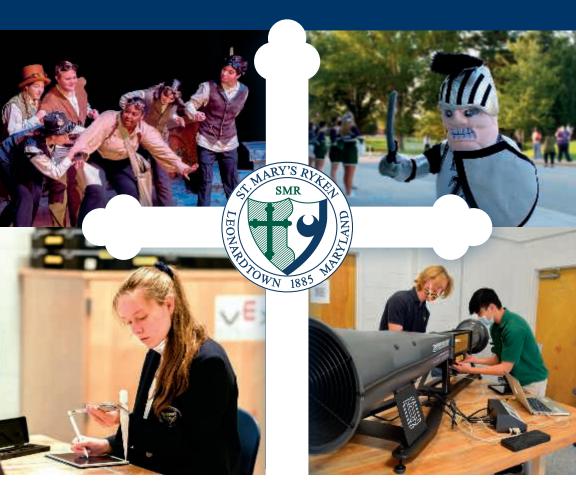
St. Mary's Ryken

A College Preparatory Catholic High School in the Xaverian Brothers Tradition

2021-2022

COURSE CATALOG



301-475-2814 **(**) O 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 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.

PORTRAIT OF A GRADUATE

In the Xaverian tradition, a challenging Catholic, college preparatory, educational program is a hallmark of St. Mary's Ryken. As a center of growth and learning, SMR expects that all students and faculty are committed to academic integrity and excellence as well as spiritual growth. Such an atmosphere instills the desire to learn for the sake of learning and increases our students' personal confidence as they experience success in the classroom, on the stage, stewardship in the community, among their peers and on the athletic field. Understanding the importance of developing the whole, unique individual, it is our hope that an SMR graduate 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 ability
 in personal and professional pursuits to effectively utilize evolving technology and
 understand how it impacts our society, 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; be open to diversity and possess a global perspective; and be committed to making a difference in their community by their leadership.

ADMINISTRATION

Dr. Glenn P. Wood II, President

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

Dr. Catherine Bowes, Principal

Ph.D., Curriculum and Instruction, Indiana University

Brad Chamberlain, Dean of Academics

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

James Parker, Dean of Students

M.M., Orchestral Conducting, University of South Carolina

Crystal Dunkin, Dean of Faculty and Student Development

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

Jonathan Lombardo, Athletic Director

M.Ed., Educational Leadership, Lynchburg College

ACADEMIC AND ENROLLMENT DATA 2020-21

Academic Year 2020–21		Enrollment 2020-21	
Number of faculty members	67	Total students	635
Number of administrators	6	Freshman class size	159
Number of staff members	25	Percent of students from	
Courses offered	167	Calvert County	11%
AP courses currently offered	27	Charles County	29%
AP courses projected for 2021–22	2 27	Prince George's County	11%
Student:faculty ratio	11:1	St. Mary's County	47%
Average class size	22	Other	2%
		Percent of students who are Catholic	60%
Affordability 2020–21			
Annual tuition	\$17,200	Class of 2020	
Percent of students receiving		Performance on the SAT	
financial aid	49%	The combined EBRW and mathematic	
merit scholarships	24%	scores of 147 students (91% of the sen	
Total financial aid awarded	\$1.835 mil	class) who took the SAT averaged 113	37.
		Percent who are attending	
		four-year colleges	79%
		Percent who are attending	
		two-year colleges	12%
		Gap year/apprentice program/	
		work/other	9%
		College scholarships awarded	321 mil

ST. MARY'S RYKEN FACULTY, COUNSELING AND ATHLETIC STAFF 2020–21

Beth Allen, St. Mary's College of Maryland

Emma Atwood, M.A.T, Secondary Social Studies, University of the District of Columbia

Annette Bennett, B.S., Information Systems Management, University of Maryland University College

Stephanie Bolin, B.A., Interdisciplinary Studies: English and Special Education, Radford University

Walter Booth, B.S., Business Management, North Carolina A&T State University

Aaron Brady, B.S., Sociology, Rutgers University

Daniel Brady, B.S., Physics, Rice University

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

Diane Carter, M.S., Biotech Studies, University of Maryland University College

Joseph Chirichella, B.A., Exercise Science, Concordia University

Bailey Clark, M.S., Athletic Training, Salisbury University

Julie Daley, M.S., Occupational Therapy, Tufts University

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

JoAnn Depperschmidt, M.S., Special Education, The Catholic University of America

Mary Rose Depperschmidt, B.A., Theology, The Catholic University of America

Gregory DeStefano, B.A., Philosophy, The Catholic University of America

Kelly Draksler, M.A.T., Secondary Social Studies Education, Towson University

Gary Duranko, M.S., Electrical Engineering, Pennsylvania State University

Jason Early, B.S., History/Secondary Education, Towson University

Tara Everly, M.S., Clemson University

Sarah Forte, B.S., Early Childhood Education and Intervention Specialist, Franciscan University of Steubenville

Shannon Foster, B.A., Theater Theatre with an English minor, Southwestern University

