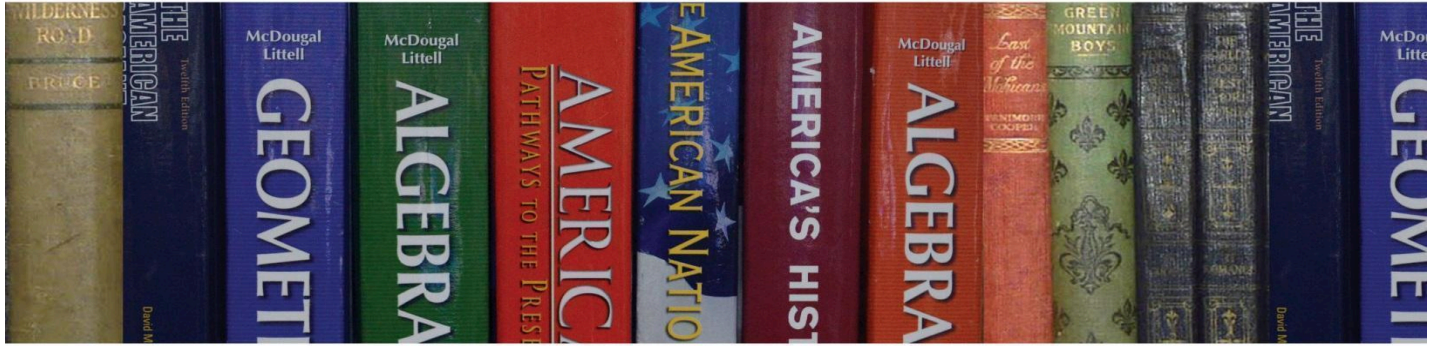


MSSDA

Mount Saint Dominic Academy



Program of Studies 2025-2026

PROGRAM OF STUDIES

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MOUNT ST. DOMINIC ACADEMY ACADEMIC PROGRAM

Mount Saint Dominic Academy offers a comprehensive college preparatory academic program that exposes students to a broad curriculum of ideas across the humanities and STEM subjects. In the spirit of empowering students, we encourage and support the development of self-awareness, self-directedness, and self-advocacy. Our aim is to inspire students to develop self-awareness as learners so they may plan a course of studies that aligns with their interests, strengths, and goals for post-secondary learning and careers.

GRADUATION REQUIREMENTS

English	4 years (20 credits)
Mathematics	3 years (15 credits)
Science	2 years (Biology, Chemistry) (10 credits)
Social Studies	3 years (World History 2 years, US History 1 year) (15 credits)
Theology	4 years (20 credits)
World Languages	2 years (10 credits)

Students must earn a total of 140 credits in order to graduate. These credits are derived from a combination of required foundational courses listed above and other academic electives.

The 9th grade academic cycle integrates Introduction to Art, Creative Expression, Physical Education, and a school counseling seminar focused on health and wellness.

In 10th grade, students continue the school counseling seminar and physical education and also take Drivers Education and Financial Literacy.

In 11th and 12th grade, students further their work with school counselors as it relates to health and wellness as well as the college exploration and application process, and expand their learning through the selection of electives.

COURSE SELECTION AND PLACEMENT

Course placement involves a holistic evaluation of the student. First year course level placements are determined by the admissions committee and takes into consideration the middle school transcript, standardized test scores, recommendations, and Mount St. Dominic Academy placement test results. For grades 10-12, placement is determined through a process of departmental review and incorporates year-end averages; current year teacher feedback; and departmental review of the student's growth over time in high school courses. The Aquinas Honors program is also utilized to determine a student's placement.

Course offerings are updated annually and students and parents receive information regarding criteria for placement at the honors and Advanced Placement levels, as well as specific prerequisites and expectations for courses. Students are supported in this process by school counselors, teachers, and the principal as needed.

THE AQUINAS HONORS PROGRAM

The Aquinas Honors Program:

- Acceptance into the Aquinas Honors Program provides students the opportunity to take honors and advanced placement courses. Approval is granted by the principal after reviewing student selections and consulting with teachers and counselors.
- Students who are accepted into the Aquinas Honors Program do not have to take the Honors or Advanced Placement level course of every subject.

Requirements for placement in Honors courses are as follows:

- A student who is currently in an Honors course may be accepted into the Honors section of the next year's course provided she has achieved a final average of 85 or higher in the current and related courses in that discipline and has the approval of the teacher and the approval of the principal.
- A student who is currently in a College Prep course must have a final average of 92 or higher in related courses in that discipline before she can be considered for an acceptance into the Honors section of the next year's course. An average of 92 in the current course does not guarantee an acceptance into Honors. Movement up a level also requires the approval of the teacher and the approval of the principal.
- Teacher evaluations will consider the following:
 - Motivation, independence & responsibility
 - Engagement/participation in classroom activities and discussions
 - Academic risk taking & resilience
 - Critical thinking/problem solving and the ability to apply concepts to novel situations
- Additional Math placement criteria:

- In addition to a minimum 92 final average, a student requesting to move from CP to Honors in Math must earn an 80% or higher on the final exam and an 80% or higher on the required readiness test.
- In addition to earning a minimum 85 final average to remain in honors, a student must earn an 80% or higher on the final exam.

Requirements for placement in Advanced Placement (AP) courses are as follows:

- Students interested in taking Advanced Placement courses will have demonstrated genuine interest in the subject or field and the skills commensurate with enthusiastic independent work and exploration.
- In order to be considered for an AP course, students must achieve a final average of 85 or higher in the previous AP course or a 92 or higher in the previous honors course.
- Additionally, students must have the approval of the teacher and the approval of the principal.
- Teacher evaluations will consider the following:
 - Ability to write comparative and analytical essays.
 - Commitment to the extra time and work required.
 - Proven ability to work independently.
 - Willingness to embrace high expectations.
 - Resilience in a rigorous academic setting.
- Additional Math placement criteria: A student requesting to move from Honors to AP Math must earn an 80% or higher on the final exam and an 80% or higher on the required readiness test.
- Students electing to accept an invitation into an AP course agree to the following:
 - AP students will attend review sessions in the weeks before the exam if deemed necessary by the teacher.
 - AP students will take a midterm assessment in January (exam, essay, etc.). There will be no exemptions.
 - AP students will have the option to take the AP exam in May. The fee is approximately \$100 per exam, payable no later than the first Friday in February.
 - Students who choose not to take the AP exam in May will take a final assessment (exam, essay, etc.). There will be no exemptions.
 - Consider the cost of all of your possible AP exams when selecting your courses.

ONE SCHOOLHOUSE (VIRTUAL LEARNING OPTION)

Mount Saint Dominic Academy believes that in-person learning is valuable in a multitude of ways. If you have taken a One Schoolhouse class, please speak with your Counselor to determine whether or not it will be offered for the 2025-2026 school year. Students completing course sequences for Graduation requirements through One Schoolhouse or a virtual learning option will be given first consideration however the virtual learning option is not guaranteed. Students are encouraged to select a course from our 2025-2026 Program of Studies.

COURSE OF STUDY BY ACADEMIC DEPARTMENT

ENGLISH

The English curricula at Mount St. Dominic Academy is built on a foundation of reading, writing and thinking about the human condition in the past, present and future. Opportunities for teamwork and collaboration are provided, and students are encouraged to find and use their voices.

English is required for students in all grades.

Grade 9	English I *
Grade 10	English II *
Grade 11	English III * AP Language and Composition Journalism and Digital Media Creative Writing
Grade 12	English IV * AP Literature and Composition Journalism and Digital Media Creative Writing

*College prep and honors level courses are offered

English I

The English I course is an introduction to the elements and techniques of literature and composition with a focus on the writing process in response to literature. Included are studies of the short story, drama, poetry and the novel. The fundamental structure of each type is investigated and discussed in terms of its basic elements and techniques with emphasis on developing the interpretive skills of the student. Throughout the course, equal emphasis is placed upon writing practice to complement literary study. Writing in the course includes the rhetorical analysis essay and formal literary analysis as well as formal and informal creative writing. The goal of the class is to prepare students to respond critically to literature through both the spoken and written word. This goal will be achieved through the practice of reading with purpose, annotating texts, and utilizing the writing process in all written assignments.

