apply the themes of leadership, cultural differences, mythology, war and empire. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded. **NCAA**

6116 Chinese I 1 Credit

PREREQUISITE: None. This course introduces students to the very fundamental knowledge of the Chinese language through listening, speaking, reading and writing. Students will not only discover a totally different and very interesting language but also expand their knowledge of the rich culture and long history of China. **NCAA**

6226 (H) Chinese II 1 Credit

PREREQUISITE: 6116. This course is for students who have successfully finished Chinese I or have an equivalent Chinese language level. It will continue to develop the student’s ability of listening, speaking, reading and writing in Chinese. It will continue to build the Chinese vocabulary and introduce the grammar rules for sentence structures. Summer work is assigned and graded. **NCAA**

6326 (H) Chinese III 1 Credit

PREREQUISITE: 6226. This course is a continuation of the understanding of the Chinese language both written and spoken. In addition to the basic four language skills, students will refine their skills in the tone pronunciation, phraseology, character development and writing techniques. Grammar will be taught more systematically and will emphasize the structures unique to the Chinese language. Summer work is assigned and graded. **NCAA**

6426 (H) Chinese IV 1 Credit

PREREQUISITE: 6326. This advanced course is a continuation and intensification of skills learned in Chinese III. As the Chinese levels advance, the topics in our textbook become more challenging, and more complex language contents are introduced. Students are expected to develop more advanced conversational ability and writing skills. Summer work is assigned and graded. **NCAA**

6111 Introduction to World Cultures (1 Semester) 0.5 Credit

PREREQUISITES: Grade 9 only. HSPT and Dean of Academics’ approval required. This elective course offers an exciting view of world cultures detailed through the study of the development of geographic literacy. The cultures covered will be regionally based with an emphasis on geography, traditions, customs, food, art, music, dress and other elements of deep and surface culture. Historical and contemporary culture will be explored while also comparing and contrasting one’s own culture. This course will be offered dependent upon enrollment.

6112 Introduction to World Languages (1 Semester) 0.5 Credit

PREREQUISITES: Grade 9 only. HSPT and Dean of Academics’ approval required. This elective course is an introduction to four to six different languages from across the globe. Essential phrases, alphabets, and numbers will be covered. Listening, speaking, reading and writing will help students with language acquisition and will be incorporated into each language studied. This course will be offered dependent upon enrollment.

6510 English for Speakers of Other Languages (ESOL) 1 Credit

PREREQUISITE: Placement by Director of International Programs. This is the first tier of the international student program course, which will include developing and enhancing reading, writing, listening and English speaking skills. This course is a world language graduation requirement credit for international students in the ESOL program. ☑

6511 (H) Advanced English for International Students 1 Credit

PREREQUISITE: 6510. This course is the second tier of the ESOL program. This yearlong course is designed to examine, review and prepare for the TOEFL iBT. The course will enhance reading, writing, listening and speaking skills to reinforce the student's overall knowledge of English for both high school and college requirements. Successful completion of this course satisfies the World Language graduation requirement for international students. International students will then be encouraged, but not required, to choose a world language for further study. ☑

FINE ARTS

1 credit required

Performing Arts

Music

7114 Music Appreciation (1 Semester) 1 Credit

PREREQUISITE: None. This course will focus on the appreciation and understanding of a variety of styles of music as well as music history. Students will develop skills to speak analytically and intelligently about music. No previous music study is necessary. ☑

7214 Beginning Guitar (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This fine arts elective provides introductory classroom instruction in basic guitar playing, including technique, music reading, melodic/harmonic playing, stage etiquette and ensemble performance.

7314 Beginning Keyboarding (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This fine arts elective provides introductory classroom performance instruction in basic keyboard playing, including technique, music theory, music reading, chords, scales, stage etiquette and ensemble performance.

7245 AP Music Theory 1 Credit

PREREQUISITE: Performing arts course or permission from the instructor. This yearlong course is an in-depth study of the language of Western music and is designed for the serious music student. Students will develop skills in musical terminology, music notation, counterpoint, basic compositional skills (four-part choral writing/realization of figured bass), score analysis (melodic, harmonic, rhythmic, textual and formal), and aural skills (melodic, harmonic dictation, sight-singing, error detection, and music contextual identification). AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

7518 Drum Circle (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This fine arts elective is designed to introduce students to instruction in world percussion and other forms of percussion, including technique, music reading, world music styles, world cultures in relation to music, stage etiquette and ensemble performance.