Ursula Gensley, B.A., Education, Marcelino Champagnat University

Sufen Guan, A.S., Edmonds Community College

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

Holly Kaufmann, B.A., Psychology, Ave Maria University

Bryan Kerns, B.S., Neuroscience, Christopher Newport University

Megan Kunst-Ordille B.S., Art Education, Edinboro University of Pennsylvania

Hannah Lawrence, B.A., Theology & Psychology, Ave Maria University

Leif Liberg, M.S.Ed., Master Teacher Program, Gwynedd Mercy University

Marcos Lindekugel, M.A., Software Engineering, University of Maryland

Brian Loewe, B.A., Sports Management & Recreation, University of Maryland Baltimore County

Jessica Magno, M.A., Teaching, University of Notre Dame of Maryland

Melanie Maldonado, B.A., English and Spanish, University of Maryland

Nathalie McDermott, University of Paris

Paula McGuigan, M.S., State University of New York at Oswego

Heather Nobary, M.S., School Counseling, McDaniel College

Kim Norris, St. Mary's College of Maryland

Alexandra Nuñez, M.A., Bilingual School Counseling, New York University

John Olon, M.A., Liberal Arts, St. John's College

Christopher Pearlberg, D.M., Music Literature and Performance, Indiana University

Aaron Percich, Ph.D., English, West Virginia University

John Raley, B.S., Marketing, Providence College

Marcy Ricciardi, M.S., Mathematics Education, Towson University

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

Jaycee Sandberg, B.S., Chemistry, Ramapo College of New Jersey

Ken Scheiber, M.A., Theology, Christendom College

Elizabeth Schuck, M.Ed., Leadership in Teaching, Notre Dame of Maryland University

Cheryl Shevchuk, M.Ed., Adult Education/ESL Specialization, Oregon State University

Tessa Silvestro, M.A., Theatre Directing, Roosevelt University, Chicago College of Performing Arts

Jonathan Smith, M.A., Secondary Mathematics Education, Western Governors University

Susan Spaulding, M.A., Latin, University of Florida

Angela Swann, B.S., Biology, High Point University

Edward Szymkowiak, M.A.T., Secondary Math Education, SUNY Binghamton

Linda Szymkowiak, M.S., English Education, SUNY Binghamton

Winifred Thompson, B.F.A., Studio Art, St. Mary's College of Maryland

David Torres, M.A., Mathematics (Teaching Option), California State University

Kristen Van Fosson, B.S., Biology and Mathematics, Allegheny College

Jackson Webb, B.A., Anthropology, St. Mary's College of Maryland

Drew Wildes, M.S., Linguistics, Georgetown University

Stephanie Wojt, M.A., Reading: Curriculum and Instruction, Grand Canyon University

Terry Wood, M.A., Education Technology Leadership, George Washington University

Charles Woolridge, B.A., Sociology, Rutgers 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 you take (college prep, honors, AP) will factor into the number of quality points you receive for a particular course. Students receive weighted credit (extra points) for honors and AP courses. GPAs are recalculated after each semester of high school. Thus, your cumulative GPA will be calculated eight times throughout your high school career.

GPA Scale:

	\mathbf{A}	B+	В	C+	C	D	\mathbf{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. Add 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), 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 sum 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.

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



St. Mary's Ryken

	THEOLOGY (4 credits)	ENGLISH (4 credits)	SCIENCE (3 credits)
12 _{TH} GRADE	Sacraments/ Theology Seminar Honors Senior Theology	AP English Literature British Literature Religious Literature	AP Physics C AP Environmental Science AP Chemistry AP Biology
11 _{TH} GRADE	Moral Theology Social Ethics	AP Language & Composition Nonfiction African-American Literature	AP Chemistry AP Biology Physics* Biology*
10 _{th}	The Old Testament The New Testament	Pre-AP Literature & Language American Literature	Chemistry* Biology*
9 _{TH} GRADE	Introduction to Religion Introduction to Catholicism	Literature & Composition*	Conceptual Physics* Biology* Chemistry*



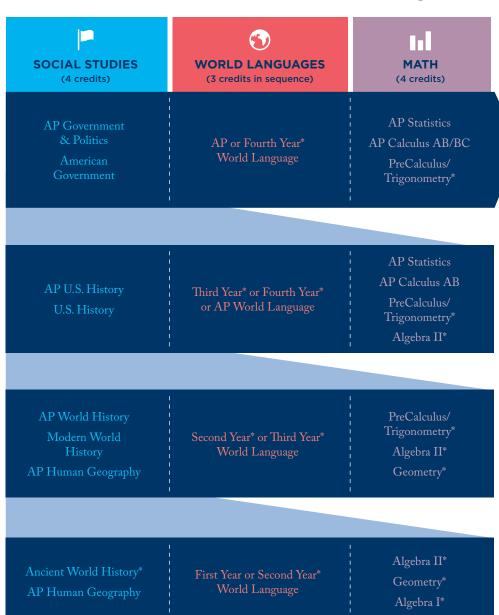
EDUCATION





credits required for graduation

(1 credit required for each)



^{*} Honors option available.

Course Offerings 2021-22

Abbreviations, Notations and Guidelines

CP College Prep Course

H Honors Course

HSPT High School Placement Test

☐ These courses satisfy graduation requirements.