Note: An English I course (CP or Honors) is required for all Grade 9 students.

English I Honors

The English I Honors course is a comprehensive study of literature and composition with a focus on the writing process in response to literature. This course is structured by focusing on literature through genre. This includes nonfiction pieces as well as novels, short stories, poetry and drama. Students will gain a further understanding of the literature through class discussions, projects, creative writing and essay writing. The goal of the class is to prepare students to respond critically to literature through both the spoken and written word. This goals will be achieved through the practice of reading with purpose, annotating texts, and utilizing the writing

process in all written assignments. Students are expected to work quickly, absorb various forms of literature, and read and write about literature with clarity.

Note: An English I course (CP or Honors) is required for all Grade 9 students.

English II

The English II course is a college preparatory survey course that concentrates on literature from around the world. The course expands on the work done in ninth grade by further acquainting students with close reading, textual analysis, and critical thinking while continuing to develop the student's writing skills. The student will study texts from a variety of literary traditions, periods, and cultures. Much time is devoted to furthering the improvement of grammar, vocabulary, and writing skills begun in the previous year. Students will further understand the literature through class discussions, projects, creative writing, and essay writing. The goal of the class is to prepare students to respond critically to literature through both the spoken and written word. These goals will be achieved through the practice of reading with purpose, annotating texts, and utilizing the writing process in all written assignments.

Note: An English II course (CP or Honors) is required for all grade 10 students.

English II Honors

The English II Honors course is a college-preparatory survey course that concentrates on literature from around the world. The course expands on the work done in ninth grade by promoting critical reflection and creative investigation of texts. This course further acquaints students with close reading, textual analysis, and critical thinking. In addition, the application of previously mastered writing skills will be directed toward critical analysis. The student will study texts from a variety of literary traditions, periods, and cultures. Students are required to do more independent reading and to respond in writing to works not necessarily discussed in class. This course includes intentional moments of intersection with history, religion, philosophy, and the arts. Students will gain a further understanding of the literature through class discussions, projects, creative writing, and essay writing. The goal of the class is to prepare students to respond critically to literature through both the spoken and written word. These goals will be achieved through the practice of reading with purpose, annotating texts, and utilizing the writing process in all written assignments.

Note: An English II course (CP or Honors) is required for all grade 10 students.

Creative Writing

In this elective creative writing course, students will have the opportunity to read and write different types of poetry and prose styles, with a focus on expressive writing. They will respond to existing literature, music, visual art, and other artistic mediums. Originality, creativity, and deep reflection will be emphasized in order to help students find and develop their unique voice. Peer review and workshopping will be integral to this course.

Note: Academic Elective offered for students in grades 11 or 12.

English III

In English III, students will prepare to continue their roles as engaged learners and take an inquiry stance towards the nature of what it means to be American. They will not only assess the nature of their society but also the nature of the information they read, hear, and see. The course

is an interdisciplinary exploration of the American imagination and national identity, with a focus on how Americans have understood and argued about the meaning and significance of an American national identity.

Literature cultivates critical thinking, and this course will attempt to reframe the American narrative through a variety of perspectives and voices. It will also confront the conflicts that have marked American society and work to deconstruct the imagined “American dream,” including the value system that accompanies it, by considering the space between so-called American values and the realities of American life.

Through conversations, essays, books, speeches, and artifacts of popular culture, we will interact with concepts of race, class, gender, identity, power, freedom, diversity, and citizenship, as they relate to both an American past, present, and future. The purpose of the course is to engage students with a variety of rhetorical contexts and increase awareness of themselves as both reader and writer. Emphasis will be placed upon the student's acquiring the necessary skills for oral and written expression, including the compilation of a writing portfolio.

Note: An English III course (CP, Honors, or AP Language) is required for all Grade 11 students.

English III Honors

In English III Honors, students will expand on the work done in tenth grade. This course promotes critical reflection and creative investigation of texts associated with the American experience to explore rhetorical analysis and assess more broadly what it means to be American and who or what determines what is American. Literature cultivates critical thinking, and this course will attempt to reframe the American narrative through a variety of perspectives and voices. It will also confront the conflicts that have marked American society and work to deconstruct the imagined “American dream,” including the value system that accompanies it, by considering the space between so-called American values and the realities of American life.

Students will practice and develop close reading skills of all texts (including their own) and begin to identify different literary techniques that authors use. Students will develop skills to analyze information they read, hear, and see, and also to succinctly express these analyses. Students will be asked to compose for a variety of purposes, negotiate multiple audiences, and participate in conversations as global citizens; they will evaluate, synthesize, and cite research to support their arguments.

Note: An English III course (CP, Honors, or AP Language) is required for all Grade 11 students.

AP English Language and Composition

The AP English Language and Composition course, which aligns with an introductory college-level rhetoric and writing course, focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. The course is guided by broad understandings of, and skills specifically related to rhetorical situations, claims and evidence, reasoning and organization, and style. Through conversations, essays, editorials, books, protests, speeches, and artifacts of popular culture, students will interact with concepts of race, class, gender, identity, power, justice, political thought, and progress, as they relate to America's current culture and society, as well as its history. At the end of this course, students can expect to develop a deep understanding of the rhetorical situation, read critically and with purpose, write and revise a variety of essays, and understand the power of language.

Note: An English III (CP, Honors or AP Language) course is required for all Grade 11 students.

Journalism and Digital Media

The Journalism and Digital Media course provides the tools to navigate a changing journalistic landscape where media plays a tremendous role. Students will learn the basics of design, photojournalism, interviewing, and journalistic writing. Students will be responsible for the production of the school's online newspaper and its written and multimedia content, as well as the promotion of their stories through social media. Students will apply for the leadership roles in The Argosy (Editor-in Chief, Managing Editor, etc.) and will be required to publish work in The Argosy and to promote said work.

Note: Offered to students in grades 11 and 12.

English IV

The English IV course is designed to study literature as a social and historical document. Students will be exposed to the literature of various cultures, time periods, and genres through which students will create the curriculum for their peers through research and collaboration with the teacher. Upon completion of this course, students will be able to identify common threads of identity and imagination and will explore the psychological/sociological/sociopolitical experience based on individual and collective identities of peoples and cultures. To foster autonomy and a greater sense of independence, as well as to empower students to find their voices, the curriculum for this course is collaboratively sourced. Students will work closely with their teacher to curate a reading list (and similar experiences) to explore identity and representation in literature.

Note: An English IV course (CP, Honors, or AP Literature) is required for all grade 12 students.

English IV Honors

The English IV Honors course is designed to study literature as a social and historical document. Students will be exposed to the literature of various cultures, time periods, and genres through which students will create the curriculum for their peers through research and collaboration with the teacher. Upon completion of this course, students will be able to identify common threads of identity and imagination and will explore the psychological/sociological/sociopolitical experience based on individual and collective identities of peoples and cultures. To foster autonomy and a greater sense of independence, as well as to empower students to find their voices, the curriculum for this course is collaboratively sourced. Students will work closely with their teacher to curate a reading list (and similar experiences) to explore identity and representation in literature.

Writing skills, presentations, and analytical papers along with Internet research are part of the course of study. Additional supplementary reading and analytical research will be required as independent study is promoted as part of the course work.

Note: An English IV course (CP, Honors, or AP Literature) is required for all grade 12 students.

AP English Literature and Composition

The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage

in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.

Note: An English IV course (CP, Honors, or AP Literature) is required for all grade 12 students.

MATHEMATICS

The goal of the math curricula is to build students' confidence and help them find joy in math. Students are encouraged to take risks through asking questions, sharing insights and exploring connections between mathematics in the classroom and in the real world.