Theater

7115 Theater Appreciation (1 Semester) 1 Credit

PREREQUISITE: None. Theater Appreciation is an introductory study of theater. Students will study theatrical vocabulary, evaluation of live productions, playwrights, play production, theater history and beginning acting technique. ☑

7215 Acting I (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This elective course is designed to familiarize students with fundamental on-stage acting skills. Students will study techniques in acting and characterization connected to in-class performances and school productions. Students will perform short pieces of theater within the classroom setting.

7315 Technical Theater (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This elective course is a fundamental study of technical theater elements. Students will have the opportunity to learn the foundational skills focusing on set design, lighting, costumes and construction for the theater. Students will have the opportunity for hands-on work in all areas.

7410 Stage Guild 0.5 Credit (scheduled twice weekly during X-Hour; full year course)

PREREQUISITE: Sophomores, juniors, seniors. This elective highlights the technical side of the theater, such as lighting, sound and set construction. Students must be committed to working at the fall and spring theatrical productions and provide support for school-related auditorium events. Students must register for both X-Hour meeting days.

7415 Film and Media Studies 0.5 Credit

PREREQUISITE: 7113/7114/7115. This fine arts elective provides students with an introduction to the film industry and offers opportunities to write, create, and edit film. Students will learn about movie genres, basic storytelling techniques, camera terminology and editing terminology. iMovie skills will be taught for the iPad.

Band / Orchestra

7610 Concert Band 1 Credit

PREREQUISITE: Ability to play a band instrument. This course is meant as an extension of elementary and middle school band programs. Students will be challenged with more difficult repertoire and ensemble techniques and will be taught to expand upon their existing musical knowledge and instrumental technical ability. Attendance at all performances is required; private lessons are encouraged. ☑

7614 (H) Jazz Band 0.5 Credit (scheduled twice weekly during X Hour; full year course)

PREREQUISITE: Audition. Open to all students; ensemble is selected by audition every year. Ensemble will be limited to two alto saxophones, two tenor saxophones, one baritone saxophone, four trumpets, four trombones, one pianist, one bassist, two guitars and two percussionists. All students must be comfortable with reading standard music notation and have a well-developed, concrete knowledge of their instruments. Class meets twice each week during X-Hour.

7615 (H) String Orchestra 1 Credit

PREREQUISITE: Ability to play an orchestral string instrument. The orchestra consists of instruments of the string family: violin, viola, cello and double (string) bass. The students will be challenged with more difficult repertoire and ensemble techniques and will be taught to expand upon their existing musical knowledge and instrumental technical abilities. Attendance at all performances is required; private lessons are encouraged. ☑

7620 (H) Concert Band 1 Credit

PREREQUISITE: By audition only. Requirements include performing all major scales at least one octave. Percussion must demonstrate proficiency in rudiments. Students will be challenged with more difficult repertoire and ensemble techniques and will be taught to expand upon their existing musical knowledge and instrumental technical ability. Attendance at all performances is required; private lessons are encouraged. ☑

Choir

7710 Chorus 1 Credit

PREREQUISITE: None. Open to all students. This course is designed to give students the opportunity to perform in a vocal ensemble in liturgical and secular settings. Students are instructed in proper singing techniques and basic music theory. Many different musical forms and styles are performed, ranging from Christian rock, Gregorian chant, pop and gospel. Students will be encouraged to participate in All-State, Solo and Ensemble Festival, Catholic University Honors Chorus, and the Tri-M Music Honor Society. This class requires after-school, evening and weekend performances, as well as some trips. Black dresses are required for ladies and tuxedos are required for men. The class may be repeated for credit. (Students must register for Chorus X-Hour.) ☑

7720 (H) Show Choir 1 Credit

PREREQUISITE: Audition. This course gives students the opportunity to perform contemporary worship music, musical theater and vocal jazz as a select showcase ensemble. Show Choir will require after-school, evening or weekend performances as well as trips, outreach and publicity events. Students are encouraged to participate in Solo and Ensemble and Honors Chorus Tri-M Honor Society. ☑
Dance