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 across the United States award credit based on AP exam scores, though these policies differ widely; students are encouraged to consult the academic policies of colleges 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 school year, given the increased workload. 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 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: Students have the opportunity to earn an AP Capstone Diploma by completing two courses—AP Seminar and AP Research—in addition to at least four other AP classes. AP Seminar and AP Research provide unique research opportunities for AP students and are designed to complement and enhance discipline-specific study in other AP courses. 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. Completion of AP Seminar and AP Research provides one of the four required English credits.

Project Lead the Way (PLTW): This program complements required courses in math, science and technology. Successful completion of the four-year program in engineering, biomedical science or computer science provides one of the three required science credits.

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 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 those schools when planning their schedules for the upcoming school year.

THEOLOGY DEPARTMENT

4 credits required

Theology Department Mission:

The Theology Department aims to challenge and engage students in the areas of meaning and purpose. We provide a rigorous academic experience in which students wrestle with primary sources and confront enduring questions through analysis and discussion, often in the format of Socratic Method or technological projects. To further these ends, we use diverse media and genres such as poetry, short stories, essays, art and film. Ultimately, we seek to prepare students to be critical thinkers who are ready to engage cross-cultural forms of knowledge in an increasingly secular world.

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. We look to discover the universal facets of human nature, especially its intrinsic, supernatural orientation. Through this approach we will explore the universal components of religious systems with an emphasis on Hinduism, Buddhism, Judaism, Islam and Christianity. ☑

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

PREREQUISITE: Theology 9A. This course begins by exploring what we can know about God through reason — namely His existence and attributes — before moving on to what God has revealed to us in Salvation History, culminating in the Coming of Christ and the establishment of His Church. The second half of the course is dedicated to learning the fundamentals of Christ's life and teachings, as preserved and passed on by the Catholic Church. ☑

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

PREREQUISITE: Theology 9B. This course will study the Old Testament with a particular focus on Covenant. Covenant Theology provides a framework for thinking through the vastly different genres and historical periods that make up the Old Testament. The Old Testament is linked throughout by covenants: God and creation, God and man, and the various covenants made with Noah, Abraham, Moses and David. Ultimately, Covenant Theology opens up the Old Testament to the New through the person of Jesus Christ.

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

PREREQUISITE: Theology 10A. This course will study the New Testament with a particular focus on Christology. A Catholic understanding will guide the study of Scripture. Students will understand the way the Church approaches the New Testament, how Sacred Scripture is interpreted, and the crucial role tradition plays. Each of these elements will find their anchor in Christ, who is the Word. Reading the words of the New Testament is ultimately to come to an understanding of Christ in history, in mystery, and in majesty.

✓

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, encyclicals 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 to learn how they may encounter Christ throughout life. ☑

1412 Theology 12B – Theology Seminar (1 Semester) 0.5 Credit

PREREQUISITE: Theology 12A. This course is designed to give seniors the tools to critically examine and understand issues of faith and morality. Students will have the opportunity to shape the content of the course around questions and topics that most interest them. Examples include the existence of God, the divinity of Christ, the veracity of Scripture, miracles, spiritual warfare, the relationship between religion and science, and more.

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

ENGLISH DEPARTMENT

4 credits required

English Department Mission:

We value approaching texts through different perspectives so that our teaching can help young readers learn to think critically and analytically. When our students conduct research and craft coherent written responses, we teach them how to do so both ethically and productively. Our classrooms focus on building relationships through positive interactions and the sharing of ideas and opinions. We believe that all students should be active listeners and should engage in respectful discourse so that we can discuss a range of topics of importance and interest. Our classrooms are spaces where morality and faith-based discussions can be cultivated and flourish as students learn to read, think, write and speak in mature and thoughtful ways.

2010 English 9 1 Credit

PREREQUISITE: HSPT and Dean of Academics approval. This course reinforces reading comprehension skills and assists students in the development of writing in its many forms, including creative, expository and informational, as core elements of a successful college preparatory high school career. Students will improve vocabulary, language usage and grammar skills, and will develop effective organizational and note-taking techniques. Close reading of fiction, nonfiction, poetry and drama will be emphasized throughout the course. This course prepares students for 10th-grade American Literature and Composition. ☑

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.

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.

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.

2220 (H) Pre-AP English Language and Literature 1 Credit

PREREQUISITE: A/B in 2120 or A in 2110. This course is a pre-AP, 10th-grade English course. It is an accelerated course designed to prepare students for success in their collegelevel 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. ☑ ★★★

2330 AP English Language and Composition 1 Credit

PREREQUISITES: A/B in 2220 or 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.

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. \square

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 Harriet 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. This course is designed to address the nature of what can and cannot be described as "religious" in literature. This course will use essays, novels, short stories, poetry, and films to wrestle with the foundational underpinnings of Christian and Catholic tradition. Selected authors may include Albert Camus, Fyodor Dostoevsky, Alice Walker, Annie Dillard, Black Elk, Thomas Merton and Isacc Bashevis Singer.