Math classes are required for students in Grades 9-11, and highly recommended for students in Grade 12.

Grade 9	Algebra I * Algebra II *
Grade 10	Geometry and Trigonometry * Algebra II * Precalculus *
Grade 11	Algebra II * Precalculus * AP Statistics Calculus Honors AP Calculus AB
Grade 12	Precalculus * Statistics AP Statistics AP Calculus AB AP Calculus BC Calculus Honors
Summer Courses	Accelerated Geometry and Trigonometry Honors Accelerated Precalculus Honors

**College prep and honors level courses are offered*

Algebra I

This course places emphasis on algebraic concepts as well as algebraic skills. The two major objectives are to teach the student to reason logically, and to express herself precisely. Classroom discussion and student participation are strongly encouraged.

Note: An Algebra I course (CP or Honors) is required for all students.

Algebra I Honors

This is an accelerated Algebra I course. The students are asked to cover more topics in depth and at a quick pace. Critical thinking and independent problem solving are fostered.

Note: An Algebra I course (CP or Honors) is required for all students.

Geometry and Trigonometry

This one-year course is divided into 2 sections: geometry and trigonometry. In the geometry portion of the course (spanning 3 marking periods), the student learns how to present an argument in a clear and orderly fashion and uses her ingenuity and imagination in the use of geometric principles. In the trigonometry portion of the course (covered in 1 marking period), the student develops an understanding of trigonometric functions and their relationships. .

*Note: A Geometry course (CP or Honors) is required for all students.
Algebra I is a prerequisite for this course.*

Geometry and Trigonometry Honors

The course covers all topics of the College Prep course at a deeper level with the inclusion of applications of trigonometric identities. The following topics are included, as time permits: logic, transformation geometry, and relationships between triangles and circles. Critical thinking and independent problem solving are fostered.

*Note: A Geometry course (CP or Honors) is required for all students
Algebra I (and departmental approval) is a prerequisite for this course.*

Accelerated Geometry and Trigonometry Honors (Summer Course)

This accelerated course covers all topics of the College Prep course with the inclusion of more complicated proofs and applications of trigonometric identities. The following topics are included, as time permits: logic, some three-dimensional work, constructions, transformation geometry and coordinate geometry. Critical thinking and independent problem solving are fostered. Students must attend class in person (not virtually). Attendance is mandatory. Any absences must be verified by a doctor's note. Missing a class may result in not getting credit for the course.

*Note: A Geometry course (CP or Honors) is required for all students.
Algebra I (and departmental approval) is a prerequisite for this course.*

Algebra II

The course is a review, continuation and expansion of Algebra I. Much time is spent on the study of functions and relations, including solutions of equations and inequalities and extensive work in graphing. Topics include rational expressions, quadratic equations, and exponential and logarithmic functions.

*Note: An Algebra II course (CP or Honors) is required for all students.
Geometry/Trigonometry is a prerequisite for this course.*

Algebra II Honors

This course is fast-paced and covers material in greater depth than Algebra II CP. The course also covers the additional topics of synthetic division and substitution, rational root theorem, logarithmic and exponential functions, and the conics. Matrices may also be introduced. Critical thinking and independent problem solving are fostered. A graphing calculator is required for this course.

*Note: An Algebra II course (CP or Honors) is required for all students.
Algebra I (and departmental approval) is a prerequisite for this course.*

Precalculus

This course is the logical sequel to Algebra II and provides a bridge to college-level math courses. It begins with a study of functions and their properties. Emphasis is placed on using numerical and algebraic methods as well as graphical analysis. The course will include a thorough study of the circular and trigonometric functions, including right triangle trigonometry, graphing and identities. A graphing calculator is required for this course.

Note: Algebra II is a prerequisite for this course.

Precalculus Honors

This is an honors level elective, the goal of which is to prepare the student for Calculus. The course includes a thorough study of the graphs and properties of various types of functions: polynomial, rational, algebraic, trigonometric, exponential, and logarithmic. An introduction to limits, their properties, and techniques for evaluating them will be presented. Critical thinking and independent problem solving are fostered. A graphing calculator is required for this course.

Note: Algebra II Honors (and departmental approval) is a prerequisite for this course.

Calculus Honors

This course explores concepts in differential and integral calculus and their applications. Broad concepts are emphasized, and knowledge through discovery is fostered. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Students learn how to use technology to help solve problems, interpret results, and support conclusions. Critical thinking and independent problem solving are fostered.

Note: Precalculus Honors (and departmental approval) is a prerequisite for this course.

AP Calculus AB

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus, including limits, derivatives, integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Students learn how to use technology to help solve problems, interpret results, and support conclusions. This course is rigorous, fast-paced, and requires students to be independent and critical thinkers.

Note: Precalculus Honors (and departmental approval) is a prerequisite for this course.

AP Calculus BC

AP Calculus BC is roughly equivalent to a second semester college calculus course and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are

represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. This course is a continuation of AP Calculus AB. This course is rigorous, fast-paced, and requires students to be independent and critical thinkers.

Note: AP Calculus AB (and departmental approval) is a prerequisite for this course.

Statistics

In this course, the student will learn the following: how to display and summarize quantitative data; how to analyze data numerically by creating frequency distributions and by calculating percentiles, mean, median, mode, variance, standard variation, and z values; how to construct and analyze statistical graphs; how to collect data through sampling for studies and experiments; elementary probability theory; the Binomial and Normal Probability Distributions; how to formulate confidence intervals and test hypotheses using z tests, t tests, and χ^2 tests; to determine the correlation coefficient and linear regression function which models a data set. Emphasis will be placed on the applications of statistics in the social and physical sciences.

Note: Algebra II is a prerequisite for this course.

AP Statistics

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

Note: Algebra II (and departmental approval) is a prerequisite for this course.

Accelerated Precalculus Honors (Summer Course)

This is an Honors level elective, the goal of which is to prepare the student for Calculus. The course includes a thorough study of the graphs and properties of various types of functions: polynomial, rational, algebraic, trigonometric, exponential, and logarithmic. An introduction to limits, their properties, and techniques for evaluating them will be presented. Other topics included as time permits are systems of equations and inequalities, and conic sections. A graphing calculator is required for this course. Critical thinking and independent problem solving are fostered. Students must attend class in person (not virtually). Attendance is mandatory. Any absences must be verified by a doctor's note. Missing a class may result in not getting credit for the course.

Note: Algebra II Honors (and departmental approval) is a prerequisite for this course.

SCIENCE

The science offerings at Mount St. Dominic Academy foster a spirit of curiosity and inquiry. Students are challenged to investigate issues and engage in discussions to explore solutions to real world events and broad global issues.

Grade 9	Biology *
Grade 10	Chemistry *
Grade 11	AP Biology AP Chemistry AP Environmental Science Environmental Science Honors Anatomy and Physiology Honors Forensic Science (<i>Will run on alternating years beginning in 2026-2027</i>) Physics Honors Advanced Physics Earth and Space Science (<i>Will run on alternating years beginning in 2027-2028</i>) Microbiology Honors
Grade 12	AP Biology AP Chemistry AP Environmental Science Environmental Science Honors Anatomy and Physiology Honors Forensic Science (<i>Will run on alternating years beginning in 2026-2027</i>) Physics Honors Advanced Physics Earth and Space Science (<i>Will run on alternating years beginning in 2027-2028</i>) Microbiology Honors

**College prep and honors level courses are offered*

** Courses will run based on enrollment*

Forensic Science and Earth and Space Science will run on alternating years beginning with Forensic Science in 2026-2027 and Earth and Space Science in 2027-2028

Biology

This course is designed to introduce students to the basic structures, functions and processes which are common to all living things. The curriculum includes topics such as origins of life, molecular processes, Mendelian genetics and genetic technology, evolution and ecology.