7910 Dance I 1 Credit

PREREQUISITE: None. This performance-oriented course is for freshman and sophomore dancers who want to develop performance skills, expand knowledge of multiple styles of dance, and begin to develop choreography skills. This course will teach fundamentals of ballet and jazz, terminology and technique. Human anatomy related to dance and stage skills will be covered. This course may be repeated for credit with instructor permission. ☑

7920 Dance II 1 Credit

PREREQUISITE: Audition and instructor permission. This performance-oriented class is for advanced dancers with demonstrated skill in at least two styles of dance who may be interested in pursuing dance at a college level. The course provides opportunities to improve dance technique, musicality and performance skills in multiple styles of dance. Styles may include classical ballet, pointe, jazz, contemporary and modern, as well as street-influenced styles such as hip-hop. Students will learn existing choreography and develop choreography skills for groups. Students will have teaching experiences throughout the year. Human anatomy as it pertains to dance, common dance injuries, nutrition and dance history will be covered. Theater skills needed for staging and performance will be covered. This course may be repeated for credit. This course satisfies the Physical Education requirement for graduation.

7930 (H) Dance III 1 Credit

PREREQUISITE: 7920 and instructor permission. Students will demonstrate advanced skill competency in at least three styles of dance. Building on all topics covered in Dance II, course material will cover technique, musicality and performance. Additional topics covered will include choreography, class design and teaching, injury prevention, anatomy and nutrition. Students at this level may be considered for duo or solo pieces, may contribute to choreography for other classes, and will be responsible for technical aspects of one major performance each year. This course may be repeated for credit.

Visual Arts

7113 Introduction to Visual Art (1 Semester) 1 Credit

PREREQUISITE: None. This class offers many possibilities to students of all levels of artistic ability. Our goal is to tie together the many aspects that constitute art to create a more comprehensive integral learning experience within the studio. These aspects are: the creative studio experience (making art), art history/culture (looking at art), aesthetic perceptions (student thoughts about art), art criticism and evaluation (your thoughts about your art/other art and why), links to other disciplines and experiences (how art relates to everything else) and future careers and endeavors (how you can use art in the future). ☑

7213 Studio I 1 Credit

PREREQUISITE: 7113 (A or teacher recommendation required). This course is for dedicated art students wishing to develop their current skills and their portfolio for AP Studio Art. Assignments encourage working from observation and perception as well as addressing conceptual ideas, visual analysis and where they fit in the art history spectrum. Media include drawing, painting, 2-D design, photography and printmaking. Regular critiques and readings will be assigned. Students will leave class with a foundational portfolio upon which they can build their future.

7330 AP Art History 1 Credit

PREREQUISITE: 7113. This course explores major forms of artistic expression, including architecture, sculpture, painting and other media from across a variety of cultures. Students will learn about the purpose and function of art as they develop the ability to articulate visual and art historical concepts in verbal and written form. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

7430 AP Studio Art 1 Credit

PREREQUISITE: A/B in 7213. This course is for serious art students who plan to continue their education in the field of art. Students can choose from the Drawing and 2-D Design Portfolios. This course requires outside assignments well beyond the normal expectations of the classroom studio experience. Students are required to complete the AP Portfolio submission in May. A fee for portfolio photography may be required. AP course and testing fees apply; summer work is assigned and graded.

7513 Drawing (1 Semester) 0.5 Credit

PREREQUISITE: 7113. This course is for both the beginning and advanced student. The emphasis is on learning to visualize and imagine like an artist. Students will learn through observational work as well as regular class critiques to develop critical analysis and their own artistic expression. Different media will be explored as well as contemporary and classical techniques.

7514 Photography (1 Semester) 0.5 Credit

PREREQUISITE: 7113. This is an introductory course in black-and-white darkroom photography concentrating on the use of 35 mm cameras. Topics include the “lens-less” techniques of photograms and pinhole photography, fundamental printing procedures, and the principles of film exposure and development. Assignments encourage the variety of picture-forms that 35 mm cameras can uniquely generate. Student work is discussed in regular critiques. Readings examine the invention of photography and the role of photography in the world, both past and present. Note: Students will need to furnish their own fully manual 35 mm SLR (single lens reflex) film camera.