2410 British Literature 1 Credit

PREREQUISITE: 2210 or 2220. This course will survey major British authors across several literary periods: Anglo-Saxon and Medieval, Renaissance and Restoration, Romantic and Victorian, and Modern. A variety of genres, including poetry, prose, short stories, novels and drama, will be examined in their philosophical, historical and literary contexts. The reading list will likely include "Beowulf," "The Canterbury Tales," a Shakespearean play, novels by Jane Austen, Emily Brontë, Charles Dickens or James Joyce, and samplings of other significant authors. The workload will include close reading, an extended research paper, various projects, vocabulary and foundations of literary criticism. \square

2430 AP English Literature 1 Credit

PREREQUISITE: A/B in 2330. Seniors only. 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.

NOTA

2510 Yearbook (Yearlong Course) 1 Credit

PREREQUISITE: Sophomores, juniors and seniors only. Students in this course are responsible for planning, designing, writing, editing and publishing the SMR yearbook. Graphic design, journalism and photography are central elements of the course. This course relies heavily on technology. After training, students will be expected to navigate independently through the yearbook software to complete production of the finished yearbook product. Working in small cohorts, students will learn how to contribute to a team in order to manage and execute a project. NOTE: This course requires students to periodically stay after school to complete projects and meet deadlines.

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, though the primary endeavor of the class will be writing: 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.

4534 AP Seminar 1 Credit

PREREQUISITES: Strong performance in English, history, and/or theology courses. 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. This course satisfies the requirement for Sophomore Theology.

4535 AP Research 1 Credit

PREREQUISITE: A/B 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. AP course and testing fees apply; students are required to sit for the exam. This course satisfies the requirement for one credit of English.

MATHEMATICS DEPARTMENT

4 credits required

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

Mathematics Department Mission:

Foundational and conceptual understanding of mathematics prepares students for success in post-secondary education as well as a host of different career opportunities. The study of mathematics helps provide students with a foundation for lifelong learning, critical thinking and collaborative, technical problem solving. Through in-class practice and assessments, attainable and realistic homework assignments, and continual access to teacher support, it is our belief that all students can be successful in rigorous mathematics courses.

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 for this class. Students enrolled in this course may be scheduled for additional supports as determined through the application and validation process.

3120 (H) Algebra I 1 Credit

PREREQUISITES: 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 for this class.

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.

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.

3310 Algebra II 1 Credit

PREREQUISITE: 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.

NEW

3320 (H) Algebra II 1 Credit

PREREQUISITE: A/B in 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.

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. A graphing calculator is required for this class. Summer assignments are required.

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. A graphing calculator is required for this class.

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. A graphing calculator is required for this class. Summer assignments are required.

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 Honors Trigonometry. A graphing calculator is required for this class. It is class.

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. Summer assignments are required.

3530 AP Statistics 1 Credit

PREREQUISITES: A/B in 3320 and 2220. 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.

3534 AP Calculus AB 1 Credit

PREREQUISITES: 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.

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.

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, data analysis and their applications in real life.

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 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

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

✓

HISTORY DEPARTMENT

4 credits required

Note: Summer work is assigned and graded in all courses.

History Department Mission:

The History Department prepares students for college, career and life by instilling a core set of critical and analytical skills through the study of culture, government and economics. Our purpose is to produce active, reflective, moral and educated global citizens who demonstrate a life-long appreciation of learning. We subscribe to the values and morals of the Xaverian Brothers' ministry and want our students to be ready to use their knowledge of history to make sense of the present and to prepare for the challenges of the future.

4110 Ancient World History 1 Credit

PREREQUISITE: None. This is an in-depth survey of world history through the Middle Ages. 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.

4120 (H) Ancient World History 1 Credit

PREREQUISITE: HSPT. This ninth-grade, honors-level course focuses on the origins of humanity through the Middle Ages. It is the prerequisite for subsequent AP history courses and is designed to prepare students for the pace and rigor of AP-level courses. This course focuses heavily on the development of primary source reading as well as historical research and analysis in order to improve critical thinking and analytical skills.

4210 Modern World History 1 Credit

PREREQUISITE: 4110 or 4120. This is an in-depth survey of world history from the end of the Middle Ages 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.

4230 AP World History 1 Credit

PREREQUISITE: 4120. This course explores global patterns in the world's history from the Middle Ages 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, compare/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.

MAN

4310 U.S. 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 also 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.

4330 AP U.S. 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 is 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.

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.

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 is 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.

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 will 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.

4425 History of World War II (1 Semester) 0.5 Credit

PREREQUISITE: 4110 or 4120. This elective course is an in-depth look at the history of World War II through the extensive use of original documents, historical reading selections, and student research. Topics include the causes of the war; operations in the European and Pacific theaters; political, social and economic impacts; and the legacy of the war. Emphasis will be placed on development of higher-level thinking and analysis skills, writing and research skills, and analysis of primary sources. Space for this semester-length course is limited; an application essay may be required. Preparatory summer research will be assigned and graded.

SOCIAL SCIENCES

4533 Introduction to Neuroscience (1 Semester) 0.5 Credit

PREREQUISTE: None; open to all students in grades 10, 11, 12. Intro to Neuroscience is an elective semester course that will study cognition in humans. Cognition is acquisition, storage, transformation, and use of knowledge. Neuroscience is the study of the structure and workings of the nervous system. In this course, students will study multiple topics such as neuroanatomy, the human nervous system, neurotransmitters, sensory and motor processes, memory, problem solving, and neurodegenerative diseases. This is an excellent course for students who want to know more about how the brain functions and how learning occurs, and for those who may have an interest in psychology.