Note: A Biology course (CP or Honors) is required for all grade 9 students

Biology Honors

Honors biology is a course designed to increase students' knowledge of the concepts, processes and facts of biology. The course covers the topics in college preparatory biology but runs at an accelerated pace with more intensity to help students develop a meaningful understanding of science in their lives. This course is designed to give students an opportunity to explore the biological worlds and become scientists by engaging in a variety of tasks such as laboratory

experiments, group activities, article readings and projects. major topics studied in the course include scientific processes, cell physiology, microbiology, and animal diversity.

Note: A Biology course (CP or Honors) is required for all grade 9 students.

Prerequisite: Approval by the Admissions Committee

Chemistry

The chemistry course is designed to introduce students to the basic laws of chemistry, covering the following topics: scientific processes, atoms and the periodic table, structure of matter and its properties, chemical reactions, quantitative relationships using the mole. Students will further develop the understanding of the relationship between experiment and theory through work in laboratory investigations.

Note: A chemistry course (CP or Honors) is required for all students in 10th grade.

Chemistry Honors

Honors chemistry will cover the same curriculum as the college preparatory chemistry course but will move at a faster pace and will include additional lab activities and an emphasis on mathematics in problem solving. This course will prepare students who will continue their studies in science to take AP Chemistry.

Note: A chemistry course (college prep or honors) is required for all students in 10th grade.

AP Biology

Completion of a summer assignment is required for this course. AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes, energy and communication, genetics, information transfer, ecology, and interactions. This course is fully aligned with College Board CED and prepares students for the AP exam held in May.

Note: Offered to grade 11 and 12 students.

Prerequisite: Students must successfully complete Biology (CP/H) and Chemistry (CP/H) courses.

AP Chemistry

Completion of a summer assignment is required for this course. The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. This course is fully aligned with the College Board CED and prepares students for the AP exam held in May.

Note: Offered to grade 11 and 12 students.

Prerequisite: Students must successfully complete Chemistry (CP/H) course.

Advanced Physics

This course is designed to meet College Board standards with both the laboratory component and topics covered and provide students with the foundation for the AP Physics exam held in May. Topics include kinematics, Newton's Laws of motion, torque, rotational motion and angular

momentum, gravitation and circular motion, work, energy, power, linear momentum, oscillations, mechanical waves, sound, and an introduction to electric circuits.

Note: Offered to grade 11 and 12 students.

Prerequisite: Students must successfully complete Chemistry H course and Algebra I Honors (or currently enrolled a Math honors course)

AP Environmental Science

Completion of a summer assignment is required for this course. Advanced Placement Environmental Science is designed to engage students with the scientific principles, concepts and methodologies required to understand the interrelationships within the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography. This course is fully aligned with College Board CED and prepares students for the AP Exam held in May.

Note: Offered to grade 11 and 12 students

Prerequisite: Students must successfully complete Biology (CP/H) and Chemistry (CP/H) courses. Along with successful completion of an Algebra course

Environmental Science Honors

Environmental Science Honors is an engaging, STEM-focused exploration of how humans interact with the natural world and how the environment impacts our health. Through hands-on labs, data analysis, and real-world problem-solving, students will investigate pressing environmental challenges—both natural and human-made—and explore innovative solutions for a more sustainable future. This interdisciplinary course integrates ecology, sustainability, climate science, and earth systems physics, encouraging students to think critically and collaborate on projects that connect science to everyday life. With field studies, interactive discussions, and cutting-edge technology, this course is perfect for students eager to make a difference in the world around them.

Note: Offered to grade 11 and 12 students

Forensic Science

Forensic Science is a year-long course that focuses on investigative practice used in the criminal justice system by crime scene investigators. This rigorous course incorporates concepts from biology, chemistry, physics and earth science. Topics include crime scene analysis, physical/chemical analysis of evidence, microscopy, chromatography, hair/fiber/glass/document/fingerprint analysis, firearms, drug, toxicology, entomology, anthropology, blood (serology) and DNA analysis. The course will use case studies to analyze issues in collection of evidence and use of evidence in prosecution of suspect(s).

Note: Offered to grade 11 and 12 students.

Anatomy and Physiology Honors

This course is an introduction to the overview of human anatomy and physiology, focusing on the structure and functions of the human body. Topics include the cell, tissues, and the

musculoskeletal, nervous, cardiovascular, digestive, respiratory, reproductive and endocrine systems. The focus will be on the organization, process and maintenance of each system and the human body as a whole.

Note: Offered to grade 11 and 12 students.

Prerequisite: Students must successfully complete Biology (CP/H).

Physics Honors

The Physics Honors program is an algebra-based course. The topics covered will be the same as the college prep Physics course with more emphasis on deriving formulas. The Physics Honors course will also be more accelerated. Topics will include forces, mechanics, energy, waves, heat transfer, electricity, magnetism, and possibly nuclear physics.

Note: Offered to grade 11 and 12 students.

Prerequisite: Students must successfully complete Algebra Honors.

Earth and Space Science

Earth and Space Science will deepen the understanding of the relationship between Earth and our Solar System. In this course, we will view Earth from the center to the rim of the solar system, its history, and where we are going. The focus of Earth's study will include Earth's interior structure, chemistry, motion, and dynamics; the processes affecting its landscapes, and climate; natural hazards; the surrounding space environment. The focus of Space will include planetary processes; cosmology; the nature and origin of the Earth, the solar system, the galaxy, the universe, the big bang, and the history from the Greeks to the current time.

Note: Offered to grade 11 and 12 students.

Microbiology Honors

Microbiology is a course that surveys the microbial world. Students will cover a wide array of microorganisms ranging from viruses, bacteria, fungi, and protozoa. Students will also learn about diseases caused microorganisms, antibiotic resistance, a microorganism's impact on the environment and on the economy.

Note: Offered to students in grades 11 and 12.

Prerequisite: Students must successfully complete Biology (CP/H).

SOCIAL STUDIES

The Social Studies curricula strives to encourage students to seek truth through investigation and foster global citizenship. Course offerings expose students to a variety of topics which allow them to explore different perspectives, examine bias, and evaluate the impacts of power and inequity.

Grade 9	World History I Human Geography Honors
Grade 10	World History II * AP World History Maximizing Your Learning Style (<i>required cycle course</i>)
Grade 11	US History * AP United States History Introduction to Psychology AP Psychology Holocaust/Genocide Studies American Civics and Government Honors Directed Research Capstone
Grade 12	AP US Government and Politics Introduction to Psychology AP Psychology Holocaust/Genocide Studies American Civics and Government Honors Directed Research Capstone

**College prep and honors level courses are offered*

World History I

This course will examine the historical developments and interdependence of world cultures, focusing on the ancient world. Economic and political institutions, as well as the social structure of various cultures, will be explored. The exploration of maps and geography are a critical component of the course.

Note: World History I OR Human Geography Honors is required for all grade 9 students.

Human Geography Honors

This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

Placement into this course is determined by a holistic review, conducted by the Admissions Committee.

Note: World History I OR Human Geography Honors is required for all grade 9 students.

World History II

This course examines the development of the modern world after 1200 C.E. by exploring the political, social, cultural, and economic changes that took place in its history. Historical articles, primary source analysis and critical reading are vehicles used to encourage the student to analyze specific issues and to make connections with the modern day.

Note: A World History II course (CP, Honors, or AP) is required for all grade 10 students.

World History II Honors

This course examines political, cultural, and economic trends in the history of the modern world after 1200 C.E. by exploring the political, social, cultural and economic changes that took place in history. Historical articles, primary source analysis and critical reading are vehicles used to encourage the student to analyze specific issues and to make connections with the modern day. Emphasis is placed on critical thinking and the continuity and connection of ideas and events throughout the history of the world. In addition, development of writing skills is emphasized.

Note: A World History II course (CP, Honors, or AP) is required for all grade 10 students.