7516 Painting (1 Semester) 0.5 Credit

PREREQUISITE: 7113. This fine arts elective is designed for both the beginner and the more advanced student. This class introduces students to classical and contemporary painting techniques and concepts with emphasis on the understanding of its formal language and the fundamentals of artistic expression. Students will paint from still-life, landscape, interiors and models. Work from observation will be geared toward realism with the introduction of abstract concepts. Color theory, linear perspective, composition, figure/ground relationships, spatial concepts and critical analysis will all be emphasized. Students will study and research major painting styles and movements in historical context. Demonstrations, slide lectures, and group and individual critiques will be given throughout the course. We will use acrylic paint and watercolor.

7517 Graphic Design (1 Semester) 0.5 Credit

PREREQUISITE: 7113. This course explores the fundamental principles and elements of art and graphic design through a series of assignments and critiques, short readings, class discussions and lectures. The emphasis is on developing students' ability to skillfully control basic design elements such as line, shape, color, type and image to communicate meaning and values. The assignments are designed to lead to the development of an accomplished body of artistic work as well as critical thinking and analysis that lays a solid foundation for future work. Sample assignments include but may not be limited to: book jackets and posters, branding and logos, motion graphics including film and television title sequences, advertisements and packaging design. Graphic Design incorporates computers in virtually every step of the design process, including the use of *Photoshop*, *InDesign*, and *Illustrator*.

7519 Ceramics (1 Semester) 0.5 Credit

PREREQUISITES: 7113; seniors only. This course will introduce hand-building techniques: pinchpot, coil-building and slab-building as well as some work on the wheel. The emphasis is on three-dimensional thinking and planning as well as process.

HEALTH AND PHYSICAL EDUCATION

1 credit required

8113 Physical Education (1 Semester) 1 Credit

PREREQUISITE: None. This course develops and acquaints students with various team sports, including soccer, flag football, lacrosse, softball, track, basketball, volleyball, floor hockey and wrestling. CPR and other health topics also will be addressed. ☑

8213 Weight Training I (1 Semester) 0.5 Credit

PREREQUISITE: 8113. Students will learn circuit training as well as how to develop and make the most of a strength training regimen. *This course cannot be repeated.*

8214 Lifetime Sports (1 Semester) 0.5 Credit

PREREQUISITE: 8113. This course acquaints students with lifetime activities including badminton, golf, volleyball, handball, archery and fencing. *This course cannot be repeated.*

8313 Health and Nutrition (1 Semester) 0.5 Credit

PREREQUISITE: 8113. This course covers a variety of health-related subjects, including emotional health, nutrition, fitness, substance use and abuse, injury prevention and safety, and personal wellness.

8413 Physical Education Assistant (1 Semester) 0.5 Credit

PREREQUISITES: 8113, 8213 and approval of PE instructor; seniors only. The student will be responsible for aiding the physical education instructor during structured classes. This will include developing skills and officiating as well as equipment management.

8513 Athletic Training (1 Semester) 0.5 Credit

PREREQUISITE: Open to students in grades 10, 11, and 12. In this course, students will gain insight into the sports medicine field with a primary focus on athletic training. Students will learn to prevent, treat and evaluate athletic injuries while maintaining an efficient and professional athletic training facility. Topics will include emergency procedures, concussions, basic anatomy and creating treatment plans. Students will complete multiple research projects and also have the opportunity to attain CPR and first-aid certification through the American Red Cross.

COMPUTER SCIENCE

1 credit required

9113 Computer Applications (1 Semester) 1 Credit

PREREQUISITE: None. Students will use current productivity software to apply academic concepts in the creation of meaningful desktop and cloud-based artifacts, projects, and presentations. Students will become effective communicators and collaborators as they exhibit proficiency utilizing word processing, spreadsheet, and presentation software applications. ☑

9114 Computing Concepts (1 Semester) 1 Credit

PREREQUISITE: None. This class introduces traditional computer concepts. Students will learn about digital technologies, the Internet and its many uses, computer hardware, operating systems of a computer, application software, communications and network technologies, the social Web and digital security. ☑