4130 AP Human Geography 1 Credit

4513 Logic and Philosophy (1 Semester) 0.5 Credit

PREREQUISITE: None. This course introduces the basic concepts, principles and methods of argument analysis and evaluation, including deductive versus inductive reasoning, validity, soundness, and probability and statistical reasoning. Introductory philosophical study will help students make judicious decisions in life and to understand the foundational principles of many other subjects. The curriculum may also include Aristotelian logic, algorithms, informal fallacies, causal reasoning and scientific method.

4530 AP Psychology 1 Credit

PREREQUISITE: Juniors and seniors only. This elective course introduces 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.

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.

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.

4534 AP Seminar 1 Credit

PREREQUISITES: Strong performance in English, history, and/or theology courses. 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. This course satisfies the requirement for Sophomore Theology.

4535 AP Research 1 Credit

PREREQUISITE: A/B 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. AP course and testing fees apply; students are required to sit for the exam. This course satisfies the requirement for one credit of English.

4514 Speech/Public Speaking (1 Semester) 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 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.

4536 Introduction to Sociology (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. This elective course focuses on the development, structure, behavior and overall functioning of our human society, with a focus on patterns of social relationships/interactions and their effects and impacts on our human behavior and everyday life. In this introduction to sociology, students will examine human social interaction and the ways in which individuals are influenced by other people, in order to determine how societies are established and changed. Topics of study will include deviance and social control, inequalities of gender and age, family and marriage, and social issues. Space for this semester-length course is limited; an application essay may be required. Preparatory summer research will be assigned and graded.

4527 (H) Humanities 1 Credit

Recommended for grades 11-12. Humanities will survey the great works of Western civilization from modern France, England, Russia, America, Eastern Europe and Japan. Readings will include poetry, novels, autobiography and drama, as well as various art forms such as painting, sculpture, music and dance. Some of the writers may include Dostoevsky, Dickens, Conrad, Joyce, St. Thérèse of the Child Jesus, Eliot, DuBois, Booker T. Washington, Graham Greene, and Shusaku Endo. Students will keep a year-long portfolio of critical and creative writing with an emphasis on revision and reflection. Field trips and structured activities will guide learning outside of the classroom. This course satisfies one of the four required English credits needed for SMR graduation. ■

SCIENCE DEPARTMENT

3 credits required

Science Department Mission:

The mission of the Science Department is to prepare our students to be responsible global citizens who are creative problem solvers and scientifically literate in biology, chemistry and physics. By providing comprehensive, technologically oriented, rigorous classes in the various science disciplines, our students will develop the knowledge and critical thinking skills necessary to excel in STEM-related careers as science innovators, researchers and conscientious stewards of our environment.

5010 Integrated Science 1 Credit

PREREQUISITES: 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 force and motion, properties of matter, chemical reactions, cell biology, body systems, ecosystems and space science.

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.

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

PREREQUISITES: 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.

5210 Chemistry 1 Credit

PREREQUISITES: 5110 and 3110. This laboratory course covers 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.

5220 (H) Chemistry 1 Credit

PREREQUISITES: A/B in 5120; A/B 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.

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.

The property of t

5320 (H) Biology 1 Credit

PREREQUISITE: A/B in 5220 or 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.

NOTE:

5420 (H) Introduction 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 is 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.

NOM:

5425 (H) Physics 1 Credit

PREREQUISITES: A/B in 5220; A/B in 3320 or A in 3310. This class should be taken concurrently with trigonometry and pre-calculus; 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.

5530 AP Environmental Science 1 Credit

PREREQUISITES: A/B in 5320 or A in 5310. 5320 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.

5534 AP Chemistry 1 Credit

PREREQUISITES: A/B in 5220 and 3320. 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.

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.

5436 AP Physics C Mechanics 1 Credit

PREREQUISITES: A/B in 3322 and 5425. AP 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 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 exam; summer work is assigned and graded.

5536 AP Physics C Electricity and Magnetism 1 Credit

PREREQUISITES: A/B in 3534 and 5425/5436. AP 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 exam; summer work is assigned and graded.

5510 Science Lab Aide 1 Credit

PREREQUISITES: Department chair approval and completion of an upper-level chemistry and/or physics class. This is a graded, unweighted yearlong science elective. The student aide 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 and Bay Studies (1 Semester) 0.5 Credit

PREREQUISITE: None. This science elective will introduce students to physical and chemical oceanography. 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. In addition, students will take part in a semester-long oyster growing project at the school dock and will gain an understanding of what problems are facing the Chesapeake Bay and how they can help reverse those problems.

5514 Marine Biology (1 Semester) 0.5 Credit

PREREQUISITE: None. 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 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.

5516 Forensic Science (1 Semester) 0.5 Credit

PREREQUISITE: Juniors and seniors only. 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.

5540 (H) PLTW-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.

5544 (H) PLTW-Introduction to Engineering Design 1 Credit

PREREQUISITE: 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) PLTW-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, and research and design, while learning strategies for design process documentation, collaboration and presentation.