Prerequisites

- *An minimum 85 in Human Geography Honors or a 92 in World History I*
- *Concurrent Honors placement in English strongly considered*
- *An additional timed writing sample may be requested*
- *See the description of the Aquinas Honors Program for complete criteria for acceptance into Honors and AP courses.*

AP World History

AP World History focuses on developing students' abilities to think conceptually about world history from approximately 1200 to the present. Six themes of equal importance — humans and the environment; cultural developments and interactions; governance; economic systems; social interactions and organization; technology and innovation — provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the six major geographical regions of the globe: East Asia, Dar al-Islam, South and Southeast Asia, Africa, the Americas and Europe, with special focus on historical developments and processes that cross multiple regions.

Note: A World History II course (CP, Honors, or AP) is required for all grade 10 students

Prerequisites

- *A 92 in Human Geography Honors*
- *Concurrent Honors placement in English strongly considered*
- *An additional timed writing sample may be requested*
- *See the description of the Aquinas Honors Program for complete criteria for acceptance into Honors and AP courses.*

Maximizing Your Learning Style

Learning is a lifelong skill and knowing how to study effectively is crucial to academic success in high school, college, and beyond. This course is designed to help 10th graders adjust to the increasing academic expectations as they ascend through the more rigorous demands of

advanced courses their junior and senior years. Drawing on evidence from both brain and behavioral research, this class incorporates a variety of hands-on activities to guide students through a process of self-reflection, and setting personal learning goals. Students will gain a better understanding of their own learning style and will begin exploring a range of techniques to tailor an approach that works best for them. Topics include time management and organization, note-taking, memory techniques, focus and motivation enhancing strategies, test-taking strategies, analyzing and incorporating teacher feedback.

**Note: This course is a required cycle course for all 10th grade students.*

US History

This course examines the development of the United States by exploring the political, social, cultural, and economic changes that took place in its history. Primary sources, maps, and other forms of data are used as tools to strengthen critical thinking, reading, and analysis skills. Students are also taught how to analyze issues of the past and connect them to contemporary ones.

Note: A US History course (CP, Honors or AP) is required for all grade 11 students.

US History Honors

This course examines the development of the United States by exploring the political, social, cultural, and economic changes that took place in its history. Primary sources, maps, and other forms of data are used as tools to strengthen critical thinking, reading, and analysis skills. Students are also taught how to analyze issues of the past and connect them to contemporary ones. Emphasis is placed on critical thinking and the continuity and connection of ideas and events throughout the history of the world. In addition, a concentration and development of writing skills is highlighted.

Note: A US History course (CP, Honors or AP) is required for all grade 11 students.

Prerequisites

- *A minimum 85 in World History II Honors or a 92 in World History II*
- *Concurrent Honors or AP placement in English strongly considered*
- *An additional timed writing sample may be requested*
- *See the description of the Aquinas Honors Program for complete criteria for acceptance into Honors and AP courses.*

AP United States History

AP United States History focuses on developing students' abilities to think conceptually about United States History from approximately 1491 to the present and apply historical thinking skills as they learn about the past. Seven themes of equal importance — identity; population and migration; politics and power; work, exchange, and technology; America in the world; environment and geography; ideas, beliefs, and culture — provide areas of historical inquiry for investigation throughout the course. These themes require students to evaluate and think critically about continuity and change over time and make comparisons among various historical developments in different times and places.

Note: A US History course (CP, Honors, or AP) is required for all grade 11 students.

Prerequisites

- *A minimum 85 in AP World History or a 92 in World History II Honors*
- *Concurrent Honors or AP placement in English strongly considered*
- *An additional timed writing sample may be requested*
- *See the description of the Aquinas Honors Program for complete criteria for acceptance into Honors and AP courses.*

Introduction to Psychology

This is a survey course introducing students to the major subfields of psychology and the scientific study of human behavior and mental processes. Topics include but are not limited to the following: sensation and perception, learning, memory, attention, motivation, emotion and personality, developmental psychology, clinical psychology and social psychology. A range of psychological principles, phenomena and theories will be explored through readings, videos, hands-on activities, and group projects. Students' interests will be taken into account when selecting topics for deeper exploration and class discussions.

AP Psychology

This course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, clinical psychology, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations, as they use the scientific method, analyze bias, evaluate claims and evidence, and effectively communicate ideas. Strong quantitative reasoning, analytical and writing skills are important for student success due to the interdisciplinary nature of the course.

Prerequisites

- *Concurrent placement in Honors or Advanced Placement English*
- *Prior or concurrent enrollment in CP or AP Statistics and/or Anatomy & Physiology Honors is strongly recommended*

Holocaust and Genocide Studies

This course takes an interdisciplinary approach to analyzing the events and factors contributing to the Holocaust and other genocides around the world. Students draw evidence from history and psychology to deepen their understanding of the characteristics of genocide and the warning signs of mass atrocities. The second half of the academic year focuses on exploring examples of genocide in contemporary history such as in Cambodia, Rwanda, and Darfur.

American Civics & Government Honors

This course is open to juniors and seniors and will explore the facets of the American government system, including voting/election processes, interactions between branches of the federal government, federalism, media bias, civil liberties, and the Bill of Rights. The second semester requires students to draft mock legislation to propose to area representatives and participate in a field trip during which they will explore an institution of the federal government.

Prerequisites

- *Enthusiastic interest for studying governance and political systems*
- *A minimum 92 average in current College Prep history course or 85 average in current Honors/AP history course*

AP US Government and Politics

This course introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments.

Prerequisites

- *A minimum 92 average in United States History Honors or 85 average in AP United States History*

Directed Research Capstone

The Senior Capstone in Directed Research 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 specific research question. Through this inquiry, they further the skills they acquired in prior academic courses by learning research methods, employing ethical research practices, collecting and analyzing participant data, and synthesizing information. Students work with a mentor with expertise in their area of interest (typically an MSDA alumna). The course culminates in an academic paper and a presentation in front of a faculty panel at the MSDA Annual Symposium. This program includes a partnership with Harvard University for support for research and enhanced opportunities for publication.

Note: Offered to students in grades 11 and 12.

THEOLOGY

The theology offerings provide a foundation for students to develop the Dominican values - veritas and caritas. Living these values will help them become advocates for social justice and change, and to foster equity throughout society and in their own lives.

Grade 9	Intro to Theology
Grade 10	Sacred Scripture
Grade 11	Church History/Morality
Grade 12	Social Justice

Intro to Theology

This course begins as an introduction to the life and charism of Saint Dominic by exploring the four pillars of Dominican Life and the tenets of veritas and caritas. Following the history of the Dominicans the class moves to a comprehensive and detailed overview of Catholicism and engages students of all religious and spiritual backgrounds in a meaningful study of the faith tradition that underlies their education at a Catholic high school.

Note: This course is required for all grade 9 students.

Sacred Scripture

This full-year foundational course begins with Genesis and concludes with Revelation. We all come from different backgrounds and learn together. The bible is our primary text. We learn to read, study, and interpret scripture.

Note: This course is required for all grade 10 students.

Church History/Morality

Church History begins where Scripture leaves off. Paul’s preaching in Acts of the Apostles in the first century lead us to the Church in the 21st Century. We examine the parallels between chronological history and significant persons and events in the development of the Church. The second semester leads us to the morality component of the course. Students learn to use principles of Moral Theology to study and examine contemporary moral and ethical issues.

Note: This course is required for all grade 11 students.

Social Justice

Social Justice class empowers students to examine society critically, based on values from the Scriptures and on the seven themes of Catholic social teaching. Social Justice focuses on the ideas of human rights; dignity; political, economical, social, and other equality; equal distribution of resources; justice; and societal participation in change. It explores obligations to care for one another, especially those most in need in society. .

Note: This course is required for all grade 12 students.

WORLD LANGUAGES

Through the exploration of world language, students learn not only to communicate in another language, but also expand their knowledge and understanding of other cultures, enabling them to celebrate diversity.