9115 Digital Photo Editing (1 Semester) 1 Credit

PREREQUISITE: None. For students with an interest in graphic design or those with novice design skills, Digital Photo Editing provides instruction on how to use Adobe Creative Cloud to create professional-looking images for both print and the Web. In this course, students will identify the components of the Photoshop environment, learn the differences between raster and vector graphics, and use the Photoshop toolbox and palettes. Students will explore various methods of selecting image areas and will learn how to modify and manipulate selections. In addition, students will learn how to work with text, layers and layer effects; how to adjust, retouch and resize images; and how to prepare images for printing and the Web. ☑

9143 Introduction to Computer Science 1 Credit

PREREQUISITE: Placement in the Scholars Computer Science Program. **This is the first of four Project Lead the Way Computer Science courses.** Students will learn fundamental computer science concepts and will develop computational thinking by applying computer science to collaboration tools, modeling and simulation, and data analysis. The students will extend their understanding of programming gained using MIT App Inventor to text-based programming in Python and apply their knowledge to create algorithms for games of chance and strategy. ☑

9213 Web Development (1 Semester) 0.5 Credit

PREREQUISITE: 9113, 9114, 9115 or 9143. Students will learn how to create and modify websites by using HTML5 and CSS3. Using CSS3, students will learn how to control the presentation of content using font properties, text formatting, padding, margins, borders and more.

9215 Computer Programming Animation (1 Semester) 0.5 Credit

PREREQUISITE: 9113, 9114, 9115 or 9143. This course introduces students to logical thinking and object-oriented computer programming. Students will create animation projects using Alice and Scratch. These software packages teach object-oriented programming in a less syntax-intensive and highly motivating environment. Although designed for the novice programmer, the course may also be taken by more advanced students.

9313 Introduction to Programming (1 Semester) 0.5 Credit

PREREQUISITES: 9113, 9114, 9115 or 9143. This course provides an introduction to programming for learners with little or no programming experience. It aims to provide students with an

understanding of programming fundamentals such as writing methods, creating loops and conditional behavior. Students will explore solving problems, understanding code and writing computer programs.

9513 Tech Squad (1 Semester) 0.5 Credit

PREREQUISITE: Grades 10, 11 or 12; 9113, 9114, 9115 or 9143. Students will develop the skills necessary to work with technology consumers in a variety of fields as they learn to assess and formulate solutions for relevant case study problems. Students will learn how to diagnose technological problems, understand why a fix works, understand what to do if a fix doesn't work, how to prioritize projects and work as a team. Students will use WordPress to create posts, articles and videos that will provide real-time tech assistance to SMR students and teachers. Successful completion of this course will allow students to take part in Tech Squad internships.

9216 Introduction to Video Game Design (1 Semester) 0.5 Credit

PREREQUISITES: 9113, 9114, 9115 or 9143. This course will introduce students to the theory and application of video game design. Students will create video games in a game development engine. They will also learn the theory behind good game design, including the use of game rules to enhance gameplay. Topics include the history of game development, player motivation, game elements, storytelling, characters, game play, level design, interface design, audio, project management, production, marketing and maintenance.

9430 AP Computer Science Principles 1 Credit

PREREQUISITE: 9143 or 9215 or 9313. AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. This course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns and computing impacts. The course will give students the opportunity to use technology to address real-world problems and build relevant solutions. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

9434 AP Computer Science A 1 Credit

PREREQUISITE: 9430. In AP Computer Science A, students will learn how to use Java to develop computer programs that solve a given problem. This course also includes the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods, as well as the responsible and ethical use of these systems. AP course and testing fees apply; students are required to sit for the exam; summer work is assigned and graded.

BUSINESS & INTERNSHIPS

3514 Accounting I (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. This elective course teaches students about preparing company financial statements at an introductory level. Topics include accounting terminology, concepts and procedures in recording, and summarizing and analyzing accounting spreadsheets. Students planning to major in accounting, business or finance in college will get an introduction to key accounting concepts in this course. ☑

3516 Personal Finance (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. Personal Finance is designed to help students understand the impact of individual choices on occupational goals and earnings potential. Topics include income, money management, spending and credit, as well as saving and investing. Students will design household budgets; simulate use of checking and saving accounts; demonstrate knowledge of finance, debt and credit management; and evaluate and understand insurance and taxes. This course will provide a foundation for making informed personal financial decisions. ☑