5546 (H) PLTW-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. **NCM**

5547 (H) PLTW-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.

5549 (H) PLTW-Biomedical Innovation 1 Credit

PREREQUISITES: 5547; placement in Scholars Biomedical Science program. In this capstone course, students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering and public health. They have the opportunity to work on an independent project and may work with a mentor or adviser from a university, hospital, physician's office or industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and health care community. In the Biomedical Innovation course, students will be asked to apply what they have learned in the previous three courses to solve unique problems in science, medicine and health care.

5548 (H) PLTW-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, a propulsion system and a rocket. They learn orbital mechanics concepts and apply aerospace concepts to alternative applications such as a wind turbine and parachute.

5550 (H) PLTW-Engineering Design and Development 1 Credit

PREREQUISITES: 5548; placement in Scholars STEM Engineering program. Engineering Design and Development is the capstone course in the PLTW engineering program. It is an open-ended engineering research course in which students work in teams to design and develop an original solution to a well-defined and justified open-ended problem by applying an engineering design process. After carefully defining the design requirements and creating multiple solution approaches, teams of students will select an approach, create and test their solution prototype. Student teams will present and defend their original solution to an outside panel. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication and interpersonal skills, their creative and problem solving abilities and their understanding of the design process.

5517 (H) MATLAB (1 Semester) 0.5 Credit

PREREQUISITE: 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 will be expected to provide their own laptop for this course.

WORLD LANGUAGES

3 sequential credits required

World Languages Department Mission:

Learning a second language is a critical skill that our graduates need in order to be competent global citizens in a multicultural world. Using Comprehension-based Communicative Language Teaching techniques, our goal is to lead students to proficiency in the three modes of communication: *interpretive* (the ability to comprehend what one reads and hears); *interpersonal* (two-way communication); and *presentational* (one-way speaking and writing to others) through the use of storytelling, authentic materials and independent discovery. Our mission is to foster in our students a passion for life-long cultural and linguistic exploration.

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.

MCM

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.

NEW

6225 (H) French II 1 Credit

PREREQUISITE: A 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.

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. ☑ NCA

6325 (H) French III 1 Credit

PREREQUISITE: A in 6215 or A/B 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.

6435 AP French 1 Credit

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.

6210 Spanish II 1 Credit

6220 (H) Spanish II 1 Credit

PREREQUISITE: A 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.

Z

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. \square

6320 (H) Spanish III 1 Credit

PREREQUISITE: A in 6210 or A/B 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.

I MAN

6430 AP Spanish Language and Culture 1 Credit

PREREQUISITE: A/B in 6320. The AP Spanish Language 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. Nearly all 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.

Nearly

6114 Latin I 1 Credit

PREREQUISITE: None. This first-year program introduces the forms, syntax and vocabulary of Latin 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.

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.

6224 (H) Latin II 1 Credit

6314 Latin III 1 Credit

PREREQUISITE: 6224. 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.

6324 (H) Latin III 1 Credit

PREREQUISITE: A in 6214 or A/B 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.

6434 AP Latin 1 Credit

PREREQUISITE: A/B in 6324. This course will use a variety of methods to read and evaluate "The Aeneid" of Virgil and "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.

6316 Chinese III 1 Credit

PREREQUISITE: 6216. This course is a continuation of the understanding of the Chinese language both written and spoken. In addition to the four basic language skills, students will develop the ability to derive word roots and character components, as well as grasp new writing techniques. Grammar will be taught more contextually and will emphasize the structures unique to the Chinese language. The social and ethical values of Chinese culture will also be emphasized throughout the course. Summer work is assigned and graded.

The Chinese language of the Chinese culture will also be emphasized throughout the course.

6326 (H) Chinese III 1 Credit

PREREQUISITE: A in 6216 or A/B in 6226. This course is a continuation of the understanding of the Chinese language both written and spoken. In addition to the four basic language skills, students will explore how to learn Chinese and decipher language and grammar patterns independently. Grammar will be taught more contextually and will emphasize the structures unique to the Chinese language. The social and ethical values of Chinese culture will also be emphasized throughout the course. Summer work is assigned and graded. ☑ NCA

6426 (H) Chinese IV 1 Credit

PREREQUISITE: A/B in 6326. This advanced course is a continuation and intensification of skills learned in Chinese III. As the Chinese levels advance, learning topics become more challenging, and more complex language components are introduced. A large emphasis will be placed on learning all aspects of the language independently. Students will develop more advanced conversational ability and writing skills, while also exploring deeper aspects of culture in present-day China and Taiwan. Summer work is assigned and graded.

6511 Advanced English I (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. ✓

6512 (H) Advanced English II for International Students 1 Credit

PREREQUISITE: 6511. This course is the second tier of the international student program course. 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 students' 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 another world language for further study. A TOEFL score of 100 must be achieved for this course to be waived. ✓

FINE ARTS

1 credit required

Fine Arts Department Mission:

The Fine Arts Department's mission is to create a lifelong appreciation and involvement in the visual and performing arts by providing experiences, study and inspiration to our students. As students learn to convey human expression in its many artistic forms, they will come to a greater understanding of the skill and craft necessary to create and appreciate the impact art can have on their world. We offer a variety of courses in this department with the hope that the spark of creativity will come alive in each student.