Grade 9	Spanish I/II * Latin I Honors French I Honors **
Grade 10	Spanish I/II * Latin II Honors French I/II Honors **
Grade 11	Spanish III/IV * Latin III Honors French III/IV Honors **
Grade 12	Spanish IV Honors AP Spanish Language and Culture

** College prep and honors level courses are offered*

*** Courses offered based on enrollment*

Note: One Schoolhouse (virtual learning option) courses are not directly aligned to in school levels and may only be utilized for students completing a course sequence for graduation requirements or in unique situations, as approved by a school Counselor and/or the Principal. There may be content covered in One Schoolhouse courses that is accelerated in comparison to

live instruction. When choosing a language trajectory, students should consult with their counselor prior to making a final decision.

Spanish I

This course is designed for students with no prior exposure to the Spanish language. The student learns correct pronunciation and grouping of words, develops the ability to speak the language through the use of oral drills, dialogues, song, computer technology, and studies grammar as an aid to speaking, writing and reading the language. Throughout the course, the student is introduced to the social and cultural life of the Spanish-speaking people.

Note: All students must complete two years of the same World Language.

Spanish I Honors

Students placed in this course cover the same material as the standard first level class, but at a more intensive level. Students are required to use the target language more extensively and do additional readings and projects as they become acquainted with the culture and traditions of Spanish-speaking countries.

Note: All students must complete two years of the same World Language.

Spanish II

The student continues to improve her pronunciation, intonation, and the grouping of words, to speak in idiomatic sentences, to increase her vocabulary, to master basic grammar, to increase her reading understanding, and to study Spanish social and cultural life. There is increased emphasis on speaking and writing the language.

Note: All students must complete two years of the same World Language.

French I

This course is designed for students with no prior exposure to the French language. The student learns correct pronunciation and grouping of words, develops the ability to speak the language through the use of oral drills, dialogues, song, computer technology, and studies grammar as an aid to speaking, writing and reading the language. Throughout the course, the student is introduced to the social and cultural life of the French-speaking people.

French I Honors

Students placed in this course cover the same material as the standard first level class but at a more intensive level. Students are required to use the target language more extensively and do additional readings and projects as they become acquainted with the culture and traditions of France and French speaking countries. This course is offered through One Schoolhouse.

Note: All students must complete two years of the same World Language.

Spanish II Honors

The students cover the same material as the college prep second level class, but at a more rigorous pace. In addition to basic Spanish grammar presented at the second level, the students will concentrate on improving their skills through writing weekly assignments and speaking in the target language.

Note: All students must complete two years of the same World Language.

Latin I Honors

The Latin I course begins the study of the language, culture and history of the ancient Romans, with special reference to Pompeii and Roman Britain in the 1st century A.D. By the end of the year, students will have gained experience in reading and interpreting the fundamentals of Latin vocabulary and grammar as well as oral expression and aural comprehension. Students utilize interactive materials and learn and practice linear-reading strategies that build critical thinking skills.

Latin II Honors

The Latin II course continues the study of the language, culture and history of Ancient Rome, with deeper examination of Roman Britain and the city of Rome. Students encounter more complex grammatical structures and additional moods and tenses of verbs. Study of word patterns helps students recognize cognates and strengthen Latin as well as English vocabulary. Interactive materials and independent projects encourage more nuanced command of linguistic and historical topics.

Note: All students must complete two years of the same World Language.

Latin III Honors

The Latin III course provides the denouement in the historical storyline begun in prior texts in and around the court of the Emperor Domitian. Students then encounter a selection of original texts by Roman authors (adapted where necessary), including Catullus, Ovid, Pliny, Tacitus, and Virgil.

Note: All students must complete two years of the same World Language.

Spanish III

The student reviews and applies the principles of grammar, continues practicing good pronunciation, intonation, and the grouping of words through materials written for Spanish-speaking people. More emphasis is placed on reading and speaking. Writing development and cultural study are continued.

Spanish III Honors

Spanish III Honors develops the student's proficiency in the five areas of reading, writing, listening, speaking and cultural awareness. In order to accomplish these goals, Spanish III Honors begins with, and keeps current, an in-depth review of essential points of grammar.

Spanish IV

This course is designed for students who wish to further their studies of the Spanish language and culture, and improve their proficiency in the five areas of reading, writing, listening, speaking, and cultural awareness. In order to accomplish these goals, Spanish IV begins with and keeps current, complete reviews of essential points of grammar.

Spanish IV Honors

This course is designed for students who wish to further their studies of the Spanish language and culture. Students in this course are presumed to have already attained a firm foundation in grammar and vocabulary. Emphasis is placed on active communication to improve the student's writing and conversational skills. Through the study of various cultural themes and literary works, students will gain a deeper understanding of Spanish culture and civilization while enhancing their level of language proficiency.

AP Spanish Language and Culture

The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives to not overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).

**Note: Juniors who have successfully completed an Honors Spanish course are eligible to take AP Spanish Language and Culture*

BUSINESS/ENTREPRENEURSHIP

Grade 9	Women in Business (co-curricular)
Grade 10	Financial Literacy (required)
Grade 11	Introduction to Business (semester) Entrepreneurship I (L.E.O. I) (semester)
Grade 12	Entrepreneurship II (L.E.O. II) Marketing

Please Note: The LEO program is a two-year program

Financial Literacy

Financial Literacy connects students with real-world scenarios, setting them up for success in life beyond the classroom. Fostering an understanding of budgeting, paychecks, credit cards, loans, taxes and more. This curriculum covers essential topics intended to equip students with financial knowledge and the tools they need to make informed financial decisions and thrive in their future endeavors.

Note: This course is mandatory for all grade 10 students.

Introduction to Business

This course Introduces students to the main business disciplines of accounting, finance, marketing, strategy, ethics, leadership and management. It develops critical thinking and collaboration skills that are essential to run any business. Using a mix of case studies and lectures, students have the opportunity to develop a high-level understanding of contemporary business environments. Intro to Business introduces career prospects for each of the primary

business areas (such as Accounting, Finance, Management, Marketing, etc.) and basic business terminology.

Note: This semester course is the first course of the two year L.E.O. Program progression and is taken in the fall of grade 11.

Entrepreneurship I

This is the first semester of the L.E.O. Program. In this course, student teams will learn about marketing, accounting, and the legal aspects of starting a business. They will have access to a network of professionals to further develop their skills (teamwork, problem solving, presentation, communication) for college and career readiness.

Note: By selecting this course, completing the application, and earning acceptance into the program, students acknowledge the commitment and requirements of the program. Acceptance into the program is determined by the MSDA L.E.O. Program Director and the L.E.O. Foundation.

Prerequisite: Introduction to Business

Entrepreneurship II

This is the second semester of the L.E.O. Program, where teams develop an abbreviated prototype of their business to test the efficacy of their idea before bringing it to full scale. This is called the Minimum Viable Product (MVP). Pitch Week helps to further fire the entrepreneurial spirit by putting student teams in front of actual investors so they can pitch their innovative MVP to win funding and turn it into an actual business.

Project management skills are introduced to keep teams on task and get as much marketplace data as possible. Students test and adjust their model to validate its potential. Practical legal concepts on company formation and intellectual property are introduced. Students begin building their “story” to persuade customers and potential investors. Using their latest data from MVP tests and what they’ve learned from previous units, teams identify tactics to promote their business, develop marketing and sales plans, including promotional strategies. They end the unit by developing their financial story. The financial model is updated with refined estimates based on the MVP learning. Financial model includes growth goals and resources needed. The year culminates with teams pitching their plan to investors with the hope of winning funding to launch their idea.

Note: By selecting this course, completing the application, and earning acceptance into the program, students acknowledge the commitment and requirements of the program. Acceptance into the program is determined by the MSDA L.E.O. Program Director and L.E.O. Foundation.

Prerequisite: Entrepreneurship I

Marketing

The Marketing course equips 12th grade students with critical thinking and collaboration skills, vital for navigating contemporary business environments. Through an engaging mix of case studies and lectures, students gain insights into important economic principles, learn how to conduct business across global markets, and explore ethical responsibilities in business practices.