9400 Senior Internship (1 Semester) 0.5 Credit

PREREQUISITE: Seniors only; application process with limited enrollment. Internship Coordinator approval is required. The SMR internship is a privilege that allows seniors to experience working in an area that may be of interest as a career. The student must propose the area of work and a possible mentor. The student will work 10 hours per week (unpaid). Semester grade will be based on a PowerPoint presentation or written paper that has been approved by the mentor and SMR prior to mid-semester. The Senior Internship is not a work-release program; it is designed to demonstrate the student's ability to extend learning beyond traditional academics and, upon approval, may be repeated for a second semester.

3517 Introduction to Business Math (1 Semester) 0.5 Credit

PREREQUISITES: 3210 or 3220. This course is an introduction to mathematics as it applies to core subject areas of business. Topics will include loans, investments, business purchasing and inventory, and business sales and marketing. ☑

9514 Office Assistant 0.5 Credit

PREREQUISITE: Seniors only. Students have the opportunity to work for various departments and offices within the school to gain practical experience in office procedures. Pass/Fail course.

ONLINE COURSES

Special Registration Period: April 2018

Physical Education 1 Credit

PREREQUISITE: None. This course parallels the SMR PE curriculum, providing students with an increased awareness of personal fitness and a better understanding of health and a healthy lifestyle. Students participate in pre- and post-fitness assessments in which they measure and analyze their own levels of fitness based on the five components of physical fitness: muscular strength, endurance, cardiovascular fitness, flexibility and body composition. Students research the benefits of physical activity, as well as the techniques, principles and guidelines of exercise to keep them safe and healthy. Successful completion of this course satisfies the graduation requirement at SMR. ☑

Computer Applications 1 Credit

PREREQUISITE: None. Students will use current electronic media and software to apply academic concepts in the creation of meaningful projects and presentations. Students will become effective communicators and collaborators as they exhibit proficiency in tiered levels of technology productivity. ☑

Fine Arts Appreciation 1 Credit

PREREQUISITE: None. This course is an introduction to the visual arts. Students will explore the different types of visual art, a brief history of art, and elements of art, while researching the lives and works of famous artists. Successful completion of this course satisfies the fine arts graduation requirement at SMR. ☑

American Short Stories 1 Credit

PREREQUISITE: None. This course will use Richard Ford's "The Granta Book of the American Short Story: Volume 1" to survey and chronicle American short fiction from the early 20th century onward. It will cover authors such as Vonnegut, Cheever, Updike, Wolff, Welty, Carver, O'Connor and Beattie. Weekly lecture material – both written and audio – will be posted online as will the weekly readings, discussion board postings, quizzes and essays about the readings. The quizzes will be taken on Quia.com, and essays will be constructed using outside sources to support one's arguments. ☑ **NCAA**

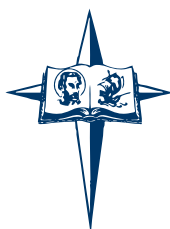
Mary, Mother of God 1 Credit

PREREQUISITE: None. She is the subject of more artwork than any woman in history, yet most of her life is unknown. Why would God's entrance into humanity depend on the consent of a poor Jewish woman? Why do Catholics hold Mary in such high esteem? This course will examine the theology of the Blessed Virgin Mary, the Mother of Jesus Christ. It will examine how Mary is presented in the New Testament, how she is foreshadowed in the Old Testament, and how our understanding of her identity has developed over time. In addition to extensive biblical exegesis, the course will examine some of the major Marian apparitions and connect them to what the Church already teaches about Mary through Scripture and Tradition. Students will also delve into Marian spirituality and devotion. ☑

St. Mary's Ryken is one of the 13 schools in the Xaverian Brothers Sponsored Schools (XBSS) network, which includes over 13,000 students and their families, 1,000 faculty, staff and administrators, and 300 trustees. St. Mary's Ryken is accredited by the Middle States Association of Colleges and Schools and the Maryland State Department of Education. St. Mary's Ryken is recognized as an independent Catholic high school by the Archdiocese of Washington, and is a member of the National Association of Independent Schools.

For more information or questions about the contents of this catalog, please contact the St. Mary's Ryken Dean of Academics:

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