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. In addition, students will be asked to perform basic musical skills in class. Students are required to attend two approved live performances. No previous music study is necessary.

7116 Fundamentals of Music (1 Semester) 1 Credit

PREREQUISITE: None. Fundamentals of Music is designed to guide students through the necessary skills needed to read, analyze and write music. The course begins with a survey of basic music elements such as note and rhythm reading, meter, scales, intervals, key signatures and harmony. Students will also develop skills needed to aurally identify and describe various aspects of music. The final for this class will consist of a student-written composition, which will be recorded by a small ensemble. This is a performance-based class. Students will be asked to perform a variety of musical tasks including singing and keyboarding. No experience with music is required for this course. Students interested in AP Music Theory should consider taking this course first. \square

7117 Introduction to Wind, Brass and Percussion (1 Semester) 1 Credit

PREREQUISITE: None. Introduction to Wind, Brass and Percussion begins with a two-week introduction to the instruments of the wind, brass and percussion family. After the introduction, students will choose one instrument to learn for the rest of the semester. On their chosen instruments, students will build the skills necessary to read and perform music individually and as an ensemble. The final for this course is a public concert. Rental/purchase of an instrument is required to participate in this course.

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. This is a performance-based class. Students are encouraged to have a guitar at home for practice, but guitars are provided by the school for use during the school day. This course is offered on a space-available basis.

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. This course is offered on a space-available basis.

7414 Keyboarding II (1 Semester) 0.5 Credit

PREREQUISITE: 7314. This fine arts elective continues instruction in keyboard playing with an emphasis on technique, music reading, melodic/harmonic playing, stage etiquette and ensemble performance. This course is offered on a space-available basis.

7245 AP Music Theory 1 Credit

PREREQUISITE: Any 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.

THEATRE

7115 Theatre Appreciation (1 Semester) 1 Credit

PREREQUISITE: None. Theatre Appreciation is an introductory study of theatre . Students will study theatrical vocabulary, evaluation of live productions, playwrights, play production, theatre 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 theatre within the classroom setting.

7315 Technical Theatre (1 Semester) 0.5 Credit

PREREQUISITE: 7113, 7114 or 7115. This elective course is a fundamental study of technical theatre elements, including set design, lighting, costumes and construction. 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: An application process will be required of all students who register for Stage Guild. This elective highlights the technical side of the theatre, 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 or 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. Students will learn iMovie skills for the iPad.

BAND / ORCHESTRA

7610 Concert Band 1 Credit

PREREQUISITE: Previous instruction on a band instrument. This course is meant as an extension of elementary and middle school band programs. Students will be taught to expand upon their existing musical knowledge and technical ability. Students will be required to attend an approved live performance outside of school. Attendance at all school performances is required. Additionally, students will be required to sign up for three Pep Band performances. Private lessons are encouraged, and students will be expected to practice independently.

7614 (H) Jazz Band 0.5 Credit (scheduled twice weekly during X-hour; full year course) PREREQUISITE: 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 knowledge of their instruments. Class meets twice each week during X-hour. Attendance at all school performances is required. Additionally, students will be required to sign up for three Pep Band performances. Private lessons are encouraged, and students will be expected to practice independently.

7615 (H) String Orchestra 1 Credit

PREREQUISITE: Ability to play a string instrument: violin, viola, cello or 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 technical abilities. Students will be required to attend an approved live performance outside of school. Attendance at all school performances is required. Private lessons are encouraged, and students will be expected to practice independently.

7620 (H) Wind Ensemble 1 Credit

PREREQUISITE: Placement determined by director and/or audition. Students will be required to perform all major/minor scales at the end of their first year in the ensemble. Percussionists will be expected to perform on mallet and auxiliary percussion. Students will be challenged with more difficult repertoire and ensemble techniques and will be taught to expand their existing musical knowledge and technical ability. Students will be required to attend an approved live performance outside of school. Attendance at all school performances is required. Additionally, students will be required to sign up for three Pep Band performances. Private lessons are encouraged, and students will be expected to practice independently.

CHOIR

7710 Chorus 1 Credit

PREREQUISITE: None. 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 and director permission. This course gives students the opportunity to perform contemporary worship music, musical theatre 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 the Tri-M Music 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

PREREQUISITES: 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. Theatre 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

PREREQUISITES: 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 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: A in 7113 or by teacher recommendation. 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 art education. Students can choose from the AP Drawing or AP 2-D Art and 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) 1 Credit

PREREQUISITE: None. 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 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: 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

Health and Physical Education Department Mission:

Our mission is to integrate a health and wellness curriculum and programs into St. Mary's Ryken High School for the betterment of all SMR students, regardless of athletic ability or ambition. Through the use of the Donnie Williams Center as a centralized, all-inclusive community wellness facility, we intend to lay the foundation for a balanced and healthier lifestyle that students can access well beyond their high school years. Aligned with the St. Mary's Ryken High School mission and Xaverian Brothers' core values, Health and Physical Education classes are designed to explore wellness through intellectual, occupational, physical, social, emotional and spiritual activities.