Moreover, the curriculum introduces various career paths within the business sector, providing a solid foundation in basic business terminology and concepts necessary for future academic and professional pursuits. This comprehensive approach prepares students to take risks and make informed decisions while pursuing profits in a dynamic business landscape.

Note: This semester course is the final course of the L.E.O. Program progression, and is taken in the spring of grade 12.

Prerequisite: Introduction to Business.

COMPUTER SCIENCE AND TECHNOLOGY

Grade 9	Robotics Club (co-curricular - not for credit) Intro to Engineering FLEX (Add “blurbs”) Artificial Intelligence FLEX
Grade 10	Robotics Club (co-curricular - not for credit) Fundamentals of Cybersecurity Intro to Engineering FLEX Artificial Intelligence FLEX
Grade 11	AP Computer Science Principles Robotics Club (co-curricular - not for credit) Intro to Engineering FLEX Artificial Intelligence FLEX Fundamentals of Cybersecurity Introduction to Robotics and Computer Programming
Grade 12	Intro to Robotics and Computer Programming Fundamentals of Cybersecurity AP Computer Science Principles Robotics Club (co-curricular - not for credit) Intro to Engineering FLEX Artificial Intelligence FLEX Fundamentals of Cybersecurity Introduction to Robotics and Computer Programming

* Intro to Engineering and Artificial Intelligence run as semester courses during FLEX period only for the 25-26 school year. Only one section for each course is being offered and will be capped with a priority given to Freshman and Sophomore students.

Introduction to Engineering

This course guides students through the engineering design process using sketching, 3D modeling, and prototyping. They will develop skills in CAD, 3D printing, material selection, and assembly design while working individually and in teams to create and refine products, documenting their progress in an engineering notebook.

**Note: Introduction to Engineering meets during FLEX time for one semester. It is a pass/fail course.*

Introduction to Artificial Intelligence

This course explores the evolution of AI, from early research on artificial general intelligence to modern advancements in neural networks, machine learning, deep learning, natural language processing, and computer vision. Students will examine how AI models learn, the impact of biased training data, and the ethical principles of responsible AI, including fairness, transparency, human-centered design, privacy, and security.

**Note: Introduction to Artificial Intelligence meets during FLEX time for one semester. It is a pass/fail course.*

Introduction to Robotics and Computer Programming

This is a beginning course in robotics. The student will learn basic programming in C/C++ and problem solving strategies in order to complete various challenges in robot function and activity. This course will cover a variety of multidisciplinary topics necessary to understand the fundamentals of designing, building, and programming robots. Topics may include physics principles of motion, temperature, sound and light, motor control, friction, sensors, timing, program loops, logic gates, and timing sequences.

AP Computer Science Principles

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and the world.

Fundamentals of Cybersecurity

This is a comprehensive cybersecurity course designed for students with an interest in the cybersecurity field. It will prepare students for an advanced cybersecurity course and/or cybersecurity certification(s). Students will learn about cybersecurity, digital citizenship, basic cryptography, basic system administration, software security, networking fundamentals and troubleshooting. Students should have some exposure to computer science, but there are no specific course prerequisites.

Note: This course is offered to grade 11 and 12 students. Approval of Principal required

FINE AND PERFORMING ARTS

Through both visual and performing arts, students have the opportunity to celebrate their creativity. With a variety of academic and co-curricular offerings, students can explore various forms of self-expression to promote cultural awareness and build community.

Grade 9	Introduction to Art (required) Creative Expression (required) Choir (FLEX 2 mornings per week-) Pass/Fail Dance (FLEX 1 morning per week) Pass/Fail Instrumental Music performance (FLEX 2 mornings per week) Pass/Fail Art Club, Fall Drama/Spring Musical, Tech Crew, Forensics (co-curricular)
Grade 10	Choir (FLEX 2 mornings per week-) Pass/Fail Dance (FLEX 1 morning per week) Pass/Fail Instrumental Music performance (FLEX 2 mornings per week) Pass/Fail

	Art Club, Fall Drama/Spring Musical, Tech Crew, Forensics (co-curricular)
Grade 11	Choir (FLEX 2 mornings per week-) Pass/Fail Dance (FLEX 1 morning per week) Pass/Fail Instrumental Music performance (FLEX 2 mornings per week) Pass/Fail Drawing and Painting Advanced Studio Art Photography Art Club, Fall Drama/Spring Musical, Tech Crew, Forensics (co-curricular)
Grade 12	Choir (FLEX 2 mornings per week-) Pass/Fail Dance (FLEX 1 morning per week) Pass/Fail Instrumental Music performance (FLEX 2 mornings per week) Pass/Fail Drawing and Painting Advanced Studio Art Photography Art Club, Fall Drama/Spring Musical, Tech Crew, Forensics (co-curricular)

Introduction to Art

Introduction to Art fosters an understanding and appreciation of art in everyday life. Presented in an engaging format, this course provides an overview of many introductory themes such as the definition of art and its cultural purpose, terminology and principles of design. Students will explore a variety of media and techniques.

Note: This is required for all grade 9 students.

Creative Expression

In the Creative Expression course students will use theatrical practices to learn how to effectively communicate who they are as individuals through a process of creation, performance and response. By exploring where they come from, what they believe, and how they fit into the world around them, students will study the components of public speaking, improvisation, story telling, spoken word poetry, and other methods of personal expression. Core competencies include but are not limited to self-awareness, self-management, social awareness, and relationship skills. The supportive class environment provides a space for students to take risks, develop resilience and practice empathy in preparation for presenting and listening in the high school classroom and beyond.

Essential Question:

How can I discover who I am as a truth seeker, use my voice to express myself and find the empathy to listen for understanding?

** Note: This course is graded Pass/Fail. A passing grade requires active and meaningful participation during lessons and completion of all required tasks and assignments.*

** Note: This is required for all grade 9 students.*

Drawing and Painting

This studio course is ideal for those students who have a strong interest in painting and drawing, and a desire to continue to develop their skills in these areas. Expanding upon knowledge and techniques learned in Studio Art Foundations, students will work at refining their drawing and painting abilities and will explore different media such as ink, watercolor, colored pencils and acrylic paint to produce imaginative and personal works of art. In addition, students will further develop their ability to self-reflect and engage in constructive group critiques and discussions.

** Note: This course is offered to students in grades 11 and 12*

Photography

This introductory course explores photography's technical and aesthetic aspects using primarily digital media. Topics include using the camera, image editing software and presentation formats. Design, composition and concept are emphasized. Students are exposed to the history of photography and study the work of significant fine art photographers. They will critically discuss and analyze their own work in a critique setting. Students will also explore the fundamentals of black-and-white film exposure and development, contact printing Photography students will use the 35-millimeter camera to manipulate light and time. They will learn the fundamentals of black and white film exposure and development, which will prepare them for contact printing, and negative enlargement in a traditional dark room. There is an expectation of independent work in this course, in the form of photographs taken outside of school.

** Note: This course is offered to grade 11 and 12 students.*

Advanced Studio Art

The Advanced Studio Art course is intended for highly motivated students who are seriously interested in the study of art. In this choice-based course, students will pursue the creation of works of art that incorporate mediums that are of interest to them (e.g. acrylics, watercolors, printmaking, graphite, pastels, etc.) Having gained confidence in particular materials and techniques, students will develop and fine-tune their personal artistic style and process, culminating in an exhibition of the student's body of work.

** Note: This course is offered to students in grade 12. Should an 11th grader wish to be admitted into this class, approval is required by the teacher.*

**Drawing and Painting is a prerequisite to this course.*

Choir (Twice a Week – FLEX period)

Join our choir and experience the joy of singing in a group setting! Meeting twice a week in the mornings, this course focuses on vocal technique, harmony, and musical expression as we prepare for our Christmas and spring concerts. Open to all students who love to sing and want to be part of a dynamic musical ensemble.

** Note: This course is offered to students in grades 9-12*

Instrumental Music performance (Twice a Week – **FLEX** period)

For students who play an instrument, this band course provides an opportunity to enhance musical skills while preparing for our Christmas and spring concerts. Meeting two mornings a week, we will work on ensemble playing, technique, and performance skills in a supportive and fun environment. All instrumental musicians are welcome. Arrangements will be customized to the best of our ability for students enrolled in Instrumental Music Performance.

** Note: This course is offered to students in grades 9-12*

Dance Exploration (Once a Week – **FLEX** period)

No experience? No problem! This dance class meets once a week in the morning and offers students the chance to explore various styles of dance in a welcoming and energetic environment. In addition to learning new techniques and improving coordination, students will prepare for performances in the Christmas and spring concerts, showcasing their creativity and growth throughout the year.

** Note: This course is offered to students in grades 9-12*

PHYSICAL EDUCATION HEALTH AND SAFETY

Grade 9	Physical Education I
Grade 10	Physical Education II Driver Education Theory
Grade 11	
Grade 12	

Physical Education I

The course incorporates both team and individual sports which promote teamwork, communication, leadership and a competitive environment. The students are learning life skills as well as gameplay, rules and regulations of various sports. Physical Education curriculum activities include but are not limited to volleyball, soccer, kickball, ultimate frisbee, basketball, and wiffleball.

** Note: Required for all grade 9 students.*

Physical Education II

The course incorporates both team and individual sports which promote teamwork, communication, leadership and a competitive environment. The students are learning life skills as well as gameplay, rules and regulations of various sports. Physical Education curriculum activities include but are not limited to volleyball, soccer, kickball, ultimate frisbee, basketball, and wiffleball.

** Note: Required for all grade 10 students.*

Driver Education Theory

This course is designed to prepare the student for the "Behind the Wheel" phase of driver education. Sound principles and practices fundamental to driver, passenger and pedestrian safety

are discussed. The State written exam is administered at the end of the course to test the student's knowledge of the legal requirements and responsibilities of driving, basic driving information, rules of the road and defensive driving tactics. Upon having completed the theory course and passing the written exam with 80 or above, students may take behind the wheel instruction through a private driving school.

** Note: Required for all grade 10 students.*

SIGNATURE PROGRAMS

**Application and/or interview are required for admission into the MSDA Signature Programs*

Mount St. Dominic Academy offers students the opportunity to explore their passions and focus their academic, service opportunities, and co-curricular experiences in a particular area of interest. Concentrated learning and experiential opportunities in the areas of **Entrepreneurship**, **Health Sciences**, and **Social Justice** are available. Over the course of junior and senior years, students will select courses aligned with their area of concentration and participate in relevant experiential and/or service opportunities. These programs are designed to foster an authentic connection between classroom and real-world, hands-on learning.

The **Entrepreneurship**, **Health Sciences**, and **Social Justice** programs provide students with the opportunity to explore their passions and focus their academic and service pursuits. Rooted in public health, social justice, leadership & entrepreneurial endeavors and non-profit work, concentrations combine intellectual and experiential pursuits. Students take a combination of required courses over the course of the 11th and 12th grades and gain a deeper understanding of the chosen field through participation in various co-curricular, community service and other related real-world experiences.

Students interested in the concentration programs will attend a mandatory information meeting during the course scheduling process in the 11th grade. Additionally, they will confer with the program advisor to discuss their interest in, and motivation for, participating in the program. In the spring of the 12th grade, students enrolled in these programs will present their experiences and learning at the Academic Symposium.

HEALTH SCIENCES CONCENTRATION

The Health Sciences program of study provides students with a foundation of knowledge related to health and medical fields. This program is intended for students who are interested in exploring post-secondary studies and careers in this area. Students will complete an application and interview with the program advisor and the science department chair.

- A. Required Courses (Four years of science)
 - a. Biology (9th)
 - a. Chemistry (10th)
 - b. Two or more of the following science courses:
 - 1. AP Biology
 - 2. AP Chemistry
 - 3. Anatomy & Physiology Honors
 - 4. Forensic Science
 - 5. Physics Honors
 - 6. Microbiology Honors

7. Environmental Science Honors
- B. One of the following in either 11th or 12th grade:
 1. AP Psychology
 2. Intro to Psychology
- C. Three years of math (MSDA graduation requirement)
- D. Active participation in [HOSA Future Health Professionals](#) as indicated through HOSA requirements and at the discretion of the advisor. Meetings will occur during CAP and/or after school. (Absences must be approved by the advisor in advance.)
- E. Experiential Pursuits
 - a. Seminar in Public Health (guest speakers, field trips, labs, etc.)
 - b. Recommended to seek a service experience in a health related field
 - c. MSDA Academic Symposium Presentation and/or active participation in other school wide events.
 1. Senior students required
 2. Groups or individual presentations must be approved by the advisor

SOCIAL JUSTICE CONCENTRATION

Social Justice is a unique concentration that includes key areas of study but also embraces one of our Sisters of the Dominican Order's most important beliefs: that of justice and human rights for all. Unique learning opportunities, assembly programs, and rigorous coursework make this a significant signature program for all students who enroll. This program is intended for students who are interested in exploring post-secondary studies and careers in this area. Students will complete an application and interview with the program advisor and the social justice department chair.

- A. (Required Courses) Four years of Social Studies/History Courses
 - a. Grade 9: World History I or Human Geography
 - b. Grade 10: World History II or AP World History
 - c. Grade 11: US History
 - d. Grade 11/12 Electives
 - i. Holocaust & Genocide Studies
 - ii. AP Government & Politics
 - iii. AP Psychology OR Intro to Psychology
- B. World Language - a minimum three years of same world language
- C. Research/Outreach (one of the following)
 - a. Capstone
 - b. Journalism
 - c. Photography
 - d. (If a student is in the LEO program, their involvement counts toward the Research/Outreach requirement.)
- D. Experiential Pursuits such as active membership in one of the following:
 - a. Social Justice Club
 - b. Environmental Club
 - c. Diversity Club
 - d. Another club that is approved by the Principal and meets these qualifications
- E. Service requirement
 - e. Minimum of 3 service experiences with a non-profit or activist organization in both 11th and 12th grade
 - f. Approval by moderator required in advance

- F. Participation in scheduled events - guest speakers, field trips, etc.
- G. MSDA Academic Symposium Presentation and/or active participation in Social Justice Day or other school wide events.

LEADERSHIP, ENTREPRENEURSHIP, AND OPPORTUNITY (L.E.O.) PROGRAM

The Leadership, Entrepreneurship, and Opportunity (L.E.O.) Program is a two-year program spanning grades 11 and 12. The program is designed to get students excited about becoming entrepreneurs by giving them the opportunity to create and fully develop their own product or service. Real-world entrepreneurs and business experts serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. In addition, lectures are given by leaders of business and/or government covering a variety of business topics. This program is intended for students who are interested in exploring post-secondary studies and careers in this area. Students will complete an application and interview with the program advisor and/or affiliates of the LEO program.

- A. (Required Courses) Junior Year
 - a. Intro to Business (semester 1)
 - b. Entrepreneurship (L.E.O.) I (semester 2)
- B. Senior Year
 - a. Entrepreneurship (L.E.O.) II (semester 1)
 - b. Marketing (semester 2)
- C. Experiential Pursuits
 - a. Classroom visits/presentations from guest lecturers, etc.
 - b. Participation in opportunities offered through the Leonidas Foundation's Leadership, Entrepreneurship and Opportunity (L.E.O.) Program, including but not limited to networking events and trips to local businesses to learn from industry professionals
 - c. Team development of a Minimum Viable Product (MVP) in collaboration with a professional mentor and coach, culminating in the annual MSDA Lionworks Competition. Select members of the Lionworks Competition will also present at the MSDA Symposium.