8113 Physical Education (1 Semester) 1 Credit

PREREQUISITE: None. In this low-intensity course, students will learn the fundamentals of body weight exercises and flexibility. Each student will be given a physical fitness test and an accompanying plan for overall health and wellness improvement. Students will participate in team and lifetime sports. Other health and wellness topics will be addressed. ☑

8114 Fitness, Yoga and Mindfulness (1 Semester) 1 Credit

PREREQUISITE: None. This low-intensity course is designed to introduce students to the basic postures, breathing techniques and relaxation methods of yoga. Improved flexibility, balance, and strength will be emphasized. Other activities will include Catholic mindfulness techniques and practices (from St. Teresa of Avila's *The Way of Perfection* & Gregory Bottaro's *The Mindful Catholic.*) A yoga mat purchase is required. \square

8115 Weight Training (1 Semester) 1 Credit

PREREQUISITE: None. This medium-intensity course is designed to improve athletic performance and is geared toward the highly motivated student-athlete. Proper warm-up and lifting/spotting techniques will be emphasized. A three-cycle program that focuses upon core lifting and strengthening will be followed by all students in the course. Other health and wellness topics will be addressed. ☑

8514 Strength and Conditioning (1 Semester) 0.5 Credit

PREREQUISITE: 8113 or current grade 10, 11 or 12 SMR student-athlete. This medium-intensity course is geared to student-athletes motivated to reach a high level of athletic performance and is designed to advance each participant's athletic and training goals. It is recommended that student-athletes take this course during the same season as his or her preferred athletic season. This class may be taken more than once. ✓

8515 High Intensity Training (1 Semester) 0.5 Credit

PREREQUISITES: Fitness assessment and instructor permission. This high-intensity course follows the principles of CrossFit and uses methods designed to improve a student's overall strength, muscular and cardiovascular endurance, body composition and flexibility. *This course may be taken more than once.*

8313 Health and Nutrition (1 Semester) 0.5 Credit

PREREQUISITE: Open to students in grades 10, 11 and 12. 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.

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

Computer Science Department Mission:

These courses are designed to teach students the theoretical and applied foundations of computer science and train students to effectively apply this education to solve real-world problems. Our courses combine strong teacher-led classroom instruction with project-based and team-oriented activities, leading to a well-rounded preparation for college-level computer science education.

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 Photoshop to create professional-looking images for both print and the Web. 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 (H) PLTW-Computer Science Essentials 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

PREREQUISITE: 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

PREREQUISITES: 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 the solutions, understand what to do if a solution 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

PREREQUISITE: 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, 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 and/or 9313. 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. (It is advised that a student have access to a computer with a Java compiler or the ability to schedule after-school time to use a school computer.)

9435 (H) PLTW-Cybersecurity 1 Credit

PREREQUISITE: 9434. Cybersecurity, A Project Lead the Way course, exposes high school students to the ever-growing and far-reaching field of cybersecurity. Students accomplish this through problem-based learning, where students role-play as cybersecurity experts and train as cybersecurity experts do. Students are given broad exposure to the many aspects of digital and information security, while encouraging socially responsible choices and ethical behavior. The course inspires algorithmic thinking, computational thinking, and especially "outside-the-box" thinking. Students explore the many educational and career paths available to cybersecurity experts, as well as other careers that comprise the field of information security.

BUSINESS & INTERNSHIPS

Business & Internships Department Mission:

Business courses and internship learning opportunities are designed to expand students' knowledge, skills and experiences in business, information technology and interpersonal learning. These courses encourage mathematical understanding of business principles and enhance critical thinking and analytical decision making in real world settings and situations.

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. ✓

3517 Introduction to Business Math (1 Semester) 0.5 Credit

PREREQUISITE: 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.

✓

9400 Senior Internship (1 Semester) 0.5 Credit

PREREQUISITES: Seniors only; application process with limited enrollment; internship coordinator approval. 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 report that has been approved by the mentor and SMR by mid-semester. The 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.

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.

SUMMER ONLINE COURSES

Special Registration Period in April 2021

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. Completion of this course satisfies the physical education graduation requirement at SMR. \square

Computing Concepts 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. ☑

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. Completion of this course satisfies the fine arts graduation requirement at SMR. ☑

Sacred Scripture 1 Credit

PREREQUISITE: None. This class will undertake an in-depth focus on two books of sacred Scripture that are not addressed in the sophomore or senior theology courses. Students will spend two weeks on the Book of Job, two weeks of exploration into the problem of evil, and then the final two weeks of the course will be spent studying the events and ideas in the Book of Revelation. Students should be aware that one synchronous meeting per week of 60-90 minutes is a requirement of the course; thus, students should plan schedules accordingly. This course can be used to substitute for either the 10th or 12th grade theology courses at SMR. ☑

ACADEMIC FEES

The following are fees associated with academic courses. These prices are subject to change.
Advanced Placement exams
AP Seminar or AP Research
World Language courses
Studio Art courses
Photography course
Band/Orchestra/Jazz Band/Keyboarding/ Beginning Guitar courses
Vocabulary.com

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:

MR. BRAD CHAMBERLAIN

brad.chamberlain@smrhs.org • 301-373-4188

301-475-2814 **f o** smrhs